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Welcome

I’m delighted to introduce the first issue of the all new and reinvigorated Aging Matters™ magazine. Those of you with good memories may remember the International Antiaging Magazine that we ran for nearly 8 years. I am excited to announce the return of that format in this, the Aging Matters™ magazine (AMM).

The quarterly AMM will keep you informed with all that’s new in the world of preventative medicine and age management. Our cutting-edge articles are written by health professionals on all aspects of how we can defeat debilitating age-related disorders.

Also enclosed is our A-Z catalog, it’s designed to help you find exactly what you are looking for. After all, knowledge is nothing without power!

This issue has exciting news about TA65® the world’s first supplement proven to extend telomeres in humans. Plus there’s an interview with the renowned antiaging physician, Thierry Hertoghe M.D., as well as the results of measuring and improving arterial condition- vital for cardiovascular health- written by yours truly. Plus, don’t miss Professor Paul Clayton’s important article on alternatives to antibiotics.

I hope you enjoy this issue and look forward to more!

Phil Micans, MS, PharmB
Editor, Aging Matters™ Magazine

Index

Welcome -Phil says thanks for finding the time 3

TA65®- the world’s first telomerase activator -our lead story 4 - 7

Passion, sex & oxytocin -an interview with Dr. Hertoghe 9 - 11

How hard are your arteries? -how to measure and improve them 13 - 19

The age of antibiotics is coming to an end -what are the natural alternatives? 21 - 23

Product A-Z listing -all our products alphabetically 25 - 62

Recommended further reading -books worth knowing 63 - 64

Condition cross-reference list -finding the right product 65 - 70

Contact details & FAQ’s -all our details are here 71

Declaration: The IAS Aging Matters™ magazine focuses on the latest international nutritional, hormonal and drug therapies to help combat the signs of aging. These signs include the physical, mental and internal changes consisting of the diseases and disorders such as cancer, arthritis and senile dementias etc. However, the main focus is upon the prevention of such aging diseases and disorders for the ‘healthy-aging’ individual.

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- **Professional articles:** We work alongside the leaders in the field and we review the latest research to ensure that everything is up-to-date. After all, if we are informed then so are you!

- **Supporting worthy organisations:** All over the world you will find IAS supporting, sponsoring, exhibiting and lecturing at key venues. You can meet us in person and see what we believe in.
In the past, halting the aging process was the goal of longevity enthusiasts. Now, research shows that it is possible to not just stop, but to reverse some of the infirmities associated with growing older and rejuvenate age-damaged tissues. Ensuring the integrity of telomeres, small segments of repeating DNA at the ends of our chromosomes which decay with time, may hold the key maintaining youthful vitality and vibrant health well into the 21st century. A novel concentrated plant extract known as TA-65 acts at the genetic level to maintain the structure of DNA, restore cellular function, and possibly keep you years younger than your chronological age.

**What are Telomeres?**

Telomeres are composed of a few hundred or more repeats of the nucleotide sequence TTAGGG (1,2) (where T= thymine; A = adenine; G= guanine) at the ends of chromosomes. They act as protective ‘caps’ preventing loss of DNA, and also guard against fusing, fraying and unraveling of chromosomes, (1,3,4) which could potentially expose and damage the genetic material.

Since investigators in the 1930’s coined the term telomere (from the Greek telos for ‘end’ and meros for ‘part’), a massive amount of research has been undertaken to explore the structure and function of these important chromosomal caps. In fact, the 2009 Nobel Prize in physiology and medicine was awarded to three scientists for their work involving telomeres.

**Hayflick’s Fifty Year-Old Observation**

Back in the 1960’s, geneticist Leonard Hayflick observed dividing human cells and made an important discovery that had a substantial impact on the future of anti-aging research. But before we examine his finding, let’s look very briefly at cell division, or mitosis ─ a fundamental, genetically-controlled process that enables a cell to duplicate itself, including chromosomes (through the process of DNA replication), to form two identical ‘daughter’ cells. Cell division allows an organism to develop and differentiate into an adult from multiple progressive stages beginning with the initial union of reproductive cells (the germ cells, egg and sperm), and after growth, to construct and repair tissues.

Hayflick reported that cultured human cells divide only a finite number of times in a progressive course leading to replicative senescence, (5) when they stop dividing altogether (the term senescence is roughly equivalent to ‘aging.’). Once cells have
reached their proliferation maximum, or so-called Hayflick limit, they are likely to stop functioning properly and/or die through the process of apoptosis. (1,6,7)

Why do cells stop dividing when they reach their Hayflick limits? Is there a cellular mechanism that monitors and counts each cell division up until the final one? And does Hayflick’s observation have any relevance to aging?

In the early 1970’s, Russian scientist Alexey Olovnikov began to answer some of these questions — he made the connection between a DNA replication problem involving telomeres and the limitation on cell division reported by Hayflick.

Telomere Length Predicts the Replicative Potential of Cells

Olovnikov proposed that telomeres in somatic (body) cells shorten over time, whereas they maintain their length in reproductive cells, (8) and that the shortening is due to incomplete DNA transcription at the telomeric ends of chromosomes. (9) (Interestingly, James Watson, one of the discoverers of the structure of DNA, also recognized this problem of incomplete end-replication. (1,10)) As later confirmed, during mitosis in somatic cells, enzymes known as DNA polymerases can’t completely copy the end portions of chromosomal DNA (3,4,11), much the way a tape recorder can’t record sound at the very ends of the tape. Instead, a few dozen nucleotides are lost with each repeated cell division, (1,7) until telomeres reach a critical length, triggering the Hayflick limit and senescence. On the other hand, reproductive cells can divide indefinitely. Perhaps, Olovnikov must have thought, there is some biochemical factor operating in reproductive cells to maintain telomere length that is turned off in somatic cells.

In 1986, telomere length was directly linked to the replicative potential of cells when researchers observed, similarly to Olovnikov, that the length of telomeric nucleotide repeats capping sex chromosomes in sperm cells were longer than in somatic cells. They went on to conclude that the factor Olovnikov theorized must be responsible for maintaining telomere length (and unlimited cell division) in germ cells is the enzyme telomerase. (1,12) (Note: The same process of progressive telomere shortening that is characteristic of somatic cells, also occurs in stem cells, (1,13,14) which have the potential to develop and differentiate into various cell types needed by the body to repair damaged tissues. Obviously, arrested growth of stem cells poses a major problem for an organism’s repair and maintenance mechanisms.)

The hTERT Gene Turns On the ‘Immortalizing Enzyme,’ but Rarely, Leading to Aging and Age-Related diseases

Telomerase (telomere terminal transferase) is an enzyme that enables DNA polymerases to copy the entire strand of DNA, including the nucleotide repeats at the ends, during cell division, so that telomeres maintain their length and integrity. The switch that turns on telomerase expression is the human telomerase reverse transcriptase (hTERT) gene. Experiments have demonstrated that artificially expressing this gene in cells stimulates telomerase production and elongates telomeres, endowing cells with the ability to divide indefinitely. (1,4,15-17) Because of this capacity to induce unlimited cell replication, telomerase can be considered an ‘immortalizing’ enzyme.

The hTERT gene is activated in germ cells, in fetal tissues before birth, and in cancer cells, but turned off in most somatic cells (1,4,7,11) for most of life (except in certain immune cells and cells replenishing the gut lining), resulting in diminished production of telomerase, shortened telomeres, arrested cell division and its consequences: aging and age-related diseases.

Because of this association between shortened telomeres, replicative senescence, and senescence in general, telomere length is considered a biomarker of aging, (3) with the telomere acting as a cellular mechanism that determines longevity (or mortality), based on its progressively diminishing length with each cell division.

With advancing years, as an increasing number of our trillions of cells exhibit dysfunctional, eroding, uncapped telomeres, the body’s systems of defense, repair and maintenance become compromised. This leads to a cascade of degenerative pathologies: DNA damage, loss of tissue structure and function, impaired mitochondrial function, increased oxidative stress, and the development of diseases including cardiovascular disease, Parkinson’s, Alzheimer’s, cancer, and atherosclerosis, not to mention overall mortality. (1-4;6,11,13,18,19)

If the hTERT gene is the switch that turns on telomerase, enabling unlimited cell division potential and cellular immortality, then why is it turned off in most cells for most of life? Because, besides germ cells and fetal tissues, telomerase is also upregulated in tumors. (1,7,11) The good news is that nature has endowed our cells with a built-in safety mechanism: shortened telomeres and the Hayflick limit, reducing the chances of unlimited cell proliferation characteristic of cancerous cells. The bad news is that within our cells is a genetically programmed, ticking clock of aging.

Restoring Telomere Length Reverses Aging: the ‘Ponce de Leon Effect’

In a fascinating 2010 study published in the journal Nature, researchers not only halted, but reversed degenerating tissues and organs in a whole animal model (not just cells) of accelerated aging by restoring telomere length and activating telomerase. (19) The researchers, led by Ronald DePinho of Harvard Medical School, bred mice genetically programmed to be deficient in telomerase, producing, by the fourth generation, animals with
markedly short, dysfunctional telomeres that presented with DNA damage, tissue degeneration in the spleen and intestines, testicular atrophy, decreased brain mass, and loss of the sense of smell. The investigators then brought these animals back from the brink of decay by reactivating telomerase. Treatment of test mice with a telomerase activator for just four weeks extended telomeres and initiated cell proliferation (most likely of stem cells, (4) leading to tissue regeneration), reduced DNA damage, and eliminated tissue deterioration in all of the organs examined. Amazingly, researchers observed a reversal of the neurodegeneration previously reported — activation of telomerase triggered neurogenesis, or the production of new brain cells, along with remyelination of neurons and an increase in brain mass. In addition, the animals’ sense of smell was restored, as was testicular mass and even fertility!

In essence, investigators genetically inactivated telomerase, producing telomere-compromised, age-accelerated, decrepit animals, then reactivated telomerase, reversing every pathology examined and restoring and rejuvenating cells, tissues, organs, and entire animals. The treated mice now appeared youthful and healthy! The authors referred to this transformation as an “unprecedented reversal of age-related decline” and DePinho later called it, less formally in an interview, “a Ponce de Leon effect.”

The Nature study concluded, “Accumulating evidence implicating telomere damage as a driver of age-associated organ decline and disease risk and the marked reversal of systemic degenerative [pathologies] in adult mice observed here support the development of regenerative strategies designed to restore telomere integrity.” (19)

‘Regenerative Strategy’ TA-65

So, can we rewind the cellular clock of aging and restore more youthful functioning by reactivating the ‘immortalizing’ enzyme?

Studies demonstrate that a natural telomerase activator, TA-65, derived from the astragalus plant, turns on the hTERT gene to lengthen telomeres in animal and human cells. (11,20) TA-65 is a purified extract of the root of Astragalus membranaceus, traditionally used in Chinese medicine. Developed by the California biotech company Geron Corporation, TA-65 was licensed to T.A. Sciences in New York in 2002 and is now available from International Antiaging Systems and sold as a dietary supplement, not a drug. Harvested from select farms in a small area of China, the active ingredient is extracted, concentrated and purified at an FDA-certified laboratory to produce a product at least 90% pure in TA-65. The product underwent many years of investigation and development at Geron prior to further research once licensed to T.A. Sciences.

A 2011 study by scientists from the Spanish National Cancer Centre in Madrid demonstrated that TA-65 increased average telomere length and decreased the percentage of extremely short telomeres in cells known as mouse embryonic fibroblasts (used in the culturing of mouse embryonic stem cells) and that the mechanism of action was through telomerase activation. In addition, an in vivo experiment in mice showed that TA-65, when supplemented in the diet, increased tissue telomerase levels, elongated ‘critically short’ telomeres, and improved age-related indicators including glucose tolerance, bone health and skin quality. (20)

A human study published in 2010 in the journal Rejuvenation Research evaluated the effects of TA-65 on telomerase activation and telomere length, specifically focusing on the immune system. The researchers studied data on 114 subjects between the ages of 51 and 75 (72% male) who, for one year, undertook an age-management program called the ‘Patton Protocol-1’ which consisted of TA-65 (10-50 mg daily), a multi-ingredient/vitamin supplement pack, quarterly lab testing and physician counseling. Results indicated that after one year, subjects exhibited a ‘positive remodeling’ of the immune system to a more youthful status, with declines in senescent cytotoxic T cells and natural killer (NK) cells. (11)

Cytotoxic T cells are a type of lymphocyte, or white blood cell that targets viruses, other pathogens, and tumors. During an infection, T cells must undergo extensive cell division to mount an effective response against the foreign invader. ‘Senescent’ cytotoxic T cells, as the name implies, can no longer divide and indicate a depleted immune system. But after TA-65 treatment for just three months, researchers saw a statistically significant ‘age-reversal’ in the number of these senescent T cells, particularly in those whose immune systems were compromised. NK cells are another type of cytotoxic lymphocyte that target tumors and viruses. The number of circulating NK cells tends to increase with age to compensate for reduced activity per cell, but after TA-65 administration for six months, researchers observed a more youthful profile in study subjects, with a decrease in NK cells.

Although average telomere length in the cells of study subjects did not increase after one year of supplementation, the percentage of cells with short telomeres decreased, leading researchers to conclude that telomerase “preferentially lengthens the shortest telomeres.” No adverse effects were reported when 50 mg per day or less was taken. (11)

In a small unpublished placebo-controlled anti-aging trial performed by T.A. Sciences, 24 men between the ages of 60 and 85 who received a TA-65 precursor (20 – 40 mg/daily) for 12 weeks showed improvements in immune function, eye sight, sexual function and skin quality, with no significant adverse effects.

TA-65 Safety

We saw earlier that the hTERT gene is turned on in germ cells and fetal tissues, as well as in cancer cells, so there is the question of whether activating telomerase may cause unwanted
malignant cell proliferation. According to T.A. Sciences, since TA-65 supports and improves immune function, it should therefore suppress any tumor cell overpopulation. Additionally, in the 2011 animal study previously described, no significant cancer incidence was observed, and in the 2010 human study, no new cases of cancer were reported after treatment with TA-65.

**TA65: ‘Changing the Nature of What Healthy Aging Means’**

According to Noel Patton, founder of TA Sciences, “Scientists now understand the pervasive role telomeres play in the aging process. The effects of age-related decline are severe and the benefits of telomere rejuvenation can be profound. TA-65 has the potential to effectively lessen and possibly eliminate the crippling effects of aging decline caused by insufficient telomerase and short telomeres. Rejuvenating shortened telomeres will change the nature of what healthy aging means.”

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**Figure 1:** Telomere repeats in a normal human lymphocyte, visualized by fluorescence, shown in yellow; DNA of chromosomes shown in blue.


**References**

Animal studies have shown that shorter telomeres not only appear to equate to a shorter life, but also poorer health too and that longer telomeres could equate to a longer and healthier life.

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*Clinical studies confirm that TA65 can lengthen the shortest telomeres in humans*
Dr. Thierry Hertoghe discusses oxytocin

Dr. Thierry Hertoghe is one of Europe’s finest hormone therapists and one of the world’s leading anti-aging physicians. He operates from his clinic in Brussels, Belgium and is in constant demand around the world for his insightful lectures and training programs. His books, both for the public and the health professional are legendary in terms of their practicality and ‘how to’ guides and they include; ‘the Hormone Solution’, ‘the patient Hormone Handbook,’ the physician “Hormone Handbook,’ the Atlas of Endocrinology for Hormone Therapy’ and ‘Passion, sex and long life- the Oxytocin adventure.’

Dr. Hertoghe is currently the President of the World Society of Anti-Aging Medicine and President of the International Hormone Society.

In this interview conducted in July 2011, Phil Micans of IAS asks Dr. Hertoghe questions about oxytocin.

Phil: “My first question Thierry is what prompted you to write your new book; Passion, sex and long life- the Oxytocin adventure?”

Dr. Hertoghe: “It was from the good feeling oxytocin inspired. I understood that this is a hormone that many people need. Many people are deficient in this hormone and are lacking the important beneficial effects that it provides. I wanted to share my knowledge about it and also share my personal experience with it so that it can also help other people.”

Phil: “May I ask you then, what have been your personal experiences and observations with using oxytocin?”

Dr. Hertoghe: “Well when I started taking it myself I did it first as an experiment, to see how it would work and at first I was not really aware of what it was doing to me. I was taking a small dose and had in that time to meet a lot of strangers because I went to buy a horse for my eldest daughter - who is very enthusiastic about horseback riding. We visited many horseback riding clubs to try to find a horse for her and it took a lot of time to find the right one. I’m a very active person, so usually I’ve no time for chit-chat, I tend to go straight to the point and I do it very quickly. Yet, now after oxytocin I was enjoying chatting with people, even talking with the horses! So it seemed like oxytocin made me more sociable and warm-hearted. These ‘side effects’ were a little unexpected, I didn’t really know about the sociability effect of oxytocin then, but here I was experiencing strong socialable effects. This was the first thing I noticed, then after several weeks I really saw that I had very great easiness with coming
into contact with people, plus I felt that I enjoyed it too. Sexually I didn’t notice any improvement to my erections, but when I was leaving my wife in the morning, or when I was just a short distance from her, I felt that she was really ‘under my skin.’ Just 5 metres from her I suffered, but it was suffereance of all the good souvenirs we had together. So it made me much more attached in a romantic way and this was for me surprising, because I thought the attachment was passion and here the attachment was a deep warm-hearted feeling. So it made me feel things more intensely and now I understand much better other people who have high levels of oxytocin.”

**Phil:** “It’s a shame Prince Charles didn’t know about oxytocin when he married Diana!” (ha ha)

**Dr. Hertoghe:** “I’m sure it would have improved things for him and we should give it to many inhabitants of Northern Europe, but perhaps to be careful to give it to Latin peoples as they might become too affectionate! That was also one of the things I experienced when I took a little bit too much of a higher dose - I became too affectionate. My wife liked it actually, but I did feel uncomfortable having lost my dependency a little bit too much, although overall it was a very pleasant sensation.”

**Phil:** “I think most people have heard about the injectable oxytocin to induce child labour, but how subtle are the differences when the different applications are used, for example the injectables and the sublingual toubles. Are there any differences between those applications?”

**Dr. Hertoghe:** “There is a real difference in applications. The injectables are the best forms for induction of labour. It’s also the best form to have a profound effect of relaxing the muscles which is good for uses like when people have pain in the muscles and tendons and there is no other solution. The sublingual oxytocin is much more for sociability and sexuality. The sublinguals make orgasms more intense and easier to come and also more sociable, there is also a sustained release form which is swallowed and assured to be absorbed through the intestine, but that doesn’t seem to work so well for sociability and for sexuality. So you need a quicker form for sociability and the sublingual is the quicker form and you don’t need to absorb much of it through the mucous membrane- that way permits a quick and a stable action.”

**Phil:** “Outside of pregnancy what sort of medical uses has oxytocin been studied for?”

**Dr. Hertoghe:** “It has not so much been studied outside of child birth- except for orgasm- and for that it seems to work better in women than it does for men. Although men do experience an effect you can recognise. In the animal studies it’s highlighted for its sociability and social factor. It has been shown that romantic anxiety is higher in people who have high oxytocin levels. Higher levels give higher sociability in people too. That has been shown. So the administration outside of pregnancy and milk production has been mostly done in the study of sexuality.”

**Phil:** “That is interesting because of course the general media have dubbed oxytocin ‘the love drug.’ But just how effective is it in helping to establish better bonding and relations? Plus, I was wondering does that mean it only works between lovers, or can it also influence family and friendships relations too?”

**Dr. Hertoghe:** “In my experience, in most of my patients and myself using it, it works to increase all relationships that you have- even if you have hostile relationships- you will often find those people more sympathetic. Because even thought it might be hostile relations you still have better human feelings for them. It’s that positive. The greater the intensity of the contact that you have with the person the better oxytocin works for that attachment. This means the attachment will be greatest generally for the partner or the spouse and then for the children and the family, then the friends, then the people in the office, then people you’ve just met and so on. You have a good chance to see that all your relationships are positively influenced.”

**Phil:** “This makes me think we should definitely be putting it in the United Nations drinking water!”

Dr. Hertoghe: (ha ha) “Yes, in all the politicians water! Then we would finally have a government in Belgium too! Did you know that there is a woman journalist in England who has done an article where she took her blood levels of oxytocin many times every time she met somebody? It has been published online. She had the highest oxytocin level when she was meeting her daughter, yet when she was meeting her lover it was the lowest... She concluded that she probably didn’t love him enough or well enough yet!”

**Phil:** “I was wondering about the physical enjoyments of sex with oxytocin, because of course it has been implicated in inducing multi-orgasms in women and enhanced performance for men. I would ask how true is that and how would you compare it to a drug everybody knows such as Viagra?”

**Dr. Hertoghe:** “Viagra is a drug that enhances the mechanical aspect of sex in men but it does not improve enjoyment. Viagra improves a man’s performance but not his enjoyment, and as sexuality is also love- which means enjoyment, you may need to add oxytocin to really make it perfect or almost perfect. So oxytocin may create the impression that this whole world has marvellous aspects in your life. Hence, I now finally understand more because when you see the world at certain moments there are scenes where everything becomes magic. I like to keep my feet on the ground and to be scientific, but with oxytocin it makes me feel things much more pleasantly, like it’s a fairy tale, something marvellous, it’s very difficult to explain. Oxytocin provides something that is emotionally very positive and very healthy and so it is just the best feeling. Plus, Viagra will not improve ejaculation, but oxytocin will help a man with his ejaculation and orgasm. I would say that oxytocin can be an adjuvant to Viagra or other products of the same type such as...”
Levitra or Cialis for a man who has two problems, problems of erectile dysfunction and problems of ejaculation. For women, there are some women who have no orgasm, but if you give too much oxytocin you can get a too easy orgasm and even a second orgasm."

Phil: “I can’t remember which doctor it is, but he always relates the story on stage of when he was injecting his patients with oxytocin and some couples had to stop on their way home, they had to pull over in the car because they couldn’t wait to get home and have sex. The funniest story he ever told was of injecting one lady in the clinic with oxytocin- who obviously then started getting that warm sensation and she looked at him and said; “doctor I didn’t realise I liked you so much!” (ha ha) .

Dr. Hertoghe: “Sure I believe this can be possible and there’s a study during sexual intercourse are actually women with high levels of oxytocin.”

Phil: “What would you say are the typical oxytocin doses for men and women?”

Dr. Hertoghe: “The typical doses are between 2.5 and 10 international units (IUs). If a person takes more than 5 international units regularly then it can lower their adrenals, so I’ve backed off a little on the oxytocin doses I originally proposed. When you have an oxytocin deficiency you need to take it every day and you can add an extra 5 IUs extra in the evening, for example when you go to a party, visit people, or when you want to have intercourse and that’s the safest dose. In America they have given 2 x 50 IUs, very high doses to schizophrenics and autistic children and they’ve had good effects. But I think this dose is far too high for the majority and will cause a fatigue due to the drop in cortisol levels and so I would warn people just to do it safely and to take 5 units in the beginning then to slowly and eventually increase it if they don’t have enough effect. I’d recommend waiting at least 3 to 6 weeks before deciding on going on higher doses on a permanent level because some side effects might appear.”

Phil: “I was wondering then, if people don’t experience the results they are looking for- is there anything you can recommend that they can do to alter or improve the performance? I was thinking here about vasopressin or some other hormones.”

Dr. Hertoghe: “It works better in people who get supplementation of sexual hormones, which are considered by many as the hormones of love. It also works better when given with other perhaps more controversial- by which I mean there’s a paucity of studies- like MSH [melanocyte stimulating hormone] or MSH derivatives, which can also improve sexuality a lot. But to my knowledge vasopressin can be useful to boost the efficacy of oxytocin. The hormone vasopressin also has some oxytocin effects because it is made in the same cells of the brain as oxytocin. In addition it is alleged that vasopressin may improve erectile dysfunction, but I think it’s a weak effect. Meanwhile, a poor oxytocin response is more related to a lack of estrogens in women and to a lack of testosterone in men. Proper levels of these hormones can really improve oxytocin’s effects. When oxytocin does not work well, it is often because of a wrong diet. We see that hormone treatments do not seem to work well if individuals eat sweets, sugars, pastas, cereals, milk products or drink alcohol. It may not even work at all, but diet correction can improve the situation within 24 hours.”

Phil: “What about possible side effects or contradictions?”

Dr. Hertoghe: “The main side effect of an oxytocin overdose is generally the lowering of cortisone, but it’s not a dangerous side effect. It means people may experience fatigue and if they really take too much they develop adrenal burnout. It’s not something dangerous, but when you stop the oxytocin overdose you may need sometimes two days to completely restore your cortisol levels before being okay. Excess oxytocin may induce a second effect: a too sticky attitude, by which I mean highly affectionate behaviour, but that’s not something very serious. It is said that the highest levels can increase jealousy, but I haven’t seen a person who was taking oxytocin become more jealous. I think it is more likely true of people who have high endogenous oxytocin levels in the first place.”

Phil: “What is your overall opinion on oxytocin? Is this going to help the masses or is it an enhancement aid for the privileged few?”

Dr. Hertoghe: “I think it’s important to provide it to as many people who need it as possible because it can change the future of persons who need it for the better. I would never in a certain sense want to have lived my life without knowing what this oxytocin effect really is- because it makes life just more enjoyable and in a certain sense beautiful. I think oxytocin is extremely necessary in our modern times. My own country of Belgium is one of those countries where people take too many anti-depressants. Most of these anti-depressants increase serotonin levels, but they also reduce oxytocin levels. For this reason, patients often become emotionally poorly sensitive, sometimes even emotional zombies because they lose their oxytocin. They also lose part of their sexuality because it also decreases their likelihood of achieving orgasm. We are probably missing a point by giving the wrong drugs. Oxytocin could help you to be less depressed. If you have better relationships, oxytocin can really improve the social relationships, which may be efficient enough to relieve depression by itself.”

Phil: “Can we sum up by saying that oxytocin gives you Joie de vive. Would that be true?”

Dr. Hertoghe: “Joie de vive, yes, with the warm heartedness that not only benefits oneself but also benefits other persons. I mean that oxytocin can also provide joie de vive to others- because the patient who takes it may behave in a much more sympathetic way.”

Phil: “Fascinating, thank you very much for giving us some of your valuable time.”
Oxytocin is a hormone released by the pituitary gland that is strongly correlated with the bonding feelings of emotion and dare we say - even love. Typically, people who have higher oxytocin levels appear to be more relaxed, in-tune with life, and approachable.

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www.antiaging-systems.com/145-oxytocin
It’s amazing to think that as long ago as the 17th Century Dr. Thomas Sydenham wrote that; “a man is as old as his artery.”

It’s taken the best part of 300 years to prove that he was correct and yet even today arterial health is not as heavily ‘relied upon’ as other cardiovascular markers—such as cholesterol. Perhaps that’s because arterial stiffness measurement has been difficult and expensive to undertake? But as you will discover in this article, that has all changed and for the first time arterial stiffness measurement has become very affordable and it can even be measured at home now!

Heart attacks kill

Firstly perhaps we should remind ourselves of the importance of keeping our cardiovascular system healthy. It seems an obvious statement to make—that heart attacks kill. But that’s the point, often a heart attack can strike almost without warning, a few twinges in the left arm in the morning, some heart burning sensations in the afternoon and then a little later on—bam! A full blown infarction that leads either to the emergency room or the morgue!

Compare that to cancer which typically ‘creeps up’ on a person taking time to ‘take hold’ and in theory at least gives a window of opportunity to have it treated. On that basis one could argue that it is even more important to take preventative measures to prevent a heart attack.

Of course there has been a great deal of emphasis on healthy hearts over the last few decades and it does show in the death league tables. Figure one highlights that in the 1900’s most people died from infectious diseases and even respiratory diseases—heart attacks were a clear third, (note that cancer was fifth). Then in the 1950’s heart attacks were by far and away the biggest single cause of deaths and cancers were in a distant second place. But when we look at the 2000 figures, we see that despite all the adverts bombarding us with cholesterol lowering cereals and yogurts etc. and the strong emphasis that many physicians’ offices have had on cardiovascular disease, that dying from a heart attack still remains the biggest single killer (and now cancer is a close second).

Figure one: Selected causes of death at the start, middle and end of the last century. Cardiovascular diseases remain the biggest killer. UK Centre for National Statistics.
Another way of looking at this is to review the causes of death of people who die prematurely- which for this purpose we shall say that they die before the age of 75. The top of the leader board at 18% are the people who die because of a heart condition. Let’s put that another way, the general population under the age of 75 has nearly a 1 in 5 chance of dying from a heart attack.

So what’s going on?

Without getting into a deep and technical assessment of the various cardiovascular disease risk markers, we shall name the major biochemical players here (in no particular order): Homocysteine, HbA1c, fibrinogen, C-Reactive, protein, platelet aggregation, heart strength, blood pressure, cholesterol (LDL/ HDL ratios), atherosclerosis, calcification/plaque, fatty deposits, hardening of arteries, poor endothelial function.

It soon becomes clear that this can be a complex picture, to attempt to assess the interplay between these various fats, inflammatory agents and deposits found in the blood. Monitoring and intervening with such an array of conditions must invariably mean mistakes or oversights, even at the best of doctors offices, leaving the patient exposed to potential issues. So are there any simpler approaches that can be taken?

The Framington study

The Framington study is very famous in the research field because it comprises one of the largest studies ever undertaken over a long period, with more than 5000 adults being followed for more than three generations.

Their outcomes were that the uncontrollable factors involved in the risk of cardiovascular disease are: Age, race, family history, gender and that the controllable factors for reducing cardiovascular disease are: Smoking, high blood pressure, high blood sugar, obesity, physical inactivity, stress.

This seems like a pretty obvious list, (that’s the public’s money at work for you!) and I would personally add environmental toxins to this list- their avoidance and their reduction (through detox and chelation methods).

I’m a firm believer that we should know the basics by now and I suspect if you are reading this article that you are the kind of person that doesn’t have to be told twice, so what do we know beyond these lifestyle and diet choices?

Cholesterol- friend or foe?

Just before we delve into the genuine ‘antiaging medicine’ part of this heart health article, let’s cover the subject of cholesterol since it is so firmly in the public’s eye.

The basic rule of thumb is that HDL (high density lipoprotein) cholesterol is ‘good’ and LDL (low density lipoprotein) cholesterol is ‘bad.’ But according to Dr. Eric S. Rawson at the University of Massachusetts Medical School; “Cholesterol screening fails to identify 50% of the people who have heart attacks in the United States each year, because their total cholesterol is either normal or only moderately elevated.” So is cholesterol a friend or a foe?

Of course nothing in life is ever that simple and if we had no cholesterol in our body we would be dead! Why? Because cholesterol is the base material (produced in the liver) that gets cleaved (methylated to be precise) by many dietary factors (B-vitamins etc) into all the hormones in our body (see figure two).

Since the body cannot control its own intake of food and drink (and sunshine exposure), that’s your job- so to speak! The only way it can enable itself to make more of a required hormone is to produce more cholesterol.

Pregnenolone is the first steroid precursor made from cholesterol. But in order to make pregnenolone, we need adequate amounts of LDL (bad?) cholesterol plus other nutrients, including vitamin A, thyroid hormones and enzymes. Pregnenolone is made inside the mitochondria and if any of these methylation materials are inadequate, then it could induce a hormonal deficiency.

Consider then that the drug to lower cholesterol levels- statins-work by inhibiting the P450 enzyme to prevent initial cholesterol production from the liver. There are frequent reports of patients not having desired cholesterol lowering despite them using statins for long periods of time- is it because the body continues to try to make more cholesterol because it needs more hormones?

By the way, it is an important to know that statins also inhibit CoQ10 (coenzyme Q10) in the body. CoQ10 is a critical energy molecule that is required in multiple processes- and in heart health too. Studies show that if you are using statins then the lower your cholesterol levels the lower your CoQ10 levels will be too.
Some countries (like Sweden) insist on patients taking additional CoQ10 if they are using statins, some like Germany recommend it and others like the UK and US ignore it altogether! This is a disaster, if you are taking a statin we strongly recommend that you take additional CoQ10, at least 100mg to 200mg per day. Today there are also plenty of books on the market that highlight many of the side effects of statin drugs too, which include erectile dysfunction. One example would be ‘Lipitor, the thief of memory’ which highlights another frightening example, I say frightening because of the virtual abandon that statin drugs are prescribed.

So we know cholesterol is an important part of producing our hormones, it also forms an important part of all cell membranes, but did you know that cholesterol is also a potent anti-oxidant? According to my good friend Rich Lippman Ph.D., cholesterol can actually neutralize one of the nastiest free radicals that can be produced in our body- the superoxide radical- and Dr. Lippman knows a thing or two because he was nominated for the Nobel Prize in medicine for his work in measuring free radical activity within the body. So I pose a second question regarding cholesterol- are high cholesterol levels due to the body wishing to neutralize superoxide free radical activity- probably due to another event?

Let’s be clear- we are not advocating a cholesterol rich diet for antioxidant purposes! But simply pointing out that this may be one of the body’s defense mechanisms.

Lastly on this subject, another good book out there by Dr. Malcom Kendrick is called ‘the great cholesterol con.’ His conclusion is that these factors are seen in many heart disease patients: Raised LDL, lowered HDL, raised blood pressure, raised fibrinogen, raised PAI 1 (clotting factor), raised Von Willebrand levels (clotting factor), raised Lp(a)- clotting factor.

But they are also the same factors as seen in Cushing’s disease patients, the only difference being that Cushing’s patients are recognised as having high cortisol levels!

Cortisol has been referred to as the ‘dark hormone’ because it is responsible for stress levels and one of the few hormones that can increase in aging. We know that corticosteroids inhibit the immune system and they are used to shut down an overactive immune system in cases of autoimmune diseases such as rheumatoid arthritis, asthma, eczema etc. But long term use or abuse of steroids is known to result in the same abnormalities as seen in Cushing’s disease, i.e. high blood sugar and insulin levels, low HDL, high LDL, more blood clotting factors and increased visceral fat deposits. This has certainly been seen, even in young patients who have abused steroids for the purposes of body building for example.

Another question then- is cortisol a more likely candidate as a cardiovascular marker than cholesterol? Whichever way you look at it, one conclusion can be drawn; cholesterol is not the be-all- and-end-all marker for cardiovascular health- indeed far from it.

By the way if you need to lower your cortisol levels look to Gerovital, phenytoin or DHEA to help.

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**Kenneth Kensey, M.D., opinion**

Dr. Kensey is an American cardiologist and he has written an interesting book which is called ‘the blood thinner cure.’ The evaluation of numerous well known cardiovascular markers has led him to the opinion that the two most important candidates are: Blood viscosity (the thickness of your blood) and arterial stiffness.

Thus, if you keep ‘thin’ (low viscosity) blood and ‘soft’ arteries then your chances of a heart attack (or a stroke) are minimal. It makes sense on two important levels, thin blood and soft arteries mean that the heart doesn’t have to work as hard to pump around the blood and flexible arteries and thin blood are less likely to coagulate thus clots are less likely to form.

**Keep your blood thin**

So let’s start with helping to ‘thin’ our blood, Dr. Kensey’s seven steps to thinning blood are: Hydrate (drink fluids, especially water), be active (exercise), eat well (organic, unprocessed food), de-stress, stop smoking, take aspirin regularly, give blood.

Of course the first 5 steps are mirroring those found in the Framington study (mentioned earlier), but let’s look at the last two- perhaps the more interesting two.

Take aspirin regularly- as a pharmacist I’ve never met a cardiologist to-date who wants to give direct dose advice, but we do know that 300 mg of aspirin releases about 2 ml of blood into the stomach, ergo aspirin is not a good long term alternative because it attacks the stomach lining, however a more typical short-term dose would be 75 mg. Personally I would recommend resveratrol instead of aspirin (more on that later).

The last aspect of Dr. Kensey’s advice is to give blood regularly! Giving blood makes the body produce more clean cells helping to reduce its viscosity and probably also it helps to release/ remove toxins too. Regular menstruation has been cited as helping to clean out body toxins and excess iron but could it be that it also improves blood viscosity as a method to reduce the risk of heart attacks? Well according to the statistics from the American heart association twice as many men as women up to the age of 65 die of heart attacks. This is even more striking given that there are more women than men in the population aged over 35, however, guess what? Past the age of 65 women begin to catch men up and over 75 overtake men in terms of the number of heart attacks they have! Is the protection women are afforded under the age of 65 due to menstruation?

I give my blood every 4 months and conversations I have with the nurses at the time suggest that there are very varied times of extraction from patient to patient- for the donation of 1-pint. As they keep these timed records, why not ask for yours to see where you stand and if you are changing? Obviously the longer it takes...
to extract your blood, (the system is gravity feed so should be the same ‘pressure’ each time) the thicker your blood is at the time. I suggest that this could be a simple method to keep an eye on your blood viscosity.

**Keep your arteries soft**

Alas there was no advice in Dr. Kensey’s book about softening arteries, so I’d like to tell you about a trial that was conducted at IAS. I hope it sheds some light onto what is possible, but just beforehand let’s look at some evidence that having ‘soft’ arteries is favorable.

Figure four shows that arterial stiffness is strongly correlated with life expectancy, in fact according to this published study6 there are vast differences between good-normal and poor arteries, with the harder the artery the worse the risk of having a fatal cardiovascular (or stroke) event.

Figure four: Arterial stiffness and longevity. Three groups of 81, 80 and 80 patients are monitored over 140 months. Those in the best (softest) artery group (<9.4 m/s) do okay with 25% dying in the period, but those with average (normal) stiffness arteries (9.4-12 m/s) do okay with 25% dying in the period, but those with harder arteries (>12 m/s) do badly with only 10% surviving! ESRD, Blacher et al. Circulation, 1999

What’s more, arterial stiffness is known to be a good biological age marker; that is to say that in the average population arterial stiffness is expected to increase with age- this is shown in figure five.v

Figure five: Arterial stiffness has an average linear line that increases with age making arterial stiffness a good choice for a biological age marker. Note that each dot represents a test and that at all ages, young or old, that there are some people who have good and bad arterial stiffness. Millasseau et al., Clin. Sci., 2002

**How can we measure arterial stiffness?**

There are several different methods, but the one that has come to the fore because of its ease of use and low cost is known as aortic pulse pressure. The test is non-invasive and simply requires the user to place a finger clamp onto one of their fingers, or a blood pressure type cuff onto their arm. Essentially the technology is able to record the volume and speed of the blood movements.

The speed of this movement is determined by two factors, firstly the initial ‘heart pulse’ which is the force of the expulsion from the heart through the arterial system; clearly this speed is the fastest that one can expect. But then there is also a return wave, an arterial pulse. This return pulse is dependent upon the condition of the arteries. If the arteries are hard and therefore absorb little energy, then they will return a faster wave as compared to softer arteries which absorb more energy and therefore return a slower wave. A comparison of the ‘heart pulse’ speed to the returning ‘arterial pulse’ speed determines the stiffness of the arteries.

A simple way to consider this is to imagine a pond. If you throw a stone into the middle you will watch the outbound wave it will travel at a predetermined speed, it doesn’t matter so much about the actual initial speed as the evaluation is to compare its speed with the second- returning wave. In the case of the pond, the return wave will depend on what the walls of the pond are made of, if they are hard like concrete then a faster return wave will be seen due to little energy absorption, but if they are soft like mud, then a slower return wave will be seen as much of the energy will have been absorbed.

Thus, in a similar way it is true of the arterial system and diagnostic devices like the Bio-Clip™ Plus (for professionals) and the world’s first arterial stiffness monitor, the Bio-Clip™ Cuff (for individuals) can determine within 1 or 2 minutes the condition of your arteries and report that detail to you in a simple to understand manner.

**What did IAS do?**

We used a Bio-Clip™ Plus to determine the before and after results of 12 individuals who were asked not to change their diet or lifestyle in anyway; whilst this was an open trial (i.e. everyone knew what they were taking) it was based on a published in-vitro study that prevented glycosylation.

Glycosylation, also known as cross-linking is a recognised theory of aging, (published by Johan Bjorksten in 1942) that describes how proteins interact with oxygen and glucose and become impaired and unable to function efficiently. Glycosylation is the
process that turns food tough and yellow, (see it for yourself by cutting an apple in half and watching it deteriorate) and it is no coincidence that the same things happen in diabetes, cataracts, aged skin and indeed in arteries too.

Figure six: The impact of several agents to inhibit the process of cross-linking in-vitro (glass) is shown here. All had an effect to reduce cross linking including vitamin C, DHA (omega 3) and pyridoxal and pyridoxamine (both vitamin B6 derivatives) and aminoguanidine having the best effect- by far.

Seeing this study published in Life Sciences gave us the idea to see if similar improvements could be sought in patients using the same supplements whilst being monitored for their arterial stiffness using a Bio-Clip™ Plus device.

We also extended our study to include the natural supplements resveratrol and carnosine as there has been plenty of published information to show that these also have favorable effects.

Plus we included an aminoacid mix called Nitric-Pro™ whose primary action through arginine is to release nitric-oxide, a factor well known to dilate vessels and therefore improve blood flow etc.

Placebo

Some patients were asked not to change any of their lifestyle patterns. We took a measurement of their arterial stiffness using a Bio-Clip™ Plus (as shown in figure eight left hand side) and a month later we retook the test (as shown in figure eight right hand side).

Figure seven: Before (left hand side) and after results (right hand side) of a person on placebo to establish changes to arterial stiffness - virtually none were noted.

What was clear is that very little had changed, whilst much can be transcribed from the wave form itself (I shall write a separate article on this matter for the technophiles out there), the most important number- the SI (stiffness index) was 8.78 m/s on the initial test and 8.80 m/s on the follow up. These numbers are too close to call (we usually allow a 5% variance in testing parameters anyway), thus as expected no changes in arterial stiffness were noted in the persons using placebos.

Resveratrol

Resveratrol is an interesting natural molecule we were keen to examine. This constituent of red grape skins is noted for being a significant part of the so called ‘French paradox.' It has been shown to ‘thin’ blood and positively impact the SIR2 longevity gene etc.

Figure eight: The impact of 45 mg of trans-resveratrol daily on this patient saw a reduction (improvement) of his SI within 5-weeks of 15%.

As can be seen in figure nine, this patient at the start had an SI of 10 m/s but after 5 weeks of 45 mg daily intake of resveratrol his SI dropped to 8.55, a reduction of 15% (remember that the lower the SI number the better).

Resveratrol works through a number of known methods including preventing the binding of cholesterol to blood platelets, (thus making them less sticky). Could it be that it is bound cholesterol levels that are important not total cholesterol levels as are usually measured?

IAS has developed a unique resveratrol containing product called Cardio-Pro™ (further details are below), but for those who want to take a higher dose of resveratrol IAS do provide Resveratrol-Pro™ which has 75 mg of resveratrol per capsule.
Carnosine

Carnosine, otherwise known as L-carnosine or beta-alistine is a very interesting natural molecule, found in meats and dark green leaves; carnosine has shown itself to have significant anti-glycation properties and has found itself popular in the antiaging fraternity as well as topical skin products etc.

Our patients took 300 mg per day (the dose recommended by Dr. Marios Kyriazis of the British Longevity Society).

Figure ten shows a 45 year old woman going from an SI start point of 9.37 m/s to 7.05 m/s (representing a 25% improvement) after taking 300 mg of carnosine daily for 6 weeks. Also note that there was significant change to her waveform with the beginning of the appearance of a third wave- which is understood to be a healthy/ youthful example.

IAS has developed Cardio-Pro™ which contains the same daily dose of carnosine and other beneficial ingredients. See below (under uniquely formulated) for further details.

IAS also provides carnosine capsules each of 500 mg for those folks who want to take higher doses.

Aminoguanidine

Our initial published study start-point highlighted that aminoguanidine was the potent anti-glycator in vitro (in glass); we were keen to see if it was also the most potent anti-glycator in-vivo (in the body).

Figure eleven shows those results. It highlights that aminoguanidine did actually give the best results in this case, with a 35% improvement within just 4-weeks for a 52-year old man. His SI started at 12.7 m/s (with a poor wave form) to 8.35 m/s (with a typical wave form), he took 225 mg of aminoguanidine daily for 4-weeks.

So far, as a solo agent, aminoguanidine has been the most potent agent to reduce arterial stiffness. Aminoguanidine is related to the bi-guanidine metformin- which is an approved drug for type-II diabetes. Whilst aminoguanidine is extracted from the cat’s claw herb, some countries class it as a medicine; therefore it has not been included in multiple products like Cardio-Pro™ however IAS makes it available seperately.

The others

Pyridoxamine, which was also used in the in-vitro study, has also been used in some patients and our results show that it is something akin to resveratrol showing a 10-15% improvement when used daily over several weeks. So this simple (but difficult to find vitamin B6 derivative) can also be a useful adjunct.

As mentioned earlier the aminoacid compound powder Nitric-Pro™ that delivers 3.5 grams of arginine per scoop was also shown to be very effective to improve SI values quickly. It’s well known that the boosting of nitric oxide in the blood, (which is the main route of efficacy of Nitric-Pro) dilates blood vessels and improves blood flow and it may also benefit the thin endothelial layer, the lining of the arteries. However whilst these values improve very quickly (often within hours) they will also pass away quickly (again within hours).

This may seem like a worthless result, but actually consider this- if you are in a high risk category and have obtained a high stiffness index result after your test, what do you do to ‘take the pressure off’? For example immediately jumping onto a treadmill in an unfit condition may induce the very thing you are trying to avoid- a coronary! Therefore Nitric-Pro may provide relief to at least get starting and into a program of change through diet, lifestyle, exercise and using the ‘longer term’ supplements that benefit- such as the ones that are mentioned above in this article.
Cardio-Pro was uniquely formulated

Cardio-Pro™ was the product that IAS specially formulated for ‘the masses’ from the results of this trial to help reduce everyone’s arterial stiffness.

Each Cardio-Pro capsule contains 15 mg of resveratrol and 100 mg of carnosine and also includes rare trace minerals important for heart health that is regularly missing in the modern diet including boron, palladium and lithium. Three capsules can be taken each day at breakfast (with food) and its cost is less than $30 a month.

Conclusions

Arterial stiffness according to data on file at MicroMedical in the UK can vary by about 10% over the course of a day. This surprises a lot of people because the assumption is often that arteries are like drainpipes-fixed, but they are made of flexible material and layers such as the endothelial layer are in some places just 1 molecule thick, therefore changes in hormonal levels and other stress factors such as running for the bus, getting a rollicking from the boss or paying your tax bill could act as effectors. But why shouldn’t arterial stiffness change slightly in the same way that blood pressure will change depending on whether you are sleeping or being active etc? Therefore it’s likely that food and drink will change parameters too (probably in both directions depending on what is consumed).

Why do I mention all of this? Because I pose the question, what is it that tips the balance? Why does the heart attack occur at that moment? Well maybe if you are in the ‘risk zone’ and your current activity raises that arterial stiffness by that 5-10% factor, then perhaps that’s the point that puts you over the top. For example, it’s no word of a lie that a lot of people die on the toilet as they strain themselves, which was the unfortunate outcome of the late great Elvis.

But if you know where you stand in terms of your arterial stiffness, then you can help yourself to stay outside of the danger zone. You can adjust your habits and your supplements to suit and by using a Bio-Clip™ Plus or Bio-Clip™ Cuff you can even see how effective those changes are that you are making. If they are working, keep them up; if they are not- then you have the opportunity to change them.

The arrival of these cost effective devices will take away the ‘faith’ you have in your health program and replace it with proof!

Meanwhile, the great news is that there are a number of methods that can help to improve arterial stiffness and significant results can be seen within a month. I hope that the examples I have shown here point towards that fact.

What is the real breakthrough here?

The fact is that the Bio-Clip™ Plus and the new at-home (a simpler unit of course) Bio-Clip™ Cuff devices have taken much of the guesswork out of knowing the condition of your arteries. Now you can know where you stand and how much your new lifestyle and supplement program is aiding you.

In my opinion this takes the whole preventative health market onto the next level- by adapting personalized programs that can be tested again and again with the knowledge of real time results.

In other words, where is your cardiovascular health now and where will it be in the months and years to come? You won’t know for sure until you are tested and furthermore with your own access to a Bio-Clip™ you have the opportunity to indulge in the ultimate individualized health program of measure-treat-measure.

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Bio CUFF™

The world’s first at-home arterial stiffness monitor

Cardiovascular disease remains the western world’s number one killer, keeping up to date with your heart health and fitness is vital. With Bio CUFF you can easily monitor the effectiveness of your lifestyle, exercise, diet and supplements to see if what you are doing is effective for your cardiovascular system.

Bio CUFF™
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See how simple Bio CUFF is to use here:
www.antiaging-systems.com/210-bio-clip-cuff-arterial-stiffness

Also available: Bio Clip for health professionals
Scientists speculate that the age of antibiotics may be coming to an end. This is because there has been a relentless increase in antibiotic resistance across all classes of drug. Furthermore, recent articles on antibiotic resistance in China paint an alarming picture of a near-future where antibiotics will have little therapeutic value (Heddini et al 2009).

Sadly, the use of antibiotics inevitably leads to the selection of resistance traits; the overuse and misuse of antibiotics in medical and other situations makes it increasingly unlikely that we will be able to stay ahead in the war against infection. Important work in such areas as quorum-sensing blockade may produce important new drugs, but these will not be available soon.

Various alternatives have been proposed from the natural world, and this article reviews one of the most prominent candidates that being the lactoperoxidase system, specifically thiocynate ions as contained in 1st Line™.

**Lactoperoxidase/ Thiocynates**

The enzyme LPO is one of the body’s major first-line defences against infection (Pruitt ’87, Ratner & Prince 2000, Gerson 2000, Wijkstrom-Frei et al ’03). LPO produces ions such as HOSCN, which have a broad spectrum of activity against gram-positive and gram-negative bacteria, HIV-1 and other viruses, moulds, yeasts, mycoplasma and protozoa (Pruitt & Reiter ’85, de Wit & van Hooijdonk ’96, Wang et al 2000, van Hooijdonk et al 2000, Seifu et al ’05, Fweja et al ’08). LPO is critical for the control of pathogens in milk from lactating animals (Reiter et al ’86) including humans (Shin et al 2000). It also plays a key role in defending the respiratory and gastro-intestinal tracts (Wijkstrom-Frei et al ’03).

LPO utilises dietary thiocyanate as one substrate, producing hypothiocyanite (HOSCN) ions. These ions kill pathogenic bacteria (Table 1) via three separate mechanisms. They inhibit bacterial glycolysis; they inhibit bacterial nicotinamide adenine dinucleotide (NADH)/nicotinamide adenine dinucleotide phosphate (NADPH)–dependent reactions (Reiter & Perraudin ‘91); and they oxidise bacterial sulphydril groups (Slungaard & Mahoney ’91, Thomas & Aune ’78). LPO also utilises iodine, forming hypohalide ions. These have an additional spectrum of anti-bacterial activity.
### Bacteria
- Escherichia coli (10)
- Yersinia enterocolitica (4)
- Klebsiella pneumoniae (13)
- Klebsiella oxytoca (10)
- Streptococcus agalactiae
- Streptococcus mutans
- Staphylococcus aureus
- Salmonella species (12)
- Shigella sonnei (15)
- Listeria monocytogenes
- Acinetobacter species (40)
- Neisseria species (20)
- Haemophilus influenzae (20)
- Campylobacter jejuni (14)
- Aeromonas hydrophila (8)
- Pseudomonas aeruginosa (6)
- Capnocytophaga ochracea
- Selenomonas sputigena
- Wolinella recta
- Enterobacter cloacae (12)

### Viruses
- Herpes simplex virus
- Immunodeficiency virus
- Respiratory syncytial virus

### Yeasts
- Candida albicans

### Table 1: LPO activity in vitro:

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<th>(number of strains tested)</th>
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Uniquely, HOSCN ions also have potent anti-viral activity. Many viruses have sulphydryl groups on their coat (ie Mangold & Streeck ‘93); when these are oxidised (ie by thiocyanate) the viral coat structure is damaged or destroyed (Almeida et al ‘79).

HOSCN ions are not toxic to human cells at the levels produced by LPO, and have little if any effect on probiotic species, making them a near-perfect antibiotic system. Furthermore, it is very difficult for microorganisms to acquire resistance to LPO; if it was easy for pathogens to become LPO-resistant, a key element in our immune system would have been disabled and we would not have survived as a species.

Today, however, the LPO system is frequently compromised. Lactoperoxidase is a ferroprotein, and iron depletion / deficiency is one of the most common forms of dysnutrition. There are also growing problems with two of LPO’s substrates, thiocyanate and iodine. Thiocyanates are derived from dietary glucosinolates (in brassica), or from cyanogenic glycosides (in beans, sweet potato and millet). Since 1950, UK consumption of fresh vegetables has fallen by 24% (Hinton ‘08). Iodine depletion is becoming more prevalent, due inter alia to reductions in salt intake and the use of (non-iodinated) sea salt (Li et al ‘06, Nawoor et al ‘06). The net effect of depletion in iron, iodine and cyanogens on LPO activity is likely to be very significant in reducing our ability to ward off infections.

Due to its chemistry, LPO is not a suitable therapeutic tool; if the milk-derived enzyme were to be consumed it would, like other milk proteins, be digested and rapidly rendered ineffective. However, the bactericidal effects of LPO can be mimicked and amplified by delivering HOSCN ions directly. This technology was initially developed in France for food plant sterilisation, and subsequently to sterilise salad leaves. It is used as an antiseptic in Belgium, and has been adapted by the WHO for bulk milk sterilisation in China and Korea (FAO/WHO ‘05).

We have reviewed the possibility that the extensive use of HOSCN might encourage the development of microbial resistance strategies, and believe that this is unlikely. Only a small number of intrinsically LPO-resistant microorganisms are known (ie Oram & Reiter ’66). While resistance may be acquired in certain specific circumstances (ie Leyer & Johnson ‘93), the evolutionary historical evidence indicates that this is clinically insignificant. Moreover, most mammals utilize LPO / HOSCN on a daily basis and it remains an effective element in the innate immune system.

With regard to safety, it should be pointed out that the level of hypothiocyanous ions in 1st Line is well below the safe and tolerable levels of thiocyanate ions produced within the body (Borgers & Junge ’79, Medizinische ‘82, WHO ‘95).

### 1st Line™, the world’s first thiocyanate ion producing kit

1st Line’s patented formula makes up into a drink containing hypothiocyanite and hypothiocyanous ions, identical to those in tears, saliva and milk. These ions are a critical defence against a wide range of pathogens including bacteria, yeasts, fungi and viruses; many of which they destroy on contact.

Until recently, the unstable hypothiocyanite ions could not be stored. In a technical breakthrough, the 1st Line kit enables the ions to be produced immediately prior to use so they can be consumed ‘fresh’, whenever required. For the first time, hypothiocyanite ions can be used as a supplement.

These bio-identical immune molecules differ from antibiotics in two ways:

1. The ions are very small molecules, with a molecular weight of around 90. They therefore diffuse further and faster though tissues than the much larger synthetic antibiotics.

2. They kill a surprisingly wide range of disease-causing micro-organisms, but unlike synthetic antibiotics do not damage probiotic species such as lactobacilli and bifidobacteria. Our immune systems and these beneficial bacterial species have co-evolved, and have ‘learned’ to co-exist.

1st Line should be used at the first symptom of an infection. Only one kit should be used per day and often only one is required. If symptoms persist another kit can be consumed the following day. Persons with more serious symptoms can use 1st Line up to twice a week, dependent upon need. For those who want to prevent the symptoms of infection 1st Line can be used once every few months.
And let us remember that hypothyricyanite ions are not toxic to human cells, they appear to have excellent tissue penetration and have little if any effect on probiotic species, making them a near perfect antibiotic system.

**Summary**

In the war against infectious micro-organisms, where we are currently losing ground, 1st Line is a break-through. For the first time, it enables the clinician or indeed any user to utilise one of the most powerful elements in our array of immune defences, namely the innate immune enzyme lactoperoxidase (LPO).

In the body, LPO utilises dietary thiocyanates from such sources as brassica vegetables to produce HOSCN ions, which kill a wide range of bacterial and viral pathogens (see Table 1, below). Uniquely, and as would be expected from an innate immune defence, this wide spectrum of anti-microbial activity does not include the essential probiotic species which are immune to LPO activity.

Lactoperoxidase therefore has all the attributes of an ideal antibiotic, and this has lead many scientists to explore its therapeutic uses. All previous attempts, however, have failed because the commercial enzyme is a dietary protein derived from milk. When eaten, LPO is rapidly broken down in the stomach and small intestine and its enzymatic activity is lost.

1st Line™ is a far more intelligent approach. It uses phase-bound lactoperoxidase remotely, supplying it with the substrates it would normally use to produce HOSCN ions outside the body. These ions are then ingested, mimicking the endogenous effects of the enzyme exactly.

Given the known efficacy and safety of the LPO / HOSCN system, and access to preliminary clinical trial data, I regard the development of this system as a medical break-through. I believe that the development of the LPO / HOSCN system is as important as the discovery of penicillin, and will make as great an impact on infection control.

To the bureaucratic mind, however, it presents a substantial problem. First direct devolves infection control to the end-user, who now has direct access to a safe, food-derived anti-infection strategy. This is the internal equivalent to anti-septics, which everyone can use, and thus runs counter to the interests of the pharmaceutical industry, their profit margins and regulatory bodies.

There is no question about the value of the enzyme system. The only question is how long this anomaly will be allowed to continue before big Pharma and its regulatory muscle either forcibly re-classify 1st Line™ as a drug, or suppress it altogether.

**References**

4. Borgers D., Junge B., Thiocyanate as an indicator of tobacco smoking.
5. Preventive Medecine 8: 351-357 (1979)

• To view all the references for this article please visit this page on the website: http://www.antiaging-systems.com/articles/17-antibiotics-coming-to-an-end-where-now
The 1st Line kit is a breakthrough in the delivery of thiocynate ions; these bioidentical molecules are made naturally in our tears, saliva, mother’s milk and body passageways and they form the literal first line of defense against pathogens of all sizes, including bacteria, flukes, germs and even viruses. Simply mix the 4-part kit into water when required.

See how simple a 1st Line kit is to make here:
http://www.antiaging-systems.com/17-1st-line
Product A-Z listing

Here is an alphabetical listing of IAS stocked products. See our cross-reference list of disorders that relate to these individual products. Much more information is available from our website including full ingredient/excipient listings, doses and side effects etc. If you need any further information or can’t find what you require, please don’t hesitate to contact us- the back cover has all our details.

The following index underneath certain products means that it can’t be shipped there or known restrictions apply. For example:

- Can’t be shipped to Australia
- Can’t be shipped to Canada
- Can’t be shipped to EU
- Can’t be shipped to Japan
- Can’t be shipped to UK

What do top health professionals have to say about IAS?

“IAS is an outstanding resource for the finest, most-up-to-date news and information on healthy aging. They also offer products of the highest integrity and efficacy. In fact, IAS is the world’s greatest source (often the only source) for the most cutting-edge and advanced nutrients to ensure optimum health span and maximum life span.”

**Dr. Nicholas Perricone**

“IAS has a history of making crucial but difficult to access medications available to patients throughout the world. IAS is one of the pioneering societies in anti-aging medicine that has helped this new medical specialty move forward.”

**Dr. Thierry Hertoghe**

“I have known IAS for about 15 years and they are a qualified group who provide for me, my family and my patients. Their skill and professional capacity has liberated me from all sorts of problems concerning the search of guaranteed and often rare dietary supplements or anything which is available but problematic to find. Their service goes far beyond duty and helps in many ways to maintain our own health.”

**Dr. Walter Pierpaoli**

“Every adult has the right to take care of his or her own personal health as he or she chooses. In the 20th and 21st centuries, this universal human right has been nearly obliterated by an ocean of nanny-state regulation and deliberate suppression of information by bureaucracies, with hidden and not-so-hidden agendas. International Anti-aging Systems is a beacon of useful health care information and a literal island of freedom of health care product choice in our otherwise un-free health care world.”

**Jonathan Wright, MD**

See them all at: www.antiaging-systems.com/testimonials/index.htm

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**Aldosterone**

Aldosterone is an adrenal hormone, its principal role is to help maintain the salt/potassium balance in the body and help to regulate...
1st Line™ (thiocyanate)

1st Line is an exciting new and all natural weapon in the fight against various types of infections including viruses. 1st Line contains a patented formula that when made up with water becomes a drink that contains thiocyanate ions.

Thiocyanate ions (also known as oxythiocynate) are the same molecules made in the body’s airways and passages, for example they can be found in tears, saliva and milk and they literally form the body’s first line of defence against all types of bacteria, yeasts, fungi, flukes, germs and even viruses, helping to destroy them on contact.

Consuming 1st Line helps to flood the bloodstream with thiocyanates, but unlike antibiotics 1st Line does not attack self molecules, in other words beneficial floras are not disturbed.

Clinical trials have exposed that 1st Line can help quickly to combat various infections relating to helicobacter, pneumonia, soft tissue infections, upper respiratory tract infections and bronchial infections. Other doctors have reported to us that their patients with various viral infections are asymptomatic, even months later after using a few doses of 1st Line.

Medical Doctor pole Clayton

“...thiocyanate ions are not toxic to human cells... and have little if any effect on probiotic species, making them a near perfect antibiotic system.”

Professor Paul Clayton

Acarbose helps to prevent the breakdown of carbohydrates in the stomach into sugars.

Acarbose is used to help diabetics by preventing ‘sugar spikes’ and it can also be a useful adjunct for weight loss too, since slowing and preventing carbohydrate absorption aids dieting.

Glucobay® 30x 100mg tablets retail $24.95
IAS price $19.99

www.antiaging-systems.com/a2z/acarbose.htm

5HTP (5-hydroxy-tryptophan)

5HTP is the precursor to serotonin, the neurotransmitter associated with well being and the alleviation of depression. Some clinical trials support 5HTP supplements to be as effective as the popular SSRI drug-Prozac®.

Note: Doses of 200mg daily should not be exceeded unless under the guidance of a physician. Do not combine with SSRI antidepressants.

5HTP 60x 50mg capsules retail $24.95 IAS price $19.99
www.antiaging-systems.com/a2z/5htp.htm

ACF228™

Dr. Lippman was nominated for the Nobel prize for medicine his work to measure free radical production within the body and as everyone knows free radicals are unstable molecules that cause a lot of damage associated with aging and degeneration. The result of Dr. Lippman’s work is the unique and exclusive to IAS- ACF228. This stands for ‘antiaging complete formula version 228.’

ACF228 is designed to neutralise not only damaging free radical production but also help to reduce other aging effects such as glycosylation and mitochondrial decline.

For further details about ACF228 and much more besides we recommend Dr. Lippman’s latest book ‘Stay 40.’

ACF228™ 45 capsules retail $59.95 IAS price $49.99
www.antiaging-systems.com/a2z/acf228.htm

Adrenalin (Olmifon®)

Adrenalin works like modafinil- it resensitizes alpha-1 receptors in the brain to be more sensitive to noradrenaline. This heightens awareness and concentration to prevent narcolepsy (sleeping in the daytime).

The results can be quite remarkable, leading to heightened states of awareness and attention, whilst at the same time not affecting sleep patterns nor causing ‘highs and lows’ that were associated with the earlier form of stimulants.
Note: Adrafinil is not recommended for continuous use past 3-months unless liver enzymes are being monitored.

Olmifon® 40x 300mg tablets retail $59.95  
IAS price $49.99

www.antiaging-systems.com/a2z/adrafinil.htm

Adrenal-Pro™

Adrenal-Pro is a pharmaceutical quality adrenal cortex extract. It is obtained from New Zealand bovine source to help counteract, not only Addison’s, but also a wide range of adrenal related maladies that include: Inflammation, stress/shock, allergies, infections, low blood sugar, low blood pressure, fatigue.

Adrenal-Pro can also help to counteract abnormalities in carbohydrate metabolism, as well as help maintain normal capillary permeability, which in turn helps to increase blood lymphocytes, ergo improving resistance to infections.

Adrenal-Pro™ 30ml liquid bottle retail $39.95  
IAS price $29.99

www.antiaging-systems.com/29-adrenal-pro

Acetyl-L-Carnitine (see Mito-Pro™)

Aldosterone

Aldosterone is an adrenal hormone, its principal role is to help maintain the salt/potassium balance in the body and help to regulate blood pressure.

However recent interest has been aroused because of its ability to help improve hearing for those with hearing difficulties. It appears that patients who are ‘low’ in aldosterone levels also have ‘poor’ hearing and vice-versa.

Recommended; one of Dr. Hertoghe’s hormone handbooks.

Aldosterone 15x 125mcg capsules retail $49.95  
IAS price $39.99

www.antiaging-systems.com/33-aldosterone-hearing-loss

Allicin (see garlic)

Alpha lipoic acid (see lipoic acid)

Anacervix®

Amantadine (Symmetrel®)

Amantadine is a weak dopamine agonist and interestingly also displays some anti-excitotoxin properties similar to memantine (see same).

Amantadine has been used as an anti-Parkinson agent, (mainly in early diseases stages) to improve bradykinesia, rigidity and tremors.

Amantadine 100x 100mg tablets retail $59.95  
IAS price $49.99

www.antiaging-systems.com/a2z/amantadine.htm

Aminoguanidine (pimagedine)

Aminoguanidine is internationally recognised as the most potent AGE inhibitor currently available. The abbreviation AGE means ‘advanced glycated end products.’

AGEs are cross linked proteins that do not work efficiently/correctly and are seen in a number of disorders including diabetes, heart enlargement, skin discoloration and hardening (particularly in smokers), cataracts and even arterial stiffness. (If you want to see glycosylation in action, then cut an apple in half and watch it turn yellow and tough).

Note: Our aminoguanidine tablets also contain vitamin B6 so there is no need for extra supplementation.

Aminoguanidine 100x 75mg tablets retail $39.95  
IAS price $29.99

www.antiaging-systems.com/a2z/aminoguanidine.htm

Anacervix®

Anacervix is a clever combination of vincamine, (related to vinpocetine) and piracetam.

Designed to help both improve brain blood and electrical flow, hence the primary use for Anacervix has been to improve brain ‘disturbances’ related to brain ‘energy crisis.’ Anacervix has good properties for helping medium to long term memory difficulties.

Anacervix® 30x 420mg capsules retail $29.95  
IAS price $21.99

www.antiaging-systems.com/41-anacervix-vincamine-concentration
Andro-Pro™ contains the latest cutting-edge nutritional ingredients to naturally boost free testosterone levels.

The most unique ingredient added to Andro-Pro is the recently discovered fructoborate. Fluctoborate is a boron derivative that according to Romanian studies is helping to alleviate bone loss and arthritis; but perhaps the most interesting clinical study was done on 13 men. They were given the equivalent of one capsule of Andro-Pro daily for 60-days, at the end of the 2 months, on average these men experienced serum level increases of vitamin D by 19.6%, DHEA-S up 56% and free testosterone rose by 29.5%.

In addition, Andro-Pro also contains the supporting agents of zinc, B6, magnesium and high quality tribulus terrestris. All factors in improving free testosterone production.

Recommended: Adding DIM-Pro® to your regime can help to reduce estrogen levels and therefore improve free testosterone levels even further

Andro-Pro™ 60 capsules retail $49.95
IAS price $44.99
webpage not available

Arimidex® (anastrozole)

Arimidex is perhaps the most famous of the 3rd generation of aromatase inhibitors. These types of drugs prevent the enzyme aromatase from converting testosterone into estrogens (and vice versa in women) and are approved for breast cancers.

Men who have a need to alter the T/E balance (which becomes deranged in the favor of estradiol with age) sometimes utilise Arimidex at no more than 1 mg per week.

Arimidex® 28x 1mg tablets retail $229.95
IAS price $199.99

www.antiaging-systems.com/a2z/arimidex.htm

Artemisinin

Artemisinin is extracted from wormwood and is highly effective in destroying flukes, yeasts and even malaria. Used by the Vietnamese army to protect their troops from malaria carrying mosquitoes, it is now recognised by the UN as better than any of the anti-malaria drugs for its treatment too!

Artemisinin can therefore be used in place of anti-malaria drugs, plus the regular use of artemisinin can help to lower many of the so-called body burdens.

Artroemisinin 90x 100mg capsules retail $34.95
IAS price $24.99

www.antiaging-systems.com/a2z/artemisinin.htm

Aniracetam (Ampamet®)

Aniracetam is a nootropic, a smart drug that is an analogue of the original-piracetam.

Aniracetam helps to improve electrical communication in the brain enabling improved memory functions, particularly enhancing short term memory problems and is the most popular mental supplement of choice in Japan.

Ampamet® 20x 750mg tablets retail $59.95
IAS price $49.99

www.antiaging-systems.com/a2z/aniracetam.htm

Arginine (see Beyond GHS®; NADH, Nitric-Pro™; Vigor-Pro™)

ATP (see ATP-Pro™ & Cell Energy®)

This product contains adenosine triphosphate (ATP), which is the universal energy of life since it is made inside the mitochondria and powers all of our functions.

Sublingual ATP supplements like ATP-Pro can help to boost energy levels and also aid in mitochondrial enhancement, most useful for disorders such as ME and MS Etc.

ATP-Pro™ 60x 20mg sublingual tablets retail $29.95
IAS price $24.99

www.antiaging-systems.com/48-atp-adenosine-triphosphosphate-energy
Azilect® (rasagiline)

Azilect contains rasagiline and it is a recently approved medication to treat Parkinson’s disease either as monotherapy (by itself) or in addition to levodopa therapy.

Azilect (also known as Agilect®) promotes increased and sustained levels of dopamine by selectively inhibiting an enzyme, monoamine oxidase-B. In this regard it is more potent (compared mg to mg) than deprenyl.

Azilect® 30x 1mg tablets retail $224.95
IAS price $199.99

www.antiaging-systems.com/a2z/azilect.htm

Banaba Extracts (see Diet-Pro™)

BCI (see Beyond Chelation Improved®)

BEC5 Curaderm® cream

BEC5 Curaderm cream was discovered by Dr. Bill Cham on the Oceania island of Vanuatu. Dr. Cham noticed that when the local farmers rubbed the plant called the ‘devil’s apple’ (found in that region and which is related to eggplant) onto the backs on animals that were experiencing skin cancers- that they had considerable success in its removal.

The eggplant cancer cure by Bill Cham Ph.D. covers all aspects of BEC5 Curaderm treatment.

It is known that BEC5 Curaderm has now been used by more than 80,000 patients, all with remarkable success. Clinical trials in the UK and Australia have confirmed the ability of BEC Curaderm to regress non-melanoma skin cancers within weeks! For example, one open study with 72 patients had 100% healed skin cancer lesions within just 13-weeks of applying BEC5 Curaderm cream twice daily.

“BEC5 Curaderm is a topical preparation which is safe and effective, an ideal therapy for outpatient treatment... It is a cost effective treatment for both primary and secondary skin cancer care.” Dermatologists at the Royal London Hospital

Furthermore, BEC5 Curaderm is known not to harm healthy cells, therefore only destroying cancer cells on and under the skin’s surface.

BEC5 Curaderm is known to be effective for all the following conditions:
- Basal cell carcinomas (BCC)
- Squamous cell carcinomas (SCC)
- Keratoses
- Keratoacanthomas
- Age spots
- Sun spots

Recommended: to achieve best possible results use tamanu oil following the BEC5 treatment

BEC5 Curaderm® 20ml tube cream retail $149.95
IAS price $139.99

www.antiaging-systems.com/PG403/bec5-curaderm.htm

Benfotiamine (Milgamma Mono®)

Benfotiamine is a synthetic version of vitamin B1. Research has shown that benfotiamine can block sugar pathways in the body. This benefits diabetics to help control ‘sugar spikes’ and it can also mean that benfotiamine can be a useful adjunct in helping to lose weight and ‘stick’ to a dieting program.
This extraordinary supplement goes far beyond any other B12 product on the market. The ingredients provide for the lowering of homocysteine, an aging marker involved in cardiovascular disease, Alzheimer’s and cancer.

The fact that B-12 can stimulate growth in children suffering from growth failure is well known. Pregnant women and women taking the contraceptive pill are at risk of B-12 and folate deficiency as are vegetarians.

Beyond Chelation Improved® (BCI) is perhaps the most comprehensive ‘single’ nutritional supplement on the market today. It has been designed by the renowned detox expert Dr. Garry Gordon and BCI contains 30 sachets and each sachet contains nine pills.

Each sachet has in it three Essential Daily Defence® capsules (see EDD), three Beyond Any Multiple® tablets and then one omega 3 capsule (from fish oils), one omega 6 capsule (primrose oil) and finally one ‘brain’ capsule- which contains both gingko biloba and phosphatidylserine.

This incredible combination provides the most complete wide ranging supplement, for example:

- The EDD capsules provide for detox and chelation, (the removal of heavy metals such as lead, arsenic and mercury).
- The tablets cover the base for good vitamins and minerals plus they also include ‘rarely’ found ingredients in multiples such as vitamin K2 and resveratrol.
- The two different oil capsules provide the well known heart and general health benefits of the omegas 3 and 6.
- There is even a brain supplement to help improve brain blood flow, (with the well known and respected Chinese herb gingko biloba) and the phosphatidylserine improves the state of brain membranes and aids long term memory.

Beyond Chelation Improved® 30 sachets retail $79.95
IAS price $69.99
www.antiaging-systems.com/a2z/beyondchelation.htm

Research has documented that adequate fiber intake helps prevent the development of obesity. But Beyond Fiber is much more than just an excellent source of fibre. It’s a probiotic with an acidophilus formulation that works at maximum efficiency alongside a unique combination of soluble and insoluble fiber from Jerusalem artichokes and brown rice husks- fiber that is needed to help colonize and fortify healthy bowel flora.

Note: Beyond Fiber also contains EDTA to help remove heavy metals.

Beyond Fiber® 504 grams powder retail $44.95
IAS price $37.99
www.antiaging-systems.com/a2z/beyondfiber.htm

Beyond GHS has been designed by Garry Gordon, MD. It is a proprietary combination of the most powerful Growth Hormone (GH) Secretagogues known, plus a cutting-edge herbal complex...
Beyond GHS® 75 tablets retail $89.95  IAS price $82.49
www.antiaging-systems.com/a2z/beyondghs.htm

**Bio-CLIP™**

The Bio-CLIP is designed for the professional user. It supplies all the kind of data a health professional would want to know to help a patient adapt their lifestyle and medicine program to ensure that their results are optimised.

The Bio-CLIP software enables electronic storage of patients details and tests to be kept on the clinic’s own PC, (it is not shared via the internet) and meets the new requirements for electronic medical storage whilst also enabling data privacy. A Bio-CLIP test uses an infrared photoplethysmography finger clamp to assess arterial wave velocity (AWV) and all of the following data is made available within just a couple of minutes:

- An arterial stiffness score in meters per second.
- A color coded bar-graph indicating if the patient’s arteries are good, okay or poor for their age group.
- The patient’s pulse wave form
- The patient’s body mass index (BMI)
- The patient’s reflective index score
- The patient’s blood oxygenation
- The patient’s current resting heart pulse rate
- The patient’s vascular age, (this is a comparison of the patient’s arterial stiffness result compared to a database of 7000 tested persons).

Anyone who is able to use a home PC can operate a Bio-CLIP. Installation is easy and requires just following a few simple steps, (as shown in the start-up procedure). Your operator will be proficient in very little time.

Bio-CLIP even outputs (via your own printer) a comprehensive report for your patient to take home; it describes your patient’s results so they know exactly what they mean. Plus once multiple tests have been stored for the same person, Bio-CLIP even charts trends, so you can see how the various results are changing and in what direction etc.

**How has the price for this test been smashed?**

Current professional AWV devices cost many thousands of Dollars, indeed most are around 10 times the cost of a Bio-CLIP- despite the fact that a Bio-CLIP uses the same chip and technology! However, with a Bio-CLIP you connect it to your own computer and printer so that none of that technology needs to be duplicated.

We believe that Bio-CLIP represents a real breakthrough in making widespread screening for arterial stiffness affordable. Bio-CLIP is set to revolutionise the scope of cardiovascular screening.

**Bio-Clip PLUS® v1.99 one complete kit retail $799.95  IAS price $749.99**

Additional year’s warranty retail $194.95  IAS price $149.99
www.antiaging-systems.com/72-bio-clip-plus

Note: *This kit comes with a 12-month warranty and a 1 year unlimited use license for 1 computer. After registration an extra 4 extra years of licenses will be issued free of charge. (Additional computer licenses cost $49.49 per annum). The PLUS requires attachment to a PC (not provided) operating a MS Windows 7, XP or Vista platform (32-bit or 64-bit).*

**Bio-CUFF™**

According to many experts, including US cardiologist Kenneth Kensey, (as reported in his book, ‘the blood thinner cure’), one of the most important measurements for determining the risk of a heart attack or a stroke is arterial stiffness.

In other words, if you have ‘soft’ arteries then the risk of a cardiovascular or stroke related event is minimal. But how do you measure the stiffness of arteries to determine if you are at risk? How can you be sure that the lifestyle and supplements you take are keeping your arteries in good health?

Well now with the introduction of Bio-CUFF, you can find out within a minute at home! Bio-CUFF is a non-invasive device that simply attaches via a regular blood pressure cuff to your arm.

Press the automated start key and you’ll know the status of your arteries and over time you can keep a check on them to ensure they are staying healthy.

**How does a Bio-CUFF work?**

Bio- CUFF uses arterial wave velocity (AWV) to assess the speed of red corpuscles, measuring the speed of blood from the heart pulse and the difference in the ‘return’ pulse from the arteries.

Think of it like this, if you throw a stone into a pond you can watch the wave travel outward. When that wave meets the bank...
of the pond a return wave will be reflected inward. The speed of that return wave is dependent upon the hardness of that pond wall, if the wall was made of concrete and therefore hard, then little energy would be absorbed from the initial wave and the return wave would be fast. On the other hand if the wall was muddy and soft it would absorb a lot of the initial wave energy and return a slow wave.

The process is essentially the same in the arteries, hence Bio-CUFF can measure the difference in speed of the two waves and using an algorithm determines the stiffness of your arteries.

**What can Bio-CUFF do?**

A one minute test with a Bio-CUFF can display all of the following information:

- An LED display bar-graph indicates if your arteries are normal (green zone), stiff (yellow zone) or stiff (red zone).
- Your current resting heart pulse rate is shown
- Your systolic blood pressure is shown
- Your diastolic blood pressure is shown

**Why should I buy a Bio-CUFF?**

Bio-CUFF can ascertain the average scores of your blood pressure, heart rate and even the stiffness of your arteries. These factors are vital parameters in the assessment of your cardiovascular health.

As cardiovascular disease remains the western world’s number one killer, keeping up to date with your heart health and fitness is a very important thing to be aware of. Furthermore, with a Bio-CUFF you can monitor the effectiveness of your lifestyle, exercise, diet, supplements and even drugs, to see if what you are doing is effective for your cardiovascular system.

**How easy is it to use a Bio-CUFF?**

It’s very easy to use a Bio-CUFF. As a standalone unit it needs no computer (and therefore has no license-fee either).

Simply attach the arm cuff and press start, the rest of the procedure is automatic and your results will be displayed on the Bio-CUFF screen.

“Bio-CUFF has enabled arterial wave velocity testing- previously the domain of clinics and hospitals to become so affordable and easy to use, that folks at home can check their own arterial stiffness and make sure that their lifestyle and supplements are benefiting their arterial condition.”  *Phil Micans, MS, PharmB*

Bio-CUFF is designed for the individual. It can hold data of up to 30 of your tests. A very useful feature is the average result, showing you from your stored tests what your average blood pressure, heart rate and arterial stiffness results are.

Now you can really take control of your cardiovascular health and fitness.

**Bio-CUFF® one complete kit retail $179.95**
**IAS price $149.99**


*Note: This kit comes with a 6-month warranty and is designed to operate standalone (i.e. it requires no additional computer) and operates with 4x AA batteries.*

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**Bio-En’R-Gy C®**

This is Dr. Garry Gordon’s unique multi-ingredient vitamin C formula. Each serving of Bio En’R-Gy C has a unique form of L-ascorbate C crystals, which have been further enhanced with the addition of 2000mg of GMS-Ribose for increased bio-availability. Furthermore, there are anti-inflammatory agents included such as MSM.

Preliminary double blind, human trials on one or more of the ingredients in Bio En’R-Gy C, taken along with vitamin C have been shown them to enhance the uptake of vitamin C plasma levels more than 30% of subjects on vitamin C alone.

Bio En’R-Gy C provides for an energy boost and protection against colds and infections as well as being an adjunct for cardiovascular disorders and cancers- as was advocated by the twice Nobel Laureate, Linus Pauling.

You can taste the difference! By drinking the unique formula in Bio En’R-Gy C conveniently provides many benefits not available in any other vitamin C formula.

**Recommended:** See the vitamin C test strips- now you can check your own levels of vitamin C

**Bio En’R-Gy C® 200 grams powder retail $59.95**
**IAS price $49.99**

[www.antiaging-systems.com/a2z/beyondc.htm](http://www.antiaging-systems.com/a2z/beyondc.htm)

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**Bioflavonoids (see Wobenzym® Energo®)**

**Bioperine (see Bio-En’R-Gy®)**

**Biotin (see Beyond B12®; HRT Plus®; BCI; Nitric-Pro™)**

**Blueberry extracts (see Andro-Pro™)**
Bone-Pro™

Bone-Pro contains documented, cutting-edge nutrients known to be effective in building strong bones and preventing osteoporosis.

In particular the inclusion of 1000 IUs of vitamin D3 per capsule in Bone-Pro is a potent and important supplement to absorb calcium, (which is also contained in each capsule).

In addition this powerful bone health formulation contains menaquinone-7, the long-chain form of vitamin K2 that has been shown to promote the growth of new bone, protect against bone loss, and reduce the risk of bone fracture.

Bone-Pro™ 180 capsules retail $44.95  
IAS price $34.99

www.antiaging-systems.com/211-bone-pro

Bromocriptine (Parlodel®)

Bromocriptine helps to block the production of prolactin, a hormone that has been linked to decreased immunity, cancers and development of breast tissues in men.

Parlodel® 30x 2.5mg tablets retail $34.95  
IAS price $19.99

www.antiaging-systems.com/a2z/bromocriptine.htm

Can-C™ eye-drops

Can-C eye-drops are the original formula for use in cataract and contains a purified and racemized form of n-acetylcarnosine, a natural di-peptide with potent anti-glycating and anti-oxidant properties that prevent lipid peroxidation.

Patients in trials placed 2-drops of Can-C into their eyes twice daily. After 6-months of use, 88.9% of patients showed improvement in the clarity of their lens and 90% saw an improvement in their visual acuity.

There have been numerous reports of cataract shrinkage and even disappearance with documented evidence that Can-C eye-drops remain effective (and safe) more than 24-months later.

The most commonly expressed initial reports are that glare is significantly improved, (for example night driving is much safer) and color perception is enhanced.

What’s more evidence is mounting that Can-C is efficacious for all of the following disorders: cataracts, glaucoma, presbyopia, corneal disorders, eye strain, ocular inflammation, blurred vision, dry eye syndrome, vitreous opacities and lesions, diabetes

Left: A woman’s eye shows the cataract before treatment.  
Right: 5-months later after use of Can-C eye-drops (two drops twice daily), there is no longer a visible cataract and eyesight has improved.

“I am so grateful for the development of Can-C eye-drops, not only have they significantly improved my own eyesight, but many of my patients report most favorably about them too. Now we have a real alternative to eye surgery so Can-C can be considered to be a genuine breakthrough.” Richard Lippman, Ph.D.

Can-C™ 2x 5ml vials retail $44.95 IAS price $39.49
SPECIAL OFFER: Buy 6 packs for $195.00 ($32.50 each)
www.antiaging-systems.com/a2z/can-c.htm

Can-C Plus™

Can-C Plus capsules are specially designed to be used alongside the Can-C™ eye-drops to aid and even boost their effectiveness. As there are a few supplements that can block the action of Can-C eye-drops, Can-C Plus capsules have been carefully designed to avoid them.

Three Can-C Plus capsules a day can be taken with food, with or without Can-C eye-drops, although for maximum benefit it is recommended that they are used together.

Can-C Plus™ 90 capsules retail $39.95 IAS price $34.99
www.antiaging-systems.com/a2z/can-c-plus.htm

Cardio-Pro®

Cardio-Pro is a specialist heart supplement borne out of testing alongside the unique Bio-Clip diagnostic equipment, (see same for further details).

Testing in patients taking Cardio-Pro for 4-6 weeks shows that on average they achieve a significant improvement in the stiffness index of their arteries. In other words, they have softer, better conditioned arteries whilst taking Cardio-Pro.

And it’s little wonder considering that Cardio-Pro contains some of the most sought after antiaging substances of our time including L-carnosine, resveratrol and ionic minerals such as magnesium and potassium, as well as trace elements such as boron, palladium and lithium- which have all but disappeared from our diets since the quality of soils have become so depleted with modern agricultural processes.

Just 3 Cardio-Pro capsules a day can provide a heart health protective benefit.

Cardio-Pro™ 90x 215mg capsules retail $34.95 IAS price $27.49
www.antiaging-systems.com/66-cardio-pro

Carnosine (see ACF228™; L-carnosine; Can-C™; Cardio-Pro™, Can-C Plus™)

Cell Energy®

Cell Energy is the result of more than 10-years of dermatological research by Germany’s leading dermatologist- Professor John Ionescu.

Cell Energy is a remarkable innovation in skin care because it encourages cellular renewal and increases the number of new, youthful skin cells.

Cell Energy is particularly designed to help tackle the toxin related skin issues such as acne, eczema and psoriasis.

Cell Energy® 50ml bottle cream retail $69.95 IAS price $62.49
www.antiaging-systems.com/a2z/energy.htm

Centrophenoxine (meclofenoxane)

Like all good antiaging supplements, centrophenoxine has many useful features with few side effects. From a memory and cognition viewpoint, centrophenoxine has demonstrated significant improvements, most notably its ability to speed up the process of memory recall.

One of centrophenoxine’s most noted benefit’s is its ability to effectively and quickly remove a cell toxin that accumulates with age (and Alzheimer’s disease) called lipofuscin. Lipofuscin can make up parts of the so-called Alzheimer brain plaques, but it can even be found in the brain’s of ‘normal’ aging people as well as other organs such as the heart, the lungs and even the
skin, where it forms part of the so-called age or liver-spots, the brown flecks found in ‘aged’ person’s skin. Indeed several weeks of centrophenoxine supplementation has seen removal and lightening of such spots.

“Centrophenoxine has shown many facets to improve conditions related to my membrane hypothesis of aging, for example its ability to improve brain-performance, survival time in animal experiments, and to remove the cell aging-pigment called lipofuscin. It has been my antiaging supplement for more than 30-years.” Professor Imre Zs.-Nagy

Centrophenoxine 60x 250mg tablets retail $39.95
IAS price $29.99
www.antiaging-systems.com/a2z/centrophenoxine.htm

Cerebrolysin®

Cerebrolysin is the first natural drug approved for Alzheimer’s disease (AD). It utilises brain proteins and aminoacids peptides (porcine origin) to support the function of neurons.

Cerebrolysin induces a growth like factor on neurons and improves synaptic responses in the hippocampus. It has been shown to decrease amyloid-beta production in the brain—these are the so-called Alzheimer plagues that are seen in the post-mortem examinations of AD autopsies. As these plagues are strongly correlated with the damage of AD, their control or reduction may be viewed as a highly significant benefit.

Note: Intramuscular injection packs are available- see injection kits for details.

Cerebrolysin® 5x 5ml i.m. ampoules retail $99.95
IAS price $79.99
www.antiaging-systems.com/a2z/cerebrolysin.htm

Chromium polynicotinate (see ACF228™, Diet-Pro™)

Cialis® (tadalafil)

Cialis is the erectile dysfunction drug manufactured by Eli-Lilly.

There have been studies that have shown Cialis to have a longer activity period than the most popular ED drug- Viagra®.

Cialis® 4x 20mg tablets retail $89.95 IAS price $79.99
www.antiaging-systems.com/a2z/cialis.htm

Ciproxin® (ciprofloxacin)

Ciprofloxacin is an antibiotic used to treat severe and life threatening bacterial infections.

Ciproxin® 10x 500mg tablets retail $34.95 IAS price $29.99
www.antiaging-systems.com/a2z/ciproxin.htm

Cobalt chloride

This form of cobalt has been noted as being able to help women utilise natural estrogens more effectively, particularly those women who have used synthetic estrogens in the past.

Note: This product is most effective when used over a longer period of time; however we recommend that this supplement is only used under the guidance of a health professional.

Cobalt 100x 200mcg tablets retail $39.95
IAS price $29.99
www.antiaging-systems.com/109-cobalt-chloride

Coenzyme Q10 (see CoQ10)
CoQ10 (Coenzyme Q10, ubiquinone, also see NeySkin®; Energo®)

CoQ10 is one of the body’s most crucial energy promoting substances. Its regular supplementation has been shown to benefit cardiovascular problems, gum disease and all manner of energy related disorders including chronic fatigue, fibromyalgia and MS etc.

CoQ10 60x 100mg chewable tablets retail $49.95  
IAS price $44.99

www.antiaging-systems.com/a2z/coq10.htm

Deprenyl (selegiline)

Parkinson’s disease is characterised by the loss of the brain neurotransmitter dopamine and deprenyl helps to prevent this loss by acting on the specific enzyme MAO-b. Professor Knoll also believes that deprenyl very significantly increases PEA (phenylethylamine) and that this may have an even more significant function that the MAO-b inhibition, (for more details on this please read Professor Knoll’s excellent book on the subject- ‘the brain and its self’).

In addition to improving dopamine levels, deprenyl has also been shown to help rebalance serotonin, noradrenaline and acetylcholine levels and whilst the uses remain ‘off-label’ deprenyl has been used for Alzheimer’s and even cancer treatments.

Our focus here is upon deprenyl’s enhancement of dopamine, which is a key brain chemical responsible for drive, focus and well being and even libido (especially for men).

The experiments of Professor Jozeph Knoll dramatically extended the lifespan of rats who were given deprenyl. Even the first rat to die that was treated with deprenyl died after the last rat not treated with deprenyl died.

This graph highlights the loss of dopamine with age, on average 13% per decade past the age of 40 for the average person, but far greater for those suffering from Parkinson’s disease.

The idea behind the antiaging use of deprenyl is to use very small doses regularly in order to help maintain healthy dopamine levels and thus improve cognitive function and help to maintain function at a better level for much longer.

Note: The liquid version titrates as 1 drop = 1mg.

Dumex® 50x 5mg tablets retail $69.95  
IAS price $59.99

Dep-Pro™ 20ml/ 300mg liquid bottle retail $89.95  
IAS price $79.99

www.antiaging-systems.com/a2z/deprenyl.htm
Dercos® (aminexil)

Dercos contains a unique patented molecule called aminexil that has been shown in large scale clinical trials to significantly improve both hair density and the retention of hair within the scalp within just 6-8 weeks of regular use.

Dercos achieves this by preventing what is known as ‘perifollicular fibrosis’ or hardening of the collagen within the hair shaft. Studies have shown that if the collagen is allowed to harden that it helps to expel the hair from the scalp and that no matter what type of hair loss (alopecia) the patient is suffering from; it is always accompanied by ‘perifollicular fibrosis.’

The regular use of Dercos has shown it to improve hair density in the average patient by 8% within 6 weeks.

Dercos shampoo should be used at least 3-times per week.

Dercos® 200ml bottle shampoo retail $29.95
IAS price $24.99
www.antiaging-systems.com/a2z/dercos.htm

Desmopressin (Minurin®)

Desmopressin is the synthetic version of vasopressin (also known as Diapid®) which is a peptide found in the hypothalamus and believed responsible for the deposit of memories.

The same hormone is also responsible for water retention and is used by persons suffering from ‘diabetes insipidus’ or frequent urination, to reduce trips to the rest room.

More interestingly are its ‘off-label’ uses which include the treatment of amnesia and to improve ‘memory imprinting’ - that is to say, to improve the recall of about to be learned material. This makes desmopressin a useful tool for absorbing information at conferences, meetings and other important occasions etc.

Note: Desmopressin is applied as a nasal spray.

Minurin® 2.5ml nasal spray retail $39.95
IAS price $34.99
www.antiaging-systems.com/a2z/desmopressin.htm

Detox-Pro™

Detox-Pro helps support the body’s natural detoxification pathways for the elimination of toxic heavy metals particularly mercury and it is believed that detoxification also results in a higher IQ as well as a more efficient immune system.

The unfortunate by-product of our complex, industrialized, high-tech society is the contamination of water, air and food by numerous chemicals and non-essential elements, such as heavy metals like mercury.

The accumulation of heavy metals in the human body poses a significant health risk, leading to a wide array of symptoms, including anemia, learning deficits, behavioral and cognitive changes, tremor, gingivitis, hypertension, irritability, cancer, depression, memory loss, fatigue, headaches, gout, chronic renal failure, male infertility, and possibly even multiple sclerosis and Alzheimer’s disease.

Detox-Pro™ 45 capsules retail $39.95
IAS price $34.99
www.antiaging-systems.com/220-detox-pro

DHA (docosahexaenoic acid, see krill, Phos-Pro™)

DHEA (dehydroepiandrosterone, prasterone)

DHEA is the most abundant steroid found in the human body and it is produced in the adrenal glands (located on the kidneys). However its amounts decline with aging and this has been associated with a number of ill effects.

DHEA 7-keto 90x 25mg capsules retail $39.95
IAS price $25.00
Note: Please order this product from: www.somatropinonline.com

Diet-Pro™

Diet-Pro is formulated with advanced nutrients to help prevent and reverse the negative effects of dietary carbohydrates by slowing carbohydrate absorption and improving insulin regulation in your body.
Put simply, Diet-Pro is a carbohydrate/starch blocker. It contains a water extract of cinnamon which can lower blood sugar levels, as well as a unique blend of specialized tea extracts to maximize starch blocking, insulin balancing, and energy production.

Used as a part of a weight management program, Diet-Pro can aid weight loss and control significantly.

**Diet-Pro™** 90 capsules retail $44.95 IAS price $34.99
www.antiaging-systems.com/a2z/dietpro.htm

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**Digestif™**

Dr. Richard Lippman has formulated Digestif as a daily antidote to digestive and stomach conditions, furthermore the uniqueness of the formula has been granted a US patent with worldwide patents pending; this special combination cannot be found elsewhere.

Digestif’s combination of enzymes, antioxidants and flavonoids help to combat bad bacteria such as H. Pylori and reduce allergic reactions and inflammation.

Taken regularly Digestif can help with irritable bowel syndrome, stomach ulcers, bloating, GI pain or general digestive problems, including regular occurrences or diarrhea or constipation. Digestif can even aid difficulty in digesting food or its slow passage.

**Digestif™** 60 capsules retail $19.95 IAS price $19.99
www.antiaging-systems.com/a2z/digestif.htm

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**Di-indolylmethane** (see DIM-Pro™)

**DIM** (see DIM-Pro™; ACF228™)

**Dimethicone** (see Nanogen™)

**DIM-Pro™**

DIM-Pro is an advanced formula designed specifically to balance healthy estrogen levels in the body.

It contains chasteberry extract, which helps to balance estrogen ratios and it contains 45mg of di-indolylmethane (DIM), the most active ingredient found in the Brassica foods. Because DIM is so much more potent than indole-3-carbinol (13C), about ten times as active, you need much less.

DIM helps to excrete estradiol, the form of estrogen considered to be the most carcinogenic and playing a significant role in the development of breast and prostate cancers.

In addition, DIM is believed to act as an aromatase inhibitor- the enzyme that acts upon testosterone to convert it into estradiol. Thus in men DIM-Pro can help to reduce estradiol levels whilst increasing free testosterone levels.

**Recommended; if required, adding Andro-Pro™ will further enhance free testosterone levels.**

**DIM-Pro™** 90 capsules retail $39.95 IAS price $31.49
www.antiaging-systems.com/a2z/estrogenblock.htm

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**DMAE** (dimethylaminoethanol, see centrophenoxine)

**DMSA** (dimercaptosuccinic acid, see Detox-Pro™; ACF228™)

**Docosahexaenoic acid** (see DHA)

**Dostinex®** (see cabergoline)

**D-pantethine** (see Can-C Plus™)

**D-pantethinol** (see Nanogen™)

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**Doxycycline**

Doxycycline is a member of the tetracycline antibiotics group and is commonly used to treat a variety of infections.

**Doxycycline 8x 100mg capsules** retail $24.95 IAS price $19.99
www.antiaging-systems.com/61-doxycyclinesin.htm

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**Dr. Gordon’s Advanced Green Powder**

Regular intake of this condensed natural formula into water can help to curb hunger cravings, increase energy and enhance digestion.

Dr. Gordon’s Advanced Green Powder plays a number of important roles, including helping those who want to diet and lose fat, those who want to detox themselves and those who want to have a regular and stable digestive system. In addition a proper body pH balance is promoted.
Organic best of greens® 10 oz. bottle powder retail $34.95 IAS price $29.99


**Dutasteride (Avodart®; Avodart®)**

Dutasteride was designed to replace finasteride (see same) as a more potent blocker of DHT (di-hydrotestosterone). Whereas finasteride (also known as Propecia® and Proscar®) blocks one of the enzymes (5-alpha reductase type I) that convert testosterone into DHT, dutasteride blocks both types (type-I and II) - hence it is more potent.

DHT levels have been cited as a trigger for the development of BPH (prostate problems),

However it was also noted that the male patients that were being treated for their prostate conditions were growing more hair on their heads and also hair on their bodies was diminishing!

Energo® cream

Energo cream has been designed by Professor John Ionescu, Germany’s foremost dermatologist. In this case, Energo has been specially developed to help aged skin regain some of its youth and to enable a ‘better look’ to be obtained, especially in that most obvious of ‘aging’ places, around the eyes.

Energo’s tried and tested formula reduces the damage of the sun (photaging) and helps to firm sagging skin and reduce fine lines and wrinkles.

**Energo® 30ml bottle cream retail $79.95 IAS price $72.49**

www.antiaging-systems.com/a2z/energo.htm

Note: This product should not be taken or handled by women, especially those who are pregnant or lactating.

Avodart® 30x 0.5mg tablets retail $89.95 IAS price $79.99

www.antiaging-systems.com/a2z/dutasteride.htm

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**Energo® 30ml bottle cream retail $79.95 IAS price $72.49**

www.antiaging-systems.com/a2z/energo.htm

Note the before-and-after improvements to a woman’s face, after just 7-weeks of daily application of Energo cream.

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www.antiaging-systems.com/a2z/energo.htm

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EDTA (ethylene diamine tetraacetic acid, see *; BCI; EDD)

Eldepryl® (see deprenyl)

Esnatri™ cream (bio-identical estrogens)

Esnatri cream is the world’s only bio-identical estrogen cream to replicate the work of Dr. Jonathan Wright.

Dr. Wright has highlighted that the ‘average’ woman produces estrogens in the ratios of estriol 90%, estradiol 7% and estrone 3% and these are the exact same ratios found inside Esnatri.

Each 1ml of Esnatri cream provides 2mg in total of the triple estrogens and it enables a precise, natural and indeed bio-identical hormone replacement therapy for women concerned about the menopause.

IAS provides dose and timing advice from Dr. Wright for both estrogens and progesterones with every purchase.

**Esnatri™ 50ml 100mg cream retail $59.95 IAS price $49.99**

http://www.antiaging-systems.com/188-esnatri-natural-estrogen
Essential Daily Defense®

This proprietary formula is based on a combination of 30 years of Dr. Gordon’s work in chelation and Dr. Lester Morrison’s arteriosclerosis research. It is formulated to help the body excrete undesirable toxins, heavy metals and lipids, while helping control excessive blood clotting tendencies, (blood clots are believed to cause 85% of the deaths from heart attacks and/or strokes).

Note: EDD is also contained in the multi-pack ‘Beyond Chelation Improved®’

Essential Daily Defense® 100 capsules retail $29.95
IAS price $25.49

www.antiaging-systems.com/a2z/essentialdailydefense.htm

Estradiol (see Esnatri™)

Estriol (see Esnatri™)

Estrone (see Esnatri™)

Eurycoma Longifolia (see Vigor-Pro™)

Finasteride (Proscar®; Propecia®)

Finasteride helps to prevent the conversion of testosterone into dihydrotestosterone. DHT has been cited behind the formation of prostate problems and even hair loss and finasteride has been made available under the trade names of Proscar® and Propecia® for the treatment of the two.

Note: See Hair-Pro™ for the latest topical finasteride agent for hair loss.

Finasteride 28x 5mg tablets retail $49.95
IAS price $39.99

Proscar® 15x 5mg tablets retail $39.95
IAS price $39.99

www.antiaging-systems.com/a2z/finasteride.htm

Fluconazole (Diflucan®, Loitin®)

Fluconazole is used to combat many different forms of yeast infections, including thrush. Yeasts are a contributing factor to our ‘body burdens’ which compromise our immunity and divert energy and repair processes away from other tasks.

Loitin® 7x 50mg capsules retail $39.95
IAS price $39.99

www.antiaging-systems.com/a2z/fluconazole.htm

Folic acid (folate, see ACF228™, BCI, Beyond B12®; HRT Plus®, Joint-Pro™; Lithium-Pro™; Nitric-Pro™)

Fludrocortisone

Fludrocortisone is a synthetic cortisol replacement which can help those who are low in cortisol to regain some of their stamina and be able to cope more effectively with stress etc.

Whilst it is well known that excess cortisol can lead to more stress, it is also true that those who are deficient in this hormone can also experience similar feelings.

Fludrocortisone can also be used in conjunction with aldosterone for hearing loss, (see Dr. Lippman’s article on our website for further details).

Recommended; one of Dr. Hertoghe’s hormone handbooks.

Fludro-Pro™ 100x 20mcg tablets retail $19.95
IAS price $14.99

www.antiaging-systems.com/84-florinef-fludrocortisone

Fructoborate (see Andro-Pro™)

GABA (gamma-aminobutyric acid, see Gamalate B6®; picamilone)
Studies are highlighting that GABOB may have good HGH release properties, very similar to GHB, but that GABOB does not induce sleep (as high doses of GHB do).

Taking GABOB at bedtime is a natural way to enable your body to increase its release of growth hormones during sleep and may also act to help you feel more relaxed and alert the following day.

GABOB® 60x 250mg capsules retail $39.95
IAS price $29.99

www.antiaging-systems.com/a2z/aminohydroxybutyricacid.htm

Galantamine is an extract of a plant found in the snow-drop family. It has been discovered to help prevent the destruction of acetyl-l-choline, the neurotransmitter most affected in Alzheimer’s disease and thus it has not only become approved for that purpose, but is also used in lower doses by those who are concerned about developing the senile dementia too.

Reminyl® 28x 8mg tablets retail $139.95
IAS price $129.99

www.antiaging-systems.com/a2z/reminyl.htm

Gamalate is a nutritional approach to help deal with stress, anxiety and overwrought feelings. With its GABA, GABOB, B6 and magnesium, it has a mild placating effect without drowsiness and may also be useful for those have a need to increase their GABA neurotransmitter balances.

Gamalate B6® 60x 250mg tablets retail $14.95 IAS price $12.99

www.antiaging-systems.com/a2z/gamalate.htm

Gengigel is a unique mouthwash that contains hyaluronic acid, a natural agent that improves connective tissues and healing. It also contains xylitol which has been shown to reduce the growth of harmful bacteria. Gingivitis, periodontitis, lichen planus, mouth ulcers and receding gums can all be treated with Gengigel.

Gengigel® 150ml bottle liquid retail $29.95
IAS price $24.99

www.antiaging-systems.com/a2z/gengigel.htm

Gerovital contains procaine, also known as Novocaine®, an analgesic but importantly the formula also contains the important stabilisers benzoic acid, potassium metabisulfate and disodium phosphate.

Gerovital has wide ranging effects including alleviating depression, improving joint condition as well as the texture of hair and skin and lessening the effects of stress.

For some time it was not clearly understood why Gerovital has such a wide range of benefits, but now it is considered that through its mechanism as its mild MAO inhibition and mild cortisol suppression that Gerovital exhibits a broad yet subtle effect of improving various brain chemicals and may also be able to influence cell metabolism favorably too.

Note; we offer original Gerovital tablets and ampoules (intramuscular injection packs are available- see injection kits for details) and a generic tablet to same formula too.

Gerovital-H3® 5x 5ml ampoules retail $49.95
IAS price $39.99

Gerovital-H3® 25x 100mg tablets retail $34.95
IAS price $24.99

GH3-Pro™ 60x 100mg tablets retail $19.95
IAS price $14.99

www.antiaging-systems.com/91-gerovital-h3
Hair-Pro™

Hair-Pro is the very latest development to help induce hair growth and it contains the absolute latest cutting-edge growth factor technologies.

Hair Pro is a unique proprietary topical liquid blend that includes finasteride, (the DHT blocking drug used orally for years as a hair loss treatment), but it also contains a plethora of aminoacids that act as hair growth factors including bFGF, TRX, VEGF and IGF-1.

In addition there is aminosyn to promote protein synthesis (hair strength), hyaluronic acid to aid hair hydration (thickness) and dexamphthanol to cleanse the pores of the blocking fat-sebum which can block nutrition from the hair root.

No finer multi factorial topical anti-alopecia product exists on the market today.

Hair-Pro™ 2 oz. spray bottle retail $199.95
IAS price $179.99
www.antiaging-systems.com/223-hair-pro

HRT Plus®

The new activated ‘Herbal Remedy from Thailand’ (hence H.R.T.) contains a bio-identical phytoestrogen called pueraria mirifica. This is a root that is found in northern Thailand and their bordering countries and whilst it is a member of the soy family it has been found to be 3000 times more estrogenic than any other type of soy!

This activated bio-identical H.R.T. supplement helps to nutritionally benefit women by supplying building blocks that assist the healthy production of natural estrogenic substances in the liver which may be compromised as a result of stress, aging and environmental exposure.

Women using HRT Plus report many premenstrual syndrome improvements, including reduced incidences of flushing and night sweats etc. HRT Plus is a nutritional (plant based) breakthrough for menopause and also contains additional supporting agents such as methyl folic acid and B12. Within 4-weeks this supplement can make a big improvement in menopause related symptoms.

HRT Plus® 60 tablets retail $49.95 IAS price $42.49
www.antiaging-systems.com/a2z/hrt_plus.htm

Hy-Col®

Hy-Col contains a chicken extract called BioCell Collagen II that releases hyaluronic acid and collagen to support healthy skin and joint function.

Hy-Col improves skin hydration and boosts skin elasticity whilst also decreasing the appearance of wrinkles by promoting skin repair and support.

Hy-Col™ 120x 250mg tablets retail $39.95 IAS price $29.99
www.antiaging-systems.com/a2z/hycol.htm

Hydergine (ergoloid mesylate)

Hydergine is an extract of a fungus that grows on rye called ergoloid mesylate and its approved uses have been to aid persons...
with memory disturbances, Alzheimer’s disease and even for persons who have suffered from shock related to electric, drowning or suffocation. This is because hydergine is an excellent provider of stabilising the levels of oxygen in the brain and has been shown to improve levels when they are too low and even decrease levels when they are too high.

The result of this optimised oxygen availability in the brain is an ability to do more mental workload without becoming tired. Accordingly, hydergine can be a good tool to battle through boring paperwork or a long drive home in the dark.

A fascinating animal experiment showed a special ability for hydergine to improve mitochondrial condition. The mitochondria are vital organelles found in every cell of our body responsible for the generation of ATP, the universal energy molecule. Unfortunately mitochondrial efficiency declines as we age and this has been linked to disrupted repair mechanisms. However an Italian study highlighted those old animal mitochondria can be improved with hydergine supplementation.

Hydergine has also been attributed to stimulate the growth of dendrite nerve fibers, since these connective strands are known to decline in aging this is another antiaging feature of hydergine. Some have even linked the density and numbers of dendrite fibers to the level of I.Q.

The Bertonin-Freddari et al, 1994 study highlights that hydergine can improve the size, volume and number of mitochondria in old animals towards the youthful example; as is shown here the difference between young, old (without hydergine) and old (with hydergine) is significant.

In summary, hydergine helps to protect against conditions of hypoxia and peroxidation, important factors to guard against a stroke and generalised brain injuries.

Hydergine can extend the boundaries of mental workload and energy, fighting against boredom and may even provide some groundwork for raising the levels of intelligence.

Note: IAS provides original Novartis (formerly Sandoz) hydergine in both tablet and liquid form. The liquid form can be titrated in small doses and may be more suitable for those who want low doses or have trouble swallowing tablets.

Hydergine® 30x 4.5mg tablets retail $34.95
IAS price $25.99

Hydergine® 40mg 40ml liquid bottle retail $24.95
IAS price $16.99

Hydrocortisone

Hydrocortisone is used in instances where individuals are responding poorly to stress, conversely because they are not producing enough cortisol.

Hydrocortisone is highlighted by key antiaging physicians as having the ability to ‘kick start’ the adrenal glands, particularly useful in states of adrenal fatigue.

Recommended; one of Dr. Hertoghe’s hormone handbooks.

Hydro-Pro® 100x 5mg capsules retail $29.95
IAS price $24.49

http://www.antiaging-systems.com/224-hydrocortisone

Idebenone

Idebenone is a synthetic analogue of CoQ10 which was originally designed in Japan to help with cognition.

It is interesting to note that idebenone appears to have most of the qualities of CoQ10 but with a very significant additional factor, idebenone is a very potent antioxidant, perhaps even the strongest single free radical scavenger agent on the market today.

Idebenone 60x 30mg capsules retail $39.95
IAS price $29.99

www.antiaging-systems.com/a2z/idebenone.htm

Injection kits

IAS provides a range of injection packs suitable either for intramuscular (i.m.) or subcutaneous (s.c.) meaning ‘just under the skin.’

Whilst individual syringes and needles are available, the packs themselves contain everything you need for 20 injections, including the relevant syringes and needles. Both packs also contain a box of alcohol wipes and a Sharpsbin® for safe disposal of used needles in each kit.

Alternatively, syringes and needles (5ml, 0.45mm x 16mm) can be purchased seperately if required.

Intramuscular 10ml injection kit IAS price $29.99

Subcutaneous 1ml injection kit IAS price $29.99

Syringe & Needle 1x pack retail $1.00 IAS price $0.99

www.antiaging-systems.com/213-injection-kits
Joint-Pro™

Joint-Pro contains both glucosamine sulfate and chondroitin sulphate, along with curcumin, boswella and other joint supportive ingredients to bring about improved joint movement and reduce joint pain, even for those in the late stages of joint discomfort.

Clinical studies support these natural ingredients’ effectiveness in promoting joint health, improving joint movement and relieving joint pain.

Joint Pro™ 180 capsules retail $49.95 IAS price $42.49
www.antiaging-systems.com/a2z/jointpro.htm

Kumex® (see deprenyl)

Ketoconazole (see Nizoral®)

Kohki leaf extract (see Prostate-Pro™)

Krill

Krill is a crustacean that is found in large masses in the sea and is a fond food for whales. Many people are becoming to regard krill as ‘superior fish oil’ because:

- Krill contains the omega oils 3, 6 and 9 (fish only contains omega 3)
- Krill is absorbed in the small intestine, (fish oils are adsorbed in the stomach) and therefore krill does not have any ‘repeat fish aftertastes.’
- Krill naturally contains phospholipids that act as a natural preservative; therefore krill oil is a lot more stable over time than fish oil.

Krill 60x 500mg gel capsules retail $49.95 IAS price $42.49
www.antiaging-systems.com/108-krill

Laetrile (amygdalin; VitaB17®)

Laetrile has also been termed as vitamin B17, it is found in kernels (particularly those of apricots) as well as some berries and seeds.

It has been used for the purposes of cancer and its uses and benefits were highlighted in Edward Griffin’s excellent book ‘world without cancer.’

It appears that laetrile utilises the cyanide locked up within its molecule and releases it only in the presence of a cancer cell, (because of the presence of a particular enzyme that is not present in healthy cells), thus laetrile can destroy cancerous cells, but not healthy cells. This fact has been a double edged sword for laetrile since cyanide is a well known poison, however it’s similar to the fact that chlorine is locked up within the salt molecule and you certainly don’t think of that when it is ingested!

Recommended: For specific treatment of a non-melanoma skin cancer we would recommend BECS Curaderm®

Note: Intramuscular injection packs are available- see injection kits for details.

Laetrile (Vita B17) 50ml Tub $74.49

B17 Laetrile Ampoules Amygdalin Ampoules 10 x 3 grams i.m. Amps $149.99

http://www.antiaging-systems.com/115-laetrile-vitamin-b17

L-arginine (see arginine)

L-carnosine (also see Can-C™; Can-C Plus™; Cardio-Pro™; ACF228™)

Carnosine is a di-peptide, which is to say is made up of two aminoacids, specifically alanine and histidine and it naturally occurs in some foodstuffs.

What is interesting about carnosine is that it is a very good anti-glycator, that is to say that it can slow and prevent cross links from damaging proteins. This means that it can be useful for diabetes, cardiovascular issues, cataracts, skin hardness and discoloration and many other issues related to aging.

“Carnosine is my favorite all-round antiager, its effective, cutting-edge, easy to use, has no significant side effects and scientifically-proven in over 1000 trials.” Marios Kyriazis, M.D. - British Longevity Society
Carnosine 30x 500mg capsules retail $39.95  
IAS price $30.49  
www.antiaging-systems.com/a2z/carnosine.htm

Lecithin (see Cell Energy®, Slim & Shape™)

L-histidine (see Can-C Plus™)

Licorice (see Digestif®, Beyond GHS®)

Lipoic acid  (alpha version see BCI; R-version see Mito-Pro™)

Liposomes (see Energo®, Cell Energy®, Slim & Shape®)

Lithium orotate (see Lithium-Pro™, Cardio-Pro™)

Lithium-Pro™

Research highlights that vitamin B12, folic acid, and lithium orotate supplementation can help support optimal health and brain function.

Studies have shown that the orotate form of lithium is the safest and most effective for the treatment of depressions and Alzheimer’s disease.

Lithium-Pro™ 60 capsules retail $24.95  
IAS price $21.99  
www.antiaging-systems.com/214-lithiumpro-lithium-orotate-folate-b12

L-methione (see ACF228™, Can-C Plus™)

L-proline (see Nitric-Pro™)

L-tryptophan

Found in foodstuffs such as dark green leaves and chicken, L-tryptophan makes up the precursor to serotonin, (although it is also used elsewhere in the body and not exclusively for serotonin as per 5HTP-see same).

L-tryptophan’s use as a supplement has principally been to improve conditions of depression; however it has also been used to aid sleep. In addition, L-tryptophan has been shown to aid persons suffering with obsessive compulsive disorders, such as gambling or alcohol abuse.

Note: L-tryptophan is also given to dogs and horses to help with their moods and epilepsy.

L-tryptophan 50x 500mg capsules retail $29.95  
IAS price $19.49  
www.antiaging-systems.com/a2z/ltryptophan.htm

Lycopene (see DIM-Pro™; Prostate-Pro™)

Lysine (see Nitric-Pro™)

Maca (Longevity Maca®, lepidium meyenii walp)

The Incas used Maca chiefly for its nutritional value (its dried roots are rich in essential amino acids-protein content), and the Conquistadors discovered ‘more valuable’ uses for it and demanded their tribute from the Indians in tons of Maca rather than gold. And although the word wasn’t in their vocabulary, they had discovered that Maca was a powerful Adaptogen.

For example, Maca can raise low blood pressure or lower high blood pressure. It can also balance blood sugar and can balance hormones (both in men and women) to virtually eliminate the unpleasant symptoms of PMS and menopause, post-menopause deficiencies, and other related conditions. Maca can help quiet the hyperactive or boost the energy levels of the chronically fatigued.

Longevity Maca® 180x 500mg capsules retail $34.95  
IAS price $29.49  
www.antiaging-systems.com/a2z/longevitymaca.htm

Magnesium (see Andro-Pro™, Bone-Pro™, Gamalate B6®; BCI, Digestif®, Nitric-Pro™)

Malic acid (see BCI; EDD)

Manganese (see Bone-Pro™, BCI)

Mastic (see Digestif®)

Meclofenoxane (see centrophenoxine)

Melatonin (MZS™, PraevoMed®)

Melatonin is one of nature’s remarkable substances and made in response to darkness by the pineal gland.
Its benefits to help overcome jet lag and shift work have become quite well known and indeed it is useful for this purpose since adequate melatonin availability enables our bodies to be correctly in tune with our circadian rhythms, these rhythms dictate our hormonal cyclicity and this cyclicity ultimately determine our aging and our level of immunity. Unfortunately melatonin secretions decline with aging.

Professor Pierpaoli has published widely on melatonin, principally through the New York Academy of Science and at the meetings of the Stromboli conferences on aging and cancer-which IAS is delighted to support.

What is important to know about melatonin is that Professor Pierpaoli advocates a 3mg dose to (his words) “put the pineal to sleep.” In addition, it is also vital to use a melatonin that produces a night peak of melatonin that is the same as the peak produced by the pineal itself. This he has achieved using specific excipients in his own formula “MZSTM” (which also contains the additional synergistic ingredients of zinc and selenium).

This graph highlights that Professor Pierpaoli’s Melatonin Zn Se formula mimics the night peak of melatonin. Note that sublingual melatonin tested peaks too soon and that time released formulas peak too late.

Here are some before and after Fundus photos showing the benefit of Melatonin Zn Se. They highlight dramatic improvements to both wet and dry forms of macular degeneration. In a trial published in the New York Academy of Science, 110 eyes, (100 patients) with both wet and dry forms of ARMD were treated only with 1 tablet of Melatonin Zn Se nightly. After 6-months 90% of the treated patients’ eyes had significant improvements to their condition. This is simply remarkable compared to the current approved therapy for ARMD which involves injecting the eye quarterly, (costs $1000+) with 50% improvement at 24-months!

Recommended: For further detailed information about melatonin and all of Professor Pierpaoli’s work we recommend his book ‘the key of life’

Memantine (Namenda®, Ebixa®)

Memantine is the first in a novel class of Alzheimer’s disease medications to act on the glutamatergic system by blocking NMDA glutamate receptors, thus effectively helping to block the damage caused by the release of excitotoxins.

Excitotoxins can be caused by items found in the food supply chain including flavor enhancers such as MSG and artificial sweeteners such as Aspartate.

Memantine caused great excitement as it became the first approved drug to show efficacy in the treatment of late-stage Alzheimer’s disease.

Memantine is marketed worldwide under the brands of Abixa, Axura, Akatinol, Ebixa, Namenda and Memox.

Ebixa® 42x 10mg tablets retail $199.95
IAS price $179.99

www.antiaging-systems.com/a2z/memantine.htm

Melon extracts (see Diet-Pro™)

Metformin (Glucophage®, Metforal®)

Metformin is a bi-guanidine drug approved for the use for the treatment of type-II diabetes. Metformin is able to improve the sensitivity of receptors to insulin without actually inferring with insulin levels. In addition metformin alters many other lipid levels favorably, for example reducing LDL (bad) cholesterol and raising HDL (good) cholesterol ratios.

Many adults are border line diabetics, mainly the result of the western diet, hence low doses of metformin can be useful to help combat the sugar highs and lows and energy and mental concentration/stability crises that can follow such events.

Furthermore, metformin can be a great addition to a diet to help speed up fat loss, especially since insulin is almost certainly the hormone most responsible for width in humans!
**Recommended: We suggest that you supplement with Beyond B12® whilst using metformin**

Dianben® 50x 850mg tablets retail $29.95  
IAS price $21.99

Metforal® 50x 500mg tablets retail $24.95  
IAS price $19.99

www.antiaging-systems.com/a2z/metformin.htm

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**Methione (see BCI; EDD)**

**Milnacipran (Ixel®, Savella®)**

Milnacipran is a psychoactive drug which functions as a serotonin-norepinephrine reuptake inhibitor (SNRI).

It is used for the treatment of clinical depression and has also been found to be clinically effective in the pain management of fibromyalgia and other similar disorders.

Ixel® 56x 25mg tablets retail $59.95  
IAS price $39.99

Ixel® 56x 50mg tablets retail $89.95  
IAS price $69.99

www.antiaging-systems.com/a2z/milnacipran.htm

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**Minoxidil (see MinSaw™)**

**MinSaw™**

MinSaw has been updated numerous times, but now it’s in its best formula ever. MinSaw provides all of these proven hair growth and protectors in its latest formula:

- **Minoxidil**: Perhaps the best known agent to help stimulate hair growth, which it does by increasing nitric oxide promotion in the root of the hair and in so doing delivers more nutrition for the hair to grow faster. MinSaw takes has one of the most potent amounts of minoxidil in it at 8%.

- **Vitamin C**: It’s known to help stimulate hair growth and ‘clean’ the root bulb, thus MinSaw now also contains the active form of L-ascorbic acid.

- **Saw Palmetto**: This herb helps to block the damaging effects of DHT, a known hair growth restrictor.

- **Resveratrol**: The remarkable protective agent found in red grape skins has recently been noted to help induce hair thickness.

- **Melatonin**: This has been documented (and was the subject of a patent) to help prevent hair loss.

- **Plus**, there is now a sixth active ingredient in MinSaw and that’s retinoic acid (also known as tretinoin). This super high strength vitamin A has long been known to improve skin condition by enhancing blood flow to the skin and in the same way, here in MinSaw this ingredient improves the blood supply around the hair root, helping it to be stronger and healthier.

Just apply a small amount of MinSaw daily to the scalp and see the results for yourself in a few weeks time.

**MinSaw™ 30ml bottle topical liquid retail $44.95  
IAS price $34.99**

www.antiaging-systems.com/139-MinSaw

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**Miroestrol (see HRT Plus®)**

**Mito-Pro™**

Mito-Pro provides a unique combination of nutrients allowing for increased mitochondria energy production without the increase in damaging oxidation that usually follows. The result: reduced aging at the cellular level.

Mito-Pro contains the highest-quality acetyl-L-carnitine and natural R-lipoic acid, to provide you with the most complete, powerful product possible. It also contains vitamins B1, B5 and biotin, which greatly enhance the effectiveness of both the R-lipoic acid and acetyl-L-carnitine.

**Mito-Pro™ 60 capsules retail $34.95  
IAS price $29.99**

www.antiaging-systems.com/a2z/mito-pro.htm

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**Moclobemide (Manerix®/ Moclamine®)**

Moclobemide is an anti-depression drug. Specifically it is a reversible inhibitor of monoamine oxidase A and acts on serotonin, noradrenaline and dopamine.

**Moclamine® 30x 150mg tablets retail $39.95  
IAS price $29.99**

www.antiaging-systems.com/126-manerix
Modafinil (also see adrafinil)

Modafinil resensitizes receptors in the brain called alpha-1 and makes them more sensitive to the neurotransmitter noradrenaline, the result is enhanced alertness and as a result modafinil has revolutionised the treatment for narcolepsy (sleeping in the daytime) and cataplexy (sudden weakness or fatigue).

A unique feature of modafinil compared to amphetamines is the fact that modafinil will not induce a ‘high’ it simply allows the brain to maintain a high state of awareness and concentration, if one is already ‘awake’ then modafinil will not increase this mode, rather it will help to maintain it for several hours, and all without major side effects and no known dependency effects.

Today the word about modafinil’s effectiveness has spread beyond the treatment of ailments. There are reports of persons undertaking critical jobs that require constant attention, people like pilots, surgeons, air traffic controllers and even long-distance truck drivers who are using modafinil to enable them to be better at what they do.

Alertec® 30x 100mg tablets $160.00
Mediodal® 30x 100mg tablets $170.00
Provigil® 30x 100mg tablets $180.00

Note: This product is only available via www.somatropinonline.com

NADH exists in every living organism and is the spark-plug in the mitochondria for ATP universal energy production. NADH supplements can increase your overall energy naturally without the need for caffeine, sugar, or other ‘energy drinks.’

NADH is also known to enhance dopamine levels which means they are a useful adjunct for Parkinson’s and can help otherwise healthy individuals with their memory, drive, focus and well being.

Note: Dr. Birkmayer’s NADH lozenges are designed to melt under the tongue. The Astarte version contains an additional 450mg of arginine. The combination of NADH with arginine elicits more nitric oxide release.

NADH Direct® 20x 20mg lozenges retail $99.95
IAS price $89.99
NADH Astarte® 20x 10mg capsules retail $89.95
IAS price $79.99
www.antiaging-systems.com/111-nadh

Naltrexone

Low doses of naltrexone appear to be effective in the treatment of a wide range of autoimmune diseases including MS, lupus, HIV. Information is even coming to light that it could also aid patients with ALS, Crohn’s, Alzheimer’s, Parkinson’s, fibromyalgia and chronic fatigue syndrome.

Note: IAS stocks the precise 4.5mg capsules as required for the low dose naltrexone program.

Naltrexone 30x 4.5mg capsules retail $59.95
IAS price $49.99
www.antiaging-systems.com/a2z/naltrexone.htm

Nanogen® conditioner

This special hair conditioner can condition hair up to 50% thicker by utilising the latest hair conditioning technology. Nanogen conditioner has a patented formula that swells the hair with a positive charged delivery system increasing water absorption by up to 10-times. In addition, a silicon coating adds weight without stickiness, the end result is thicker and heavier hair that still moves naturally.

Nanogen® hair conditioner 240ml bottle conditioner IAS price $29.99
Nanogen® shampoo

Nanogen shampoo helps to block DHT production in the scalp. DHT is a by-product of testosterone that is understood to be involved in hair loss. Nanogen shampoo contains a plethora of natural ingredients to encourage hair growth and it can be used in place of your regular shampoo.

Nanogen® Hair prepare 240ml bottle shampoo
IAS price $34.99
www.antiaging-systems.com/a2z/Nanogen_a.htm

Nettle root extract (see Prostate-Pro™)

NeyGero® (RNAs)

Composed of ribonucleic acids (RNAs), the building blocks of DNA, extracted from bovine tissues, NeyGero helps the organs most affected by stress, wear and aging. There are RNAs from the heart, thymus, gonads, liver, pancreas-13 glands in total, plus, vitamins B6, B12 and E, as well as procaine, biolechthins and amino-acid complexes.

It is a combination that acts as a tonic, improving cellular activity and aiding cellular metabolism.

Note: Intramuscular injection packs are available—see injection kits for details.

NeyGero 64-A® 5x 2ml i.m. ampoules retail $139.95
IAS price $129.49

NeyGeront® 40x 0.5ml capsules retail $79.95
IAS price $71.49
www.antiaging-systems.com/124-neygeront-rn13-rna-cell-therapy

NeySkin® CoQ10

NeySkin CoQ10 cream combines a unique blend of the skin’s RNAs (ribonucleic acids-bovine origin), vitamins, plant extracts and the antioxidants vitamin E and CoQ10.

The result is a skin moisturizer that leaves you with skin that is better supplied with vital nutrients and oxygen, enhanced blood circulation and increased collagen and elastin production whilst at the same time the removal of metabolic waste is improved. Your skin will be cleansed, moisturized, replenished, refreshed and rejuvenated.

NeySkin® 50ml tube cream retail $52.95
IAS price $47.49
www.antiaging-systems.com/127-neyskin-coq10-skin-cream

Nicergoline (Sermion®)

Nicergoline has an alpha-adrenolytic action which means that it activates the brain’s metabolism and improves arterial flow, lowers vascular resistance and improves the use of glucose and oxygen. Furthermore, it is known that nicergoline inhibits platelet aggregation, and animal experiments have shown it to increase nerve growth in the aged brain.

Nicergoline is being used to help treat migraines of vascular origin, as well as blood problems such as transient ischemia (occasional blood supply difficulties), platelet hyper-aggregability (sticky blood platelets), improving lung blood-circulation and even for macular degeneration.

Sermion® 50x 10mg tablets retail $49.95
IAS price $39.99
www.antiaging-systems.com/a2z/nicergoline.htm

Nitric-Pro™

Nitric-Pro has been designed to elicit a strong release of nitric oxide within the body.

The body’s natural source to produce nitric oxide is from arginine and oxygen, this is why each scoop of Nitric-Pro contains 3500mg of arginine, along with other natural ingredients that enhance and support its role.

Using Nitric-Pro to increase your nitric oxide levels can help in many ways including deep-vein thrombosis, normalise blood pressure, soften arteries and improve blood flow, assist breathing, improve erections, enhance hair growth and even increase the secretion of HGH.

Note: To further enhance nitric oxide release try combining Nitric-Pro with NADH.

Nitric-Pro™ 450 grams powder retail $69.95
IAS price $59.99
www.antiaging-systems.com/129-nitric-pro
Nizoral® shampoo (2% ketoconazole)

Nizoral can help in two principal ways for scalp health, by reducing the causes of dandruff and by removing scalp fungal infections.

However there is a third interesting element to this shampoo. Nizoral can help ‘unclog’ the sebum oil deposits that collect in the follicles bulb, this removal can improve nutrition delivered to the hair root and enable hair to grow stronger and faster.

Recommended: Nizoral should not be used more than 3-times a week and always followed with a quality conditioner such as Nanogen® to prevent drying of the hair and scalp

Nizoral® 60ml bottle shampoo retail $19.95 
IAS price $14.99

www.antiaging-systems.com/a2z/nizoral.htm

Nordihydroguaiaretic acid (NDGA, see ACF228™; Digestif®)

Norditropin® (see HGH)

Omega 3 (see krill; BCI)

Omega 6 (linoleic acid, GLA, see krill; BCI)

Omega 9 (oleic acid, see krill; BCI)

Ouabain (see Strodival®)

Oxythiocynate (thiocynates, see 1st Line™)

Oxytocin (Oxy-Pro™)

Oxytocin is a hormone produced in the hypothalamus and secreted into the blood by the pituitary gland.

Oxytocin has been described in detail in Dr. Thierry Hertoghe’s latest book- Passion, Sex and Adventure, the oxytocin story.

It is coming to light that oxytocin has pain curbing abilities and could be efficacious in fibromyalgia. Other studies are highlighting that oxytocin could be efficacious in the treatment of autism and even schizophrenias. But it is perhaps its ability to enhance bonding between partners that is likely to attract most attention.

From the sexual standpoint oxytocin has been known to increase ejaculation in the male and in females oxytocin has had significant libido enhancement effects, including the inducement of multiple orgasms.

We have worked alongside Dr. Hertoghe to create a practical and efficacious sublingual troche (that’s a gel like tablet) typical doses are 5 to 20 IU as required.

Oxy-Pro® 24x 20IU sublingual troches retail $94.95
IAS price $84.99

www.antiaging-systems.com/a2z/oxytocin.htm

PABA (para-aminobenzoic acid, see BCI; Gerovital®)

Palladium (see Cardio-Pro™)

Palmitate (see BCI)

Pancreatin (see Wobenzym®)

Papain (see BCI; EDD; Wobenzym®)

Paxil® (Seroxat®, paroxetine)

Paxil contains paroxetine which is approved as is a selective serotonin reuptake inhibitor (SSRI) antidepressant. Marketing of the drug began in 1992 by the pharmaceutical company SmithKline Beecham.

Seroxat® 14x 20mg tablets retail $39.95
IAS price $29.99

www.antiaging-systems.com/a2z/paxil.htm

Penicillin (Penilevel®)

Penicillin is a term used for a group of antibiotics derived from the Penicillium fungi. Penicillin antibiotics are historically significant because they are the first drugs that were effective against many previously serious diseases such as syphilis and staphylococcus infections and penicillin’s are still widely used today. This form contains the ‘preferred’ potassium base.

Penilevel® 30x 250mg sachets powder retail $34.95
IAS price $29.99

www.antiaging-systems.com/157-penicillin
**Phenytoin** *(Dilantin®, Epanutin®)*

Phenytoin works by stabilising electrical activity in the brain which, if disturbed, can result in fits or seizures; this is why the major approved use for phenytoin is the treatment of epilepsy.

However, as eloquently described in the book ‘the story of a remarkable medicine’ by the Wall Street giant Jack Dreyfus, phenytoin has the ability to assist conditions of pain, stress, behavioral and neuromuscular disorders and cardiovascular issues such as arrhythmias, angina and hypertension, but perhaps most significantly of all- some forms of depression.

**Epanutin® 28x 25mg tablets**

*retail $14.95*  
*IAS price $9.99*

www.antiaging-systems.com/a2z/phenytoin.htm

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**Phos-Pro™ (phosphatidylserine & DHA)**

Phos-Pro contains a phosphatidylserine DHA compound, (PS-DHA), an essential component of brain cell membranes to help support memory, brain longevity and mood.

Phos-Pro contains the most biologically active form of phosphatidylserine which supports brain function to help:

- Enhance cognitive and mental function
- Improve memory and overall brain function
- Deliver DHA to your brain cells
- Improve your outlook and mood
- Support nerve transmitter and synaptic release

**Phos-Pro® 60x 100mg capsules**

*retail $59.95*  
*IAS price $49.99*

www.antiaging-systems.com/a2z/phosphatidylserine.htm

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**Picamilon**

Picamilon is a Russian development that bonds two natural molecules- GABA (utilised for stress and anxiety) and niacin, (the B3 vitamin that can cause stimulation). What was created is a unique calming agent that has no sedative effects; in fact almost the opposite as picamilon displays some mild stimulatory properties.

Furthermore, because picamilon has significant vasodilation effects, (in other words it can improve blood flow) it has been used to treat disorders related to ischemia including migraines and eye disorders.

**Picamilon 60x 50mg tablets**

*retail $29.95*  
*IAS price $24.99*

www.antiaging-systems.com/a2z/picamilon.htm

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**Piracetam** *(Nootropil®; also see Anacervix®)*

Piracetam was the very first nootropic, (commonly called smart drugs) to be developed and despite being one of the very first products that IAS offered when we went started out in 1991, it still remains one of our best selling products today! Why? Because it is a very beneficial memory agent that has a great safety record, with very few side effects, plus it is cost effective.

Piracetam has been shown to have a better/ lower toxicity profile than salt. Maybe because it has a very small impact upon brain chemical levels, but rather helps to improve electrical communication across the brain’s corpus callosum.

In medical terms piracetam is used to improve short term memory and to treat a wide variety of senile dementias as well as autism and Down’s syndrome and can also assist with travel and altitude sickness.

**Note:** IAS offers the original UCB brand called Nootropil which is available in tablet and liquid form. The liquid form was specifically designed for children (it is sweetened with saccharin), but its advantages include being able to titrate low doses (if required) and also aid any person who has difficulty swallowing tablets.
Placenta

Placenta extracts have long been used as general rejuvenation therapies and remain popular today in Swiss cell therapy clinics where many thousands of Dollars are often charged for a course.

We are offering the highly respected German cell extract company- VitOrgan’s placenta injectable in its highest concentration form. This is applied via intra muscular injection and contains Pharma extracted and controlled bovine origin placenta.

Note: Intramuscular injection packs are available- see injection kits for details.

NeyDil 70® 5x 5ml i.m. ampoules retail $124.95
IAS price $99.99

Placenta (NeyDil 70®)

Nootropil® 20 grams 100ml liquid retail $24.95
IAS price $19.99

Nootropil® 60x 800mg tablets retail $29.95
IAS price $24.99

www.antiaging-systems.com/a2z/piracetam.htm

Polyphenols (see grape seed extract)

Pomegranate extracts (see Andro-Pro™)

Potassium (see BCI; Gerovital®)

Potassium iodide (see ACF228™)

Prasterone (see DHEA)

Pueraria mirifica (see HRT Plus®)

Pramiracetam

Pramiracetam is the latest development of the original smart-drug piracetam. Pramiracetam works in much the same way; that is to improve electrical communication across the corpus callosum and to help improve intra hemisphere brain communication.

In so doing pramiracetam has been used to aid conditions of poor cognitive function, in particular to enhance short term memory functions.

One study suggested that the optimal dose of pramiracetam is 15mg per Kg bodyweight, whereas piracetam’s are 100mg per Kg bodyweight, ergo this comparison suggests that pramiracetam can be considered to be 6/7 times more potent than piracetam alone.

Pramiracetam 40x 300mg tablets retail $59.95
IAS price $49.99

www.antiaging-systems.com/a2z/pramiracetam.htm

Pregnenolone

In the 1950’s before the invention of non-steroidal anti-inflammatories, pregnenolone was the drug of choice to reduce inflammatory responses that were the cause of arthritis etc. It was given in multi gram doses without any significant side effects and in this regard can be considered to be one of the safest hormones around.

Recommended; one of Dr. Hertoghe’s hormone handbooks.

Pregnenolone 50x 100mg capsules retail $24.95
IAS price $19.99

www.antiaging-systems.com/165-pregnenolone-metabolite

Procaine (Novocain®, see Gerovital®)

Progesterone

Progesterone is often the ‘missing’ hormone in the treatment of female menopause. What we mean by this is that whilst estrogen treatments, (see Esnatri for details) are often considered as a primary replacement hormone for women of that certain age, progesterone is often forgotten about.

The best known action of progesterone is its ability to help build bone mass and since progesterone levels fall rapidly in menopause it contributes to osteoporosis in elderly women. Progesterone is strongly advocated to be taken in combination with any estrogen replacement program.
**Progesterone levels decline in women with age; in some cases progesterone levels can be undetectable!**

*Recommended; one of Dr. Hertoghe’s hormone handbooks.*

Progesterone 50ml 1.3 grams cream retail $39.95
IAS price $24.99

www.antiaging-systems.com/a2z/progesterone.htm

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**Propranolol (Inderal®)**

Propranolol is a beta-blocker, a drug that can block the effects of adrenaline, the so-called fight or flight hormone. Propranolol is used to help calm stressful persons and to keep them calm during stressful situations, it can also have an effect on lowering high blood pressure and other side effects of stress caused due to high adrenaline levels.

Inderal® 30x 40mg tablets retail $17.95
IAS price $9.99

www.antiaging-systems.com/a2z/propranolol.htm

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**Prostate-Pro™**

Prostate-Pro contains all the proven nutritional sources of the highest quality that can improve prostate conditions. For example, only herbs of European Pharmaceutical Grade are used in Prostate-Pro, these include nettle root and Pygeum africanum and they are of the same forms and standardizations as used in the impressive scientific studies.

Furthermore, only the highest quality, natural form of lycopene is included in Prostate-Pro, whereas most other supplements use a synthetic form of lycopene that is not as effective. Prostate-Pro also incorporates daidzien, which is more effective than saw palmetto.

Prostate-Pro™ 90 capsules retail $49.95
IAS price $44.99

www.antiaging-systems.com/a2z/prostatepro.htm

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**Prozac® (fluoxetine)**

Prozac is the original SSRI anti-depression drug manufactured by Pfizer.

Inderal® 28 x 20mg Caps retail $17.95 IAS price $9.99

www.antiaging-systems.com/a2z/prozac.htm

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**Pueraria mirifica (see HRT Plus®)**

Pygeum africanum (see Prostate-Pro™; Nanogen®)

**Pyri Pro™**

Pyridoxamine is one of the three naturally occurring vitamin B6’s (the others being pyridoxal and pyridoxine), but pyridoxamine as a supplement is the rarest form, perhaps partly due to its high per Kg. price or the fact that the FDA have decided that it is a drug (sic). However looking at the science rather than the politics, the clinical trials have supported facts about pyridoxamine that do not appear to be present in the more commonly available B6 vitamins. In particular pyridoxamine has potent anti-glycosylation properties; this has benefits for diabetes, cardiovascular disorders and cataracts to name but a few.

Pyri Pro™ 60x 50mg tablets retail $29.95
IAS price $26.49

www.antiaging-systems.com/a2z/pyridoxamine.htm

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**Pyritinol (Cerbon 6®)**

Pyritinol is a derivative of vitamin B6 and is generally accepted use is to improve memory, vigilance and concentration.

Physical and psychological exhaustion; altered sleeping and waking rhythms and symptoms related to senility and pre-senility have all been shown to respond positively to pyritinol. It may even be of benefit for those who perform poorly academically.

Cerbon 6® 60x 100mg tablets retail $27.95
IAS price $19.99

www.antiaging-systems.com/a2z/pyritinol.htm

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Note: Please order this product from: www.somatropinonline.com

wwwANTIAGING-SYSTEMS.COM // Order hotline: 1-866-800-4677 // e-mail: ias@antiaging-systems.com
Quinton®

Quinton is perhaps one of the most remarkable and unique ‘water’ products available today. This is because it is marine plasma harvested from a seawater vortex plankton bloom, of which only a few such areas exist on the planet.

This source and its health properties were discovered by Dr. Rene Quinton (1867-1925) and hence named after him. The water extract was the source of relief for hundreds of thousands of French people during that century and Dr. Quinton became so respected that when he died, the French Prime Minister Paul Painleve came to read his elegy.

In Dr. Quinton’s book of 1904 (translated from the French- ‘ocean water its organic matrix’), he demonstrated the analogy between the body’s inner environment, the blood plasma and ocean water - the medium in which all cellular life had its origin. The book was so well received at the time that he was called the second Darwin.

Today, Dr. Quinton and his work are not common knowledge, yet this essential marine plasma seawater extract is still produced in Europe.

It’s impossible for us to do credit to the wide range of benefits that can be transcribed by this water, please see the IAS website for further details.

What we shall mention here is that Quinton contains a rich biomatrix of 72 minerals in a highly bioavailable form. It is even suggested that just one vial of Quinton can rehydrate more than a liter of regular spring water.

- The hypertonic form is the pure plasma extract which has three times the mineral concentrations of your blood. For energy, rapid remineralisation and sports performance this form is recommended.
- The isotonic form has added spring water to obtain the same concentration mineral as blood plasma; it is recommended for longer-term regular use to support health, healing and detoxification, or for persons of a ‘sensitive’ nature.

Note: The Quinton marine plasma extract is cold sterilised under ISO pharmaceutical conditions, it loses none of its important activities through heat or chemicals as many other sea extracts do.

Isotonic® 24 oral ampoules retail $59.95
IAS price $47.99

Hypertonic® 24 oral ampoules retail $59.95
IAS price $47.99

www.antiaging-systems.com/a2z/quinton.htm

Reboxetine (Edronax®, Davedax®)

Reboxetine is an anti-depressant known as a selective noradrenaline re-uptake inhibitor (SNRI). It belongs to a unique group of drugs with actions that tackle anxiety and help to stimulate the mind.

Edronax® 60x 4mg tablets retail $79.95
IAS price $69.99

www.antiaging-systems.com/a2z/reboxetine.htm

Red algae (carrageenan, see BCI; EDD)

Red yeast (see BCI; EDD)

Relenza® (Zanamivir)

Relenza is the anti-viral drug manufactured by Glaxo Smith Kline.

Relenza® 20x 5mg diskettes retail $59.95 IAS price $49.99

www.antiaging-systems.com/a2z/relenza.htm

Resveratrol (see Resveratrol-Pro™, Cardio-Pro™, BCI, ACF228™)

Resveratrol is the now famous constituent found in red wine that helps to reduce the harmful effects of cholesterol and reduces many pathways/ stages of cancer.

Resveratrol-Pro also contains additional synergistic ingredients which include the other grape flavonoid- quercetin, vitamin E and the extract of green tea EGCG as well as additional red wine polyphenols.

Note: Resveratrol-Pro only contains the active form of trans-resveratrol at a high dose of 75mg per capsule.

Resveratrol-Pro™ 60 capsules retail $34.95
IAS price $29.99

www.antiaging-systems.com/150-resveratrol
Retin-A® cream

Retin-A contains retinolic acid, a pure form of vitamin A that enhances blood supply to the skin’s surface and transforms the appearance of thicker, tougher skin into more youthful looking, elastic and fresher skin but speeding up the process of the delivery of nutrition to the skin and the removal of waste materials from it.

Retin-A is the cream of choice for cosmetic surgeons to speed up the wound healing of cosmetic surgery and scarring etc.

Recommended: It is suggested that a quality moisturiser is utilised, (we recommend NeySkin®) and that as skin will be more sensitive during treatment that the patient be aware that their skin may burn more quickly when exposed to sunshine, therefore we recommend Solaris® skin screen is employed when necessary.

Note: We now also supply the new micro-gel which is designed to sit on the skin surface and release slowly. Results are improved and side effects are reduced.

Retirides® 30ml 0.025% cream retail $39.95  
IAS price $32.49

Retirides® 30ml 0.050% cream retail $44.95  
IAS price $39.99

Retirides® 30ml 0.100% cream retail $59.95  
IAS price $44.99

Retin-A® 20ml 0.100% micro-gel retail $69.95  
IAS price $59.99

www.antiaging-systems.com/a2z/retina.htm

Samoe (S-Adenosyl-L-Methionine; SAMYR®)

SAMe stands for S-Adenosyl-L-Methionine, a universal methylator; that is to say it is used widely throughout the body to help convert one chemical into another.

SAMe when used as a supplement can significantly help improve joint conditions; this is because it acts as a sulphur donor enabling other nutrients such as chondroitin sulphate and MSM to do their job better in rebuilding and maintaining joint cartilage etc. Some of the earliest signs of SAMe’s ability to help correct arthritic conditions are reduced signs of swelling and pain.

SAMe is also the third most concentrated chemical in the liver, so it has been used to correct liver disorders such as cirrhosis and even hepatitis. A better liver means better detoxification and that has an impact on general health and well-being.

But perhaps SAMe’s most successful role has been in assisting and alleviating depression. Most mild to medium forms of depression respond well to SAMe and this was highlighted in Dr. Richard Brown’s excellent book on the subject ‘stop depression now with SAMe,’ (although it should be noted that persons with severe/ bi-polar or schizophrenic forms should consult with their physician before starting on SAMe).

Note: Our SAMe tablets are enteric coated and blister packed in foil. It is important that the tablets are protected from light and that they avoid stomach digestion by the enteric coating.
Sermorelin is a breakthrough development in the field of growth hormone (GH) replacement, for sermorelin is the bioidentical molecule used by the pituitary gland to help stimulate production and release of GH into the bloodstream.

Sermorelin is not GH; GH is a complicated molecule consisting of 191 amino acids, but rather sermorelin is a 29 chain of amino acids, but importantly it is the first 29 amino acids of GH, the part responsible for activation.

This is what makes sermorelin stand head and shoulders over all previous agonists of GH, because sermorelin is GH site specific and therefore effective. What is more, sermorelin has a negative feedback loop (unlike GH itself), so the issues of overdosing and safety associated with injections of GH are minimized/completely avoided with sermorelin.

And now for the first time it has been shown that sermorelin is stable at room temperature and efficacious when used sublingually. These are additional factors that favor sermorelin as the next generation of GH activators.

We are excited to introduce this sublingual liquid version of sermorelin which has been created with the close cooperation of Dr. Richard Walker of SARA (Scientific Applied Research into Aging), a world renowned antiaging expert.

Silver in its various forms has been known about for hundreds of years as a killer of many infections. The pioneers to the west of America placed a silver Dollar into barrels of water to help keep them free from infection. Today silver coated water filters help keep pools clean and silver coated plasters and even clothing helps us to stay fresh.

What’s important to know about silver supplements is that they should be:

- Non-ionic, if you read about side effects such as argyria, (the greying of the skin), these are due to ionic forms of silver being used in the past; these forms should no longer be on the market.
- In addition, the potency of the silver protein should in the hundreds of parts per million (ppm) to be effective.
- Finally, the silver molecule should be as small as possible. Now the technology exists to produce nano molecules this has improved its effectiveness.

IAS is delighted to report that the ‘advanced colloidal silver’ (ACS-200) that we offer has all three of these important qualities listed above and is a 200 ppm strength.

Silver is reported in the literature to kill over 650 different forms of viruses, fungi, yeasts, bacteria and flukes, both gram positive and gram negative. Keep a bottle of ACS200 in your first aid cabinet at the ready!

Note: The ‘spray’ bottle can be used on skin infection or sprayed into the ears, nose and throat as required. You can also remove the ‘spray’ top and consume it in one go (as a shot) to help knock out internal infections.

ACS200 spray 2 fluid ounces retail $39.95
IAS price $32.49
www.antiaging-systems.com/174-silver
Slim and Shape® cream

Slim and Shape body lotion is designed to activate lymph circulation to reduce the appearance of cellulite.

Designed by one of Europe’s leading dermatologists- Professor John Ionescu, it is the result of 10 years’ of his clinical research.

Slim and Shape has a DMS liposome base, giving it excellent skin moisturizing properties, with additional algae extracts, caffeine and DMAE to mobilize excess lipids and fat deposits. The result is a lotion that moisturizes and reduces cellulite.

Slim and Shape body lotion is free of preservatives, color and fragrances and therefore is hypoallergenic and suitable for sensitive or allergic skin.

Slim & Shape® 150ml bottle cream retail $59.95
IAS price $54.49
www.antiaging-systems.com/a2z/slimandshape.htm

Solaris®

Solaris is a unique sun-cream developed by one of Europe’s leading dermatologists, Professor John Ionescu, to provide a ‘healthy’ tan, without the skin aging effects of the sun.

Solaris Photoaging Defence Formula, which combines for the first time UVA plus UVB protection (with an SPF of 25) with melanin promoting factors, thus enhancing the natural tanning process.

Unlike many sun creams these days, Solaris is free of preservatives, colors and fragrances and therefore hypoallergenic and suitable for sensitive or allergic skin.

Solaris® 150ml bottle cream retail $59.95
IAS price $49.99
www.antiaging-systems.com/184-solaris

Stablon® (tianeptine)

Stablon is an anti-depressant which has attracted the interest of the medical community for two key reasons; it works in a novel way and it appears to produce fewer side effects to the more commonly available anti-depressants.

Stablon increases our body’s uptake, or absorption, of the important neurotransmitter serotonin (which helps to regulate mood). This contrasts with common anti-depressants like Prozac® and Paxil®, which instead work to maximise serotonin levels by blocking their uptake.

Stablon is known in the majority of cases to act without certain side effects that are seen with SSRIs, side effects such as the loss of libido/sexual appetite, cause of erectile dysfunction, drowsiness and weight gain.

Stablon® 30x 12.5mg tablets retail $49.95
IAS price $34.99
www.antiaging-systems.com/a2z/stablon.htm

Stablon® 60x 12.5mg tablets retail $69.95
IAS price $64.99

Strodival® (g-Strophantinum, Ouabain)

The commonly held belief is that heart disease is caused by blockages of plaque in the arteries; however another theory of myocardial infarction was proposed by Dr. Berthold Kern of Germany more than 50 years ago.

Dr. Kern was concerned because many of his autopsies of patients who had died of heart attacks didn’t corroborate the obstruction hypothesis.

Over many years Dr. Kern developed another theory- that is that it is unchecked metabolic acidosis, (the accumulation of acid) in the left ventricle, (the part that supplies all parts of the body except the lungs) that is the problem for these patients.

This process occurs when energy conditions become poor; a reduced oxygen environment develops acidosis and the ensuing fermentation metabolism (under anaerobic conditions), in turn lowers the Ph. The lower Ph begins a destructive process of cell self-digestion (apoptosis), and when a critical mass is reached a heart attack is triggered.

What Dr. Kern discovered was that an extract of an African plant
called strophanthus gratus, (specifically g-Strophanthinum), when used orally prevented myocardial tissue acidosis and substantially significantly reduced the incidence of infarctions.

Strodival has been used in cases of arrhythmias and angina and given at the onset of chest pains.

**Note: The tablets are enteric coated.**

**Strodival® 100x 3mg enteric coated tablets retail $79.95 IAS price $72.49**

www.antiaging-systems.com/a2z/strodival.htm

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**Squalene (see Slim & Shape®)**

**Succinic acid (DMSA, see Heavy Detox®)**

**Superoxide dismutase (see Nanogen®)**

**Symmetrel® (see Amantadine)**

**Tamanu**

Tamanu oil is a remarkable topical healing agent, with skin healing, anti-neuralgic, anti-inflammatory, anti-microbial, anti-biotic and anti-oxidant properties.

Tamanu oil is widely used for a wide range of topical ailments including inflamed skin, ulcers, sores, pimples, rashes, wounds, chapped skin, acne, psoriasis, fissures/ haemorrhoids, sunburn, dry/ scaly skin and even stretch marks and recently formed scars.

**Tamanu 50ml bottle oil retail $24.95 IAS price $21.99**

www.antiaging-systems.com/208-tamanu-oil-topical-healing-agent

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**Tetracycline (Ambramicina®)**

Tetracycline is a broad-spectrum antibiotic, indicated for use against many bacterial infections including acne, rosacea, and dental applications.

**Ambramicina® 16x 250mg tablets retail $29.95 IAS price $19.99**

www.antiaging-systems.com/a2z/tetracycline.htm

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**Thymus (see Thym-Uvocal®)**

The thymus is a gland located in the chest. It produces hormones that, among other things, strengthen the body’s immune system. However, the hormonal output of the thymus gland diminishes rapidly after the age of 25, resulting in a reduced immune system and greater susceptibility to tumors, rheumatic disease and growth disorders etc. In fact, the thymus gland is one of the earliest to diminish in its efficiency, often starting at the beginning of puberty, around the age of thirteen!

Thym-Uvocal contains all 13 of the thymic peptides and we remain confident that it is a premier thymus extract supplement. In clinical trials, Thym-Uvocal supplements have helped rheumatoid arthritis patients reduce the number of painful joints and the intensity and duration of pain within just 6 weeks of treatment. The improvements have even been recorded up to 72 weeks later.

**Note: Thym-Uvocal capsules now also contain zinc and selenium as synergistic agents to support the thymus peptides.**

**Thym-Uvocal® 90x 200mg capsules retail $119.95 IAS price $97.49**

www.antiaging-systems.com/a2z/thymus.htm

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**Thyroid (Armour®; Synthroid®)**

A decline in the secretion of hormones from the thyroid gland (hypothyroidism) can result in poor concentration, confusion, memory problems, cold hands and feet, weight gain, menstrual problems, sleep disorders, dry skin, thinning hair and low energy levels. An underactive thyroid is also a major cause of a common painful musculoskeletal condition known as fibromyalgia.

Aging often leads to hypothyroidism, one of the most famous thyroid experts, Dr. Broda Barnes states that as many as 40% of the adult population could be hypothyroid.

Thyroid supplements come in two forms; these are whole or natural supplements and synthetic supplements. It is almost always better to use a whole-natural thyroid extract because the synthetic versions usually only comprise of one of the thyroid hormones, (such as, T3 or T4), whereas, whole-natural thyroids cover a fuller spectrum of thyroid hormones (including T1, T2, T3 and T4).

By measuring a particular hormone known as Thyroid Stimulating Hormone (TSH) it can be determined whether
supplementation is necessary. However there are simple measures such as noticing if one regularly has cold hands and feet, problems adapting to temperature changes, or checking to see if one’s rising from bed body temperature is regularly below 97.8 degrees Fahrenheit could indicate a hypothyroid condition that needs correction.

Recomended; one of Dr. Hertoghe’s hormone handbooks.

Our natural thyroids include:
Armour® 100x 15mg tablets retail $44.95
IAS price $41.49
Armour® 100x 30mg tablets retail $59.95
IAS price $49.99
Armour® 100x 60mg tablets retail $79.95
IAS price $69.99
Armour® 100x 90mg tablets retail $94.95
IAS price $79.99
ERFA 100x 30mg tablets retail $44.95
IAS price $39.99
ERFA 100x 60mg tablets retail $69.95
IAS price $59.99
ERFA 100x 125mg tablets retail $99.95
IAS price $89.99
Westhroid® 100x 15mg tablets retail $44.95
IAS price $36.99
Westhroid® 100x 30mg tablets retail $49.95
IAS price $39.99
Westhroid® 100x 60mg tablets retail $59.95
IAS price $52.49
Westhroid® 100x 120mg tablets retail $89.95
IAS price $79.99

Our synthetic thyroids include:

Titre® (T3) 50x 20mcg tablets retail $34.95
IAS price $24.99

Eutirox® (T4) 84x 100mcg tablets retail $29.95
IAS price $19.99

Thyrotropin releasing hormone (see TRH)

TMG (trimethylglycine, betaine, see Bio-En’R-Gy®, BCI; EDD; Joint-Pro™)

Tocotrienols (see BCI)

T-Pro™ (see Vigor-Pro™)

Tribulus terrestris (see Andro-Pro™, Beyond GHS®, Vigor-Pro™)

TRH (Abaris™)

TRH is a hypothalamic hormone whose real uses and benefits are just coming to the fore, primarily after research conducted by Dr. Walter Pierpaoli, the physician and scientist who exposed the benefits of melatonin to the world.

Dr. Pierpaoli’s research suggests that TRH is a ‘master’ hormone responsible not just for helping to adjust thyroid hormones (its principle recognised role), but in helping to rectify many imbalances throughout the body. For example in his animal experiments TRH supplements have encouraged old animals to:

- Re-establish spermogenesis, (reversing the age-related dysfunction of their testes).
- Correct kidney dysfunction, (a significant finding for renal issues).
- Correct pancreatic dysfunction, (a significant finding for diabetic issues).
- Act as an anti-cancer/ protective agent.
- Lose significant fat deposits and hence weight within 2 to 3 months.

IAS is delighted to be the first organisation in the world to offer a sublingual TRH tablet.
Valdoxan® (agomelatine)

This antidepressant has been developed by the pharmaceutical company Servier and is classified as a norepinephrine-dopamine disinhbitor (NDDI) due to its antagonism of the 5-HT receptor. Activation of 5-HT receptors by serotonin inhibits dopamine and norepinephrine release, whereas antagonism of 5-HT results in an enhancement of both dopamine and noradrenaline release.

Perhaps what makes agomelatine most unique is that it is also a potent agonist at melatonin (see same for further details) receptors. Therefore agomelatine is the first drug to be listed as a melatonergic antidepressant.

Because of its unique profile, agomelatine has not been associated with weight gain, sexual side effects, sleep problems or withdrawal syndrome; this is in contrast to most SSRIs and many other types of antidepressants.

Valdoxan® 28x 25mg tablets retail $149.95
IAS price $129.99

www.antiaging-systems.com/a2z/agomelatine.htm

Vanodax™ 30 sublingual tablets retail $349.95
IAS price $299.99

www.antiaging-systems.com/209-trh-thyrotropin-releasing-hormone-weightloss

Trypsin (see Wobenzym®)

Ubiquinone (see CoQ10)

Urea (see Slim & Shape®, BEC5 Curaderm®)

Urtica dioica (see Nanogen®)

Venlafaxine (Efexor®)

Venlafaxine is a serotonin, noradrenaline reuptake inhibitor and was introduced by Wyeth in 1993.

It is used primarily for the treatment of major depression, generalized anxiety disorder, social anxiety disorder, obsessive-compulsive disorder, panic disorder, and menopausal hot flashes in adults.

Efefor® 60x 37.5mg tablets retail $39.95
IAS price $32.49

www.antiaging-systems.com/a2z/efexor.htm

Viagra® (sildenafil)

Viagra is the original erectile dysfunction drug manufactured by Pfizer.

Viagra® 4x 100mg tablets retail $89.95 IAS price $81.49

www.antiaging-systems.com/161-viagra-sildenafil

Vigor-Pro™

Vigor-Pro has been designed as an all natural supplement to help gently improve free testosterone levels, and also to help regain that ‘lost/ apathetic’ feeling for life and libido.

Apart from tribulus terreus there are a number of important vitamin and herbal agents along with the blood and nitric oxide enhancers’ yohimbine, arginine and gingko biloba.

Used regularly, the Vigor-Pro formula can enhance sexual vigor, arousal, interest in life and sex and spark a ‘Joy of life.’

Vigor-Pro™ 90 capsules retail $24.95 IAS price $21.49

www.antiaging-systems.com/225-vigor-pro

Recommended: If you want to boost your testosterone levels further check out Andro-Pro™

Vincamine (see Anacervix®)

Vincamine treats and prevents strokes, senile dementia and memory disturbances by improving brain blood flow.

Vinpocetine (Intelectol®)

Vinpocetine is a vasodilator (improves brain blood flow) that, uniquely for this type of drug, affects only the areas that need to be improved.
This action has lead to vinpocetine being used to improve hearing (particularly tinnitus), eyesight and even alleviate problems related to the menopause.

Perhaps most commonly used by those who are concerned about stroke events, or those who simply want to improve their brain energy levels and their levels of concentration.

Intelectol® 50x 5mg tablets retail $19.95  
IAS price $15.99  
www.antiaging-systems.com/a2z/vinpocetine.htm

Vitamin A (beta carotene, palmitate, see BCI; Cell Energy®)

Vitamin B1 (thiamine, see BCI; Nitric-Pro™)

Vitamin B1 (see benfotiamine)

Vitamin B2 (riboflavin, see BCI; Vigor-Pro™, Nitric-Pro™)

Vitamin B3 (niacin, see BCI; Xan-Pro™, Vigor-Pro™, EDD, Cell Energy®; picamilon; ; Nitric-Pro™)

Vitamin B5 (pantothenic acid, see BCI; Vigor-Pro™, Cell Energy®; Nitric-Pro™)

Vitamin B6 (pyridoxine, see Andro-Pro™, BCI; EDD; Vigor-Pro™, Gamalate B6®, Joint-Pro™, Beyond B12®, HRT Plus®; Nanogen®; ACF228®, Nitric-Pro™)

Vitamin B6 (see pyridoxamine)

Vitamin B12 (cobalamin, see Beyond B12®, BCI; Joint-Pro™, Vigor-Pro™, Lithium-Pro™)

Vitamin D3 (cholecalciferol, see D3-Pro™, Bone-Pro™, BCI; D3-Pro™)

Vitamin C (ascorbic acid, see Bio-En’R-Gy®, BCI; Bone-Pro™, Digestif®; Nitric-Pro™)

Vitamin C test strips (Vitacheck-C®)

Until recently it has been difficult to determine how much vitamin C was in your body, luckily that has changed with these simple to use vitamin C test strips.

Simply urinate onto a strip and after a few seconds compare its color with that of the chart on the bottle.

All the evidence is that vitamin C, (which cannot be stored in the human body and must be sought in the diet every day) can protect against a plethora of disorders. Maintaining healthy levels of vitamin C is one of the core programs for maintaining health and preventing infections.

Now you can easily and cheaply check your vitamin C levels every day. If necessary then you can adjust them easily by taking a teaspoon of the unique Bio-En’R-Gy C® (see same).

Vitacheck-C® 50 strips retail $14.95  IAS price $12.49  
www.antiaging-systems.com/a2z/vitaminCstrips.htm

Wobenzym-N®

Wobenzym is an enzyme preparation originally designed in Germany in the 1960s and is a natural anti-inflammatory with many additional health benefits.

Although its original use was primarily to treat osteoarthritis, studies have revealed that Wobenzym lowers C-reactive protein levels (a marker of chronic infection in the body) on average by 30%. The latest research, published in the New England Journal of Medicine, has documented that individuals with high levels of C-reactive protein have up to 6 times the likelihood of a heart attack or strokes as individuals with lower levels.

Some Olympic teams have used Wobenzym to reduce injuries by as much as 50% and to enhance healing after injury. This is partly due to the bioflavonoids ability to prevent the dis-coloration and local pain associated with traumatic injuries.

Wobenzym® 200 tablets retail $64.95  
IAS price $59.99  
www.antiaging-systems.com/a2z/wobenzym.htm

Wormwood (see artemisinin)
Xan-Pro® (xanthinol nicotinate)

Xan-Pro is contains the most potent form of vitamin B3 (niacin) called xanthinol nicotinate which can easily pass through membranes. It has been shown to stimulate memory and concentration by improving blood flow to the brain.

Xan-Pro increases brain glucose metabolism, improves levels of ATP, (see same for details) within the brain and acts as a vasodilator (improves blood flow).

Xan-Pro extremities, and has been clinically proven to enhance the reaction speed and hand and eye coordination of the elderly.

Note: Xan-Pro can cause a flushing of the skin and an increased sense of warmth in some persons. Always start with a low dose and build up gradually if necessary.

Xan-Pro® 50x 150mg tablets retail $29.95
IAS price $19.99
www.antiaging-systems.com/a2z/xanthinol.htm

Yohimbe (see Vigor-Pro™ and yohimbine)

Yohimbine is an extract from the bark of the Yohimbe tree that helps to awaken the libido and gives an all-round boost to male sexual performance and before the advent of Viagra®, this natural supplement was a key treatment for male impotence.

Furthermore, yohimbine has also been shown to increase the availability of the neurotransmitter, acetylcholine. All these factors are involved in the frequency, strength and stamina of penile erection, as well as the general desire of awakened libido.

Plain Prowess® 100x 5mg tablets retail $69.95
IAS price $59.99
www.antiaging-systems.com/a2z/yohimbine.htm

ZeoGold® (zeolite)

ZeoGold contains the purest form of zeolite available on planet earth. Zeolite is a crystal like structure that is a natural component of earth rock.

What makes it interesting for health is its ability to chelate, (remove toxins from the body, especially heavy metals). The interest in zeolite has been formed around its ability to chelate whilst not removing beneficial minerals such as zinc, which some other chelators have some affinity for. This is because zeolite’s unique crystal structure is large enough to attract and contain heavy metal particles, but is too small to contain ‘healthy’ minerals.

Note: To get full activation and benefits, open and hydrate an individual capsule in four ounces of high quality water or liquid of choice.

ZeoGold® 30 capsules retail $54.95 IAS price $47.49
www.antiaging-systems.com/204-zeo-gold-garry-gordon

Zeolite (see ZeoGold®)

Zinc (see Andro-Pro™, BCI; Can-C Plus™, MZS™, Nanogen®; Thym-Uvocal®)
Books recommended further reading

**Great teeth for life** by Brian Halvorsen, BDS

The UK's leading holistic dentist, Dr. Halvorsen walks you through the things you need to do throughout your life to maintain good dental hygiene and to help keep your teeth great for life. The story starts even at the prenatal stage and as dental health affects many other parts of the body, Dr. Halvorsen also includes a chapter dedicated to practices that can remove toxins from the body too.

**169 page book $20.00**
www.antiaging-systems.com/197-great-teeth-for-life-brian-halvorsen

**Passion, sex, long life & oxytocin** by Thierry Hertoghe, M.D.

Dr. Hertoghe's book is the first to focus entirely on the hormone oxytocin. Here he describes not only the published and clinical evidence of its effects, but also those it has had upon him, his family and his patients. As usual, Dr. Hertoghe's highly practical approach to hormone use includes tables on its doses, formats and uses etc.

**159 page book $40.00**

**Stay 40** by Richard Lippman, Ph.D.

One of the most informative books you can purchase on advanced antiaging techniques. Free radical expert Dr. Lippman talks through his extensive experience with both hormones and nutritional strategies that can help to protect the body from free radical, glycosylation, oxidative and inflammatory attacks. There is a broad spectrum of information in this book that you are unlikely to find anywhere else and it is described in practical, easy 3 step approaches.

**243 page book $35.00**
www.antiaging-systems.com/215-stay-40-without-diet-or-exercise

**The atlas of endocrinology** by Thierry Hertoghe, M.D.

This incredible book is a pictorial guide to the physical attributes of what each hormone, whether it is in hyper or hypo activity within a patient can do. In other words here is the forgotten approach to medicine, a physical exam of a patient to determine which hormones they are lacking or which they may have too much of. This incredible reference tool details several generations of Dr. Hertoghe's family's experience in endocrinology. Hormones covered include GH, IGF1, MSH, oxytocin, vasopressin, melatonin, thyroid, calcitonin, parathormone, cortisol, DHEA, pregnenolone, aldosterone, insulin, estrogen, progesterone and testosterone.

**327 page book $350.00**

**The eggplant cancer cure** by Bill E. Cham, Ph.D.

This is the remarkable story of how Dr. Cham discovered a natural ingredient in relation to the eggplant can successfully remove non melanoma skin cancers in humans. More than 20 years of study, backed by published references and documented before, during and after photos from some of the 80,000 patients who have been 100% successfully treated to date with the BEC5 Curaderm cream.

**122 page book $29.00**
www.antiaging-systems.com/201-the-egg-plant-cancer-cure

**The key of life** by Walter Pierpaoli, M.D.

Dr. Pierpaoli updates us from his original best seller 'the melatonin miracle' on the varied benefits and uses that melatonin supplements can achieve. Here, not only does Dr. Pierpaoli look into the clinical trials supporting its role in immunity, fertility, macular degeneration, jet lag, sleep and
hormonal cyclicity, but he also informs us on the right types to use, the correct doses and the times to take melatonin etc.

266 page book $30.00
www.antiaging-systems.com/200-the-key-of-life-walter-pierpaoli

The patient hormone handbook by Thierry Hertoghe, M.D.

The patient hormone handbook by Dr. Hertoghe is one of the most comprehensive books you can buy regarding hormones. His guide tables are legendary showing how different hormone formats (tablets vs. injections for example) can be used, along with their doses, including indicators of too low or too high a dose can be used. This book is highly recommended if you are on a hormone replacement therapy and hormones covered include melatonin, GH, thyroid, cortisol, DHEA, androstenedione, pregnenolone, aldosterone, estrogen, progesterone and testosterone. Also a number of supporting nutritional agents are included.

310 page book $250.00
www.antiaging-systems.com/198-patient-hormone-handbook-thierry-hertoghe-md

The physician hormone handbook v2 by Thierry Hertoghe, M.D.

The physician hormone handbook is the ultimate hormone handbook. Here Dr. Hertoghe describes all of the hormones discussed in his patient hormone handbook (as above), and in addition this version 2 also covers IGF-1, vasopressin, MSH, oxytocin, parathormone and insulin. The physician hormone handbook not only has greater detail, (especially for determining the physical attributes of hormone deficiencies), but it also includes a lab section to evaluate blood and urine levels too. If you are a health professional practicing hormone replacement therapies this book is an invaluable tool.

833 page book $425.00
www.antiaging-systems.com/198-patient-hormone-handbook-thierry-hertoghe-md
Condition cross-reference list

This cross-reference list highlights individual products that have been used to treat & prevent various aging disorders. Note: It does not mean that all these products are synergistic together.

Adaptogens
Beyond HRT®, Longevity Maca®, Quinton®

Addison’s disease
Aldosterone, DHEA

ADHD (ADD, attention deficit disorder, see mental stimulants)

Adrenal fatigue
Adrenal-Pro™, aldosterone, DHEA, hydrocortisone

AGE (Advanced Glycated End Products, cross linking of proteins)
ACF228™, aminoguanidine, Can-C Plus™, Cardio-Pro™, L-carnosine, metformin, pyridoxamine

Age Related Mental Decline (see cognitive)

Aids (see HIV)

Alcoholism (also see compulsive disorders)
5HTP, L-tryptophan, memantine

Allergies
Conisan B™, Joint-Pro™, Pregnenolone, Thym-Uvocal®, Wobenzym®, Zirtec®

ALS (amyotrophic lateral sclerosis, see Lou Gehrig’s disease)

Alzheimer’s disease (see senile dementia)

Aminoacids (including di-peptides)
ACF228™, 5HTP, Beyond GHS®, Cardio-Pro™, L-carnosine, L-tryptophan, Mito-Pro™, Nitric-Pro™

Anabolic (see growth hormone & testosterone)
Anginas (also see heart & blood disorders)
Strodival®

Animal use
Can-C™ eye-drops, deprenyl, L-tryptophan

Anti-aging (as impacting on a particular theory of aging)
- Aminoguanidine (glycosylation)
- Centrophexoxine (membrane)
- Hydergine (mitochondrial)
- Idebenone (free radical)
- L-carnosine (Hayflick)
- Melatonin (rotational)
- Metformin (neuroendocrine)
- Resveratrol (calorie restriction)
- ACF228™ (free radical)

Anti-biotics (also see influenzas & infections)
- Ciproxin, doxycycline, penicillin, roxithromycin, tetracycline

Anti-depressants (also see depression & well being)
- Lithium-Pro™, milnacipran (Ixel®), moclobemide (Manerix®), Paxil®, Prozac®, reboxetine (Edronax®), Stablon®, Valdoxin® (agomelatine), venlafaxine (Efexor®)

Anti-oxidants (free radical scavengers)
- ACF228™, Bio-En’R-Gy®, Beyond Chelation Improved®, Bromocriptine, Cardio-Pro™, centrophexoxine, deprenyl, Essential Daily Defense®, Gerovital-H3®, hydergine, idebenone, krill, L-carnosine, melatonin, Mito-Pro™, pyritinol, Resveratrol-Pro™, vinpocetine, ZeoGold®

Anxiety (see stress)

ARMD (Age Related Macular Degeneration, also see eyesight)
- Melatonin Zn Se®, Nicergoline

Aromatase inhibitors
- Arimidex®, Beyond HRT®, DIM-Pro™

Arterial (See heart & arterial disorders)

Arthritis (rheumatoid & osteo)
- Gerovital-H3®, Hy-Co®TM, Joint-Pro™, krill, pregnenolone, pyritinol, SAMe, Thym-Uvocal®, Wobenzym®

Asthma (see Allergies)

Autism (also see chelation agents)
- Oxytocin, piracetam

At-home test kits (also see health diagnostics)
- Bio-Cuff™

Bell’s palsy
- Beyond B12®

Blood disorders (relating to circulation, cholesterol, homocysteine etc., also see angina & heart & arterial disorders & cancer)
- Acarbose, aminoguanidine, Anacervix®, ATP-Pro™
- Beyond Any Multiple®, Beyond B12®, Beyond Chelation Improved®, Bio-En’R-Gy®, Cardio-Pro™, Gerovital-H3®, krill, metformin, NADH, nicergoline, Nitric-Pro™, propranolol, Resveratrol-Pro, thyroid, TRH, vinpocetine, Wobenzym®

Blood pressure
- Nitric-Pro™, oxytocin

Bone problems (also see joints & arthritis)
- Andro-Pro™, Bone-Pro™, Esnatri™, Hy-Co®TM, progesterone, SAMe, thyroid

Breathing (see Lungs)

Cancer (also see anti-oxidants & radiation)
- 1st Line™, Arimidex®, artemisinin, BEC5®, Beyond HRT®, Bio-En’R-Gy®, bromocriptine, D3-Pro™, DIM-Pro™, Femara®, laetrile, melatonin, metformin, naltrexone, progesterone, Resveratrol-Pro™, Thym-Uvocal®, TRH, Wobenzym®

Cardiovascular (see heart & arterial disorders)

Cataplexy (sudden fatigue)
- Adrafinil, modafinil, picamilon

Cataract (also see eyesight)
- Can-CTM, Can-C Plus™

Chelation agents (removing heavy metals, also see detox)
- Bio-En’R-Gy®, Beyond Fiber®, Beyond Chelation Improved®, centrophexoxine, Detox-Pro™, Dr. Gordon’s advanced green powder®, Essential Daily Defense®, EZ Defense®, L-carnosine, ZeoGold®

Cholesterol (see blood disorders)

Crohn’s disease
- Naltrexone
Chronic fatigue syndrome (see mental stimulants & physical energy improvement)

Cognitive (also see memory & senile dementias)
Anacervix®, aniracetam, centrophenoxine, deprenyl, desmopressin, DHEA, Gerovital-H3®, hydergine, idebenone, memantine, Mito-Pro™, NADH, nicergoline, phenytoin, picamilone, piracetam, pramiracetam, pregnenolone, pyritinol, thyroid, vinpocetine, Xan-Pro™

Compulsive disorder treatment (also see alcoholism)
5HTP, Gamalate-B6®, L-tryptophan, picamilone

Cortisol alteration (also see stress)
DHEA, aldosterone, fludrocortisone, Gamalate B6®, hydrocortisone, Gerovital-H3®, phenytoin

Cross linking (see advanced glycated end products)

Deep vein thrombosis (see frequent fliers)

Dental (see teeth & gums)

Depression (also see well-being & anti-depressants)
5HTP, aniracetam, D3-Pro™, deprenyl, Gerovital-H3®, Lithium-Pro™, L-tryptophan, milnacipran, Mito-Pro™, NADH, NeyGeront®, picamilone, piracetam, pramiracetam, pregnenolone, SAMe, Thym-Uvocal®, thyroid, Vigor-Pro™

Detox (also see chelation agents)
Artemisinin, Bio-En-R-Gy®, Beyond Fiber®, DIM-Pro™, Detox-Pro™, Dr. Gordon’s advanced green powder®, ZeoGold®

DHT alteration (dihydrotestosterone)
Dutasteride, finasteride, Hair Pro™, MinSaw™, NanoGuard®

Diabetes
Acarbose, aminoguanidine, benfotamine, Diet-Pro™, krill, L-carnosine, metformin, Mito-Pro™, Nitric-Pro™, pyridoxamine, TRH

Dieting (See weight loss)

Digestive issues
Beyond Fiber®, Digestif®, Dr. Gordon’s advanced green powder®

DNA support (including telomeres)
Beyond Any Multiple, carnosine, CoQ10, D3-Pro™, krill, NeyGer®®, NeyGeront®, placenta, Resveratrol-Pro, TA65®

Down’s syndrome
Melatonin, piracetam

Energy improvement (see physical energy & mental stimulants)

Enzymes
Wobenzym®

Epilepsy
GABOB, phenytoin

Erectile dysfunction (also see sex-libido & premature ejaculation)
Andro-Pro™, cabergoline, Cialis®, Nitric-Pro™, oxytocin, Vigor-Pro™, Viagra®, yohimbine

Estrogen alteration (both increases & decreases)
Arimidex®, cobalt chloride, DIM-Pro™, Esnatri™, NADH, progesterone

Eyesight (also see cataract, ARMD & glaucoma)
Aminoguanidine, Can-C™, Can-C Plus™, melatonin, nicergoline, picamilone, vinpocetine

Excitotoxins
Amantadine, Carnosine, deprenyl, idebenone, Carnosine, Lithium-Pro™, memantine

Fertility
Melatonin, metformin, TRH

Fibromyalgia (also see physical energy & mental stimulants & pain relief)
1st Line, milnacipran, naltrexone, oxytocin

Frequent fliers
1st Line, artemisinin, Cardio-Pro™, DHEA, Gamalate-B6®, L-tryptophan, melatonin, Nitric-Pro™, picamilone, piracetam, pregnenolone, Resveratrol-Pro™, silver protein

Gastrointestinal (see digestive)

Glaucouma (also see eyesight)
Can-C™

Glucose control (see diabetes)

www.antiaging-systems.com // Order hotline: 1-866-800-4677 // e-mail: ias@antiaging-systems.com
**Glycosylation prevention** (see AGE)

**Growth hormone**
- GABOB, Beyond GHS®, bromocriptine, deprenyl, Gamalate B6®, hydergine, Nitric-Pro™, Sermorelin, Thym-Uvocal®, thyroid

**Hemorrhoids**
- Nitric-Pro™

**Hair improvement**
- Dercos®, dutasteride, finasteride, Gerovital-H3®, Hair Pro™, krill, MinSaw™, NanoGuard®, NanoThik®, Nitric-Pro™, Nizoral®

**Headaches** (see migraines)

**Heath diagnostics**
- Bio Clip, Bio Cuff, Vitamin C Strips

**Hearing disorders**
- Aldosterone, Anacervix®, fludrocortisone, nicergoline, picamilone, vinpocetine

**Heart & arterial disorders** (also see angina & for blood conditions such as circulation, cholesterol/homocysteine etc., see blood disorders)
- Aminoguanidine, Bio-En’R-Gy®, Beyond Chelation Improved®, Bio-Clip, Bio Cuff, Cardio-Pro™, centrophenoxine, CoQ10, idebenone, krill, Mito-Pro™, Nitric-Pro™, propranolol, Resveratrol-Pro™, SAMe, Wobenzym®

**Herpes** (also see anti-biotics)
- 1st Line™, ACF228™, amantadine, silver protein, Wobenzym®

**HIV** (also see immune system improvement)
- 1st Line™, melatonin, naltrexone, Thym-Uvocal®

**HGH** (see growth hormone)

**Homocysteine** (see blood disorders)

**Hormones** (includes hormonal support supplements)
- Aldosterone, Adrenal-Pro™, Andro-Pro™, cobalt chloride, Desmopression, DHEA, DIM-Pro™, Esnatri™, fludrocortisone, hydrocortisone, melatonin, oxytocin, pregnenolone, progesterone, Thym-Uvocal®, thyroid, Vigor-Pro™, TRH

**HRT** (hormone replacement therapy for women)
- Cobalt chloride, Esnatri™, HRT Plus®, melatonin, progesterone

**Human growth hormone** (see growth hormone)

**Hypertension** (see blood pressure)

**Immune system improvement** (also see infections)
- 1st Line™, Beyond B12™, DHEA, L-carnosine, Longevity Maca®, melatonin, Mito-Pro™, NeyGeront®, pyritinol, Resveratrol-Pro™, Thym-Uvocal®, thyroid

**Infections** (also see immune system improvement, anti-biotics & influenzas)
- 1st Line™, artemisinin, fluconazole, silver protein, Wobenzym®

**Inflammation**
- Bio-En’R-Gy, Beyond Chelation Improved®, Digestif®, Dr. Gordon’s advanced green powder®, krill, Longevity Maca®, pregnenolone, Thym-Uvocal®, Wobenzym®

**Influenzas** (also see anti-biotics, infections & immune system improvement)
- 1st Line™, amantadine, Relenza®

**Insulin & glucose control** (see diabetes)

**Intestinal flora** (see probiotics)

**Joints** (also see bones & arthritis)
- Hy-Col™, Joint-Pro™, krill, pregnenolone, SAMe, Thym-Uvocal®, Wobenzym®

**Kidney disorders** (also see infections)
- Aminoguanidine, SAMe, TRH

**Learning** (also see memory & mental stimulants)
- Aniracetam, desmopressin, hydergine, piracetam, pramiracetam

**Libido** (see sex-libido)

**Lipids** (see blood disorders)

**Liver disorders** (also see infections)
- Idebenone, pregnenolone, SAMe, silver protein
**Longevity enhancement** (significant increases seen in animal studies)
- Centrophenoxine, deprenyl, Desmopressin, melatonin

**Lou Gehrig’s disease** (ALS)
- Naltrexone

**Lungs**
- Centrophenoxine, Nitric-Pro™

**Lupus**
- Milnacipran, naltrexone

**Macular degeneration** (see ARMD & eyesight)

**Malaria** (also see anti-biotics)
- Artemisinin

**Menopause** (see HRT)

**Mental stimulants**
- Adrafinil, aniracetam, centrophenoxine, deprenyl, desmopressin, krill, modafinil, NADH, nicergoline, picamilone, piracetam, pramiracetam, Xan-Pro™

**Memory** (also see cognitive & senile dementia)
- Aniracetam, centrophenoxine, deprenyl, desmopressin, hydergine, piracetam, pramiracetam, pregnenolone, vinpocetine

**Methylation** (conversion of one chemical into another inside the body)
- Beyond B12®, Bio-En’R-Gy®, SAMe, Wobenzym®, Xan-Pro™

**Migraines** (also see pain relief)
- Beyond B12®, nicergoline, memantine, picamilone

**Minerals** (including trace- also see vitamins)
- Beyond Any Multiple®, Cardio-Pro™, Quinton®

**Mitochondrial support**
- ATP-Pro™, CoQ10, deprenyl, hydergine, idebenone, Mito-Pro™, NADH, pregnenolone, SAMe

**Multiple Sclerosis** (also see mitochondrial support)
- Melatonin, naltrexone

**Nail condition**
- Gerovital-H3®, krill

**Narcolepsy** (sleeping in the daytime)
- Adrafinil, melatonin, modafinil, picamilone

**Oral health care** (see teeth & gums)

**Osteoporosis** (see bone problems)

**Pain relief**
- ATP-Pro™, Gerovital-H3®, memantine, milnacipran, nicergoline, oxytocin, Wobenzym®

**Parasites** (see infections)

**Parkinson’s disease** (see senile dementia)

**Pets** (see Animal use)

**Photoaging** (see radiation & skin problems)

**Ph balance** (rebalancing)
- Dr. Gordon’s advanced greens®, Quinton®

**Physical energy improvement**
- ATP-Pro™, Beyond B12®, CoQ10, idebenone, L-carnosine, Longevity Maca®, Mito-Pro™, NADH, pregnenolone, SAMe, yohimbine

**PMS** (pre-menstrual syndrome)
- Beyond B12®, krill, HRT Plus®, Longevity Maca®, vinpocetine

**Premature ejaculation/ ejaculate** (also see erectile dysfunction & sex-libido)
- Oxytocin

**Probiotics**
- Beyond Fiber®, Digestif®, Dr. Gordon’s advanced greens®, Quinton®

**Prostate** (also see cancer)
- Beyond B12™, Beyond HRT®, Bone-Pro™, D3-Pro™, DIM-Pro™, dutasteride, finasteride, melatonin, Prostate-Pro™

**Prolactin alteration**
- GABOB, bromocriptine, cabergoline, Gamalate-B6®
PSA (prostate specific antigen- see prostate)

Radiation (sunburn & radiotherapy)
BEC5®, melatonin, Solaris®

RNA support (see DNA support)

Senile dementia (also see cognitive & memory)
Amantadine, Anacervix®, aniracetam, bromocriptine, cabergoline, centrophenoxine, deprenyl, desmopressin, galantamine, hydergine, Lithium-Pro™, melatonin, memantine, NADH, naltrexone, piracetam, pramiracetam,

Senility
Gerovital-H3®, NeyGeront®

Sex-libido (also see erectile dysfunction & premature ejaculation)
Andro-Pro™, deprenyl, Longevity Maca® NADH, oxytocin, Vigor-Pro™, yohimbine

Skin problems (also see radiation and cancer)
Aminoguanidine, BEC5®, Cell Energy®, Energo®, Gerovital-H3®, Hy-CoTM, L-carnosine, melatonin, NADH, NeySkin®, Retin-A®, silver protein, Solaris®, Thym-Uvocal®, thyroid, Quinton®

Sleep disorders (both a lack of & too much)
5HTP, adrafinil, L-tryptophan, melatonin, modafinil, Mit-Pro™

Smoking cessation
5HTP

Sports (see growth hormone, estrogen alteration, physical energy & testosterone)

Stress (also see cortisol)
5HTP, GABOB, Gamalate-B6®, Gerovital-H3®, Longevity Maca®, L-tryptophan, melatonin, NADH, NeyGeront®, oxytocin, picamilone, phenytoin, propranolol, pregnenolone

Stroke
Anacervix®, aniracetam, hydergine, idebenone, nicergoline, Nitric-Pro™, picamilone, piracetam, pramiracetam, pregnenolone, vinpocetine

Stomach (see digestive)

Sunburn (see radiation)

Syndrome X (metabolic syndrome)
Aminoguanidine, DHEA, krill, melatonin, metformin, Mit-Pro™

Tanning
Solaris®

Teeth & gum disorders
Doxycycline, EZ Defense®, Gengigel®, NADH, NeyDent®, silver protein, Quinton®, ZeoGold®

Telomeres (see DNA support)

Testosterone & testes (also see fertility and prostate)
Andro-Pro™, Beyond B12®, Beyond GHS®, DHEA, melatonin, NADH, oxytocin, TRH, Vigor-Pro™

Travel (see frequent fliers)

Triglycerides (see blood disorders)

Veterinarian (see animal use)

Vigor
Vigor-Pro™

Vitamins (see ‘just’ minerals for separation)
Benfotiamine, Bio- En’R-Gy®, Beyond Any Multiple®, Beyond Chelation Improved®, Cardio-Pro™, CoQ10, Gamalate B6®, Nitric Pro™, Xan-Pro™

Water
Quinton®

Weight gain
Beyond GHS®, DHEA, GABOB

Weight loss
5HTP, acarbose, aminoguanidine, ATP-Pro™, benfotiamine, Beyond Fiber®, Diet-Pro™, DIM-Pro™, Dr. Gordon’s advanced green powder®, galantamine, L-tryptophan, metformin, Mit-Pro™, thyroid, TRH, Xan-Pro™

Well-being (also see depression)
Aniracetam, Beyond B12®, deprenyl, DHEA, Gamalate-B6®, Gerovital-H3®, krill, melatonin, NADH, NeyGeront®, picamilone, piracetam, pramiracetam, SAMe, Thym-Uvocal®, thyroid, Wobenzym®
How to order from IAS

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EU & world +44 208 181 6106
UK 0208 181 6106

FAQs

Q. How long has IAS been in business?
IAS has been operating since 1991, as you may imagine with more than 20 years of experience we are a well established and respected organization. See our testimonials online for details.

Q. Why if IAS is based in GB are all goods priced in US Dollars?
Our major market is the United States, plus most countries know the value of their currency to the US Dollar.

Q. Are there any taxes to add?
We are legally required to add a surcharge to countries within the European Union (EU). Countries outside of the EU will not have any additional charges added by IAS.

Q. Do you accept credit cards?
We currently accept Visa and Mastercard; we hope to add more payment methods soon.

Q. Will you confirm the receipt of my order?
We will confirm all orders received via email, so please make sure you give us your email address.

Q. Will you confirm the dispatch of my order?
We will confirm all dispatches via email, so please make sure you give us your email address.

Q. How do you ship and how long does it take?
Shipping rates vary on the delivery destination; our territories are (1) the United Kingdom (2) USA, Canada and Europe and (3) the rest of the world. Each territory has 3 shipping choices; standard, priority or insured so you can choose to value your order and the speed of its delivery. Please see website or contact us for full details.

Q. Will you send me information by email?
We will send you our weekly IAS e-Bulletin with the latest information about products, protocols and special offers. You can unsubscribe from the IAS e-Bulletin anytime. We do not share your details with third parties.

Q. Will you send me information by mail?
We will send you our quarterly ‘Aging Matters™’ magazine, you can unsubscribe from the ‘Aging Matters™’ magazine anytime. We do not share your details with third parties.

Q. Do you offer business relationship deals?
If you are a health professional or a retailer in the health/medical business then IAS does have a number of different programs that may suit your needs. Please contact us for further details.

Q. Can you help me find other products not on your store?
Yes! We are an international pharmacy and we specialise in the ‘hard to obtain.’ Please contact us with your requirements.
Can-C is the original anti cataract eye drop, the only NAC eye drop patented and approved by the inventors of the technology IVP (Innovative Vision Products).

Can-C eye drops are the **exact formula** used in all the clinical studies conducted by IVP.

**Can-C Eyedrops**

2 x 5ml eye-drop Bottle $39.49

Buy 6 for just $195.00

Saving you ($41.94)

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