REVOLUTION!

In this issue:

The peptide biomarker revolution
The latest about gene switches

Vitamin B17 and cancer
Looking to a world without cancer

Fighting Alzheimer’s disease
How a snow-drop extract can help

Why bother?
Being concerned about preventing disease
**Welcome**

Revolutions are rare, but nonetheless dramatic things, they tend to rapidly overturn orthodox thinking, and so in that context we have several stories in this issue that are a revolution for health.

The first is told by Dr. Marios Kyriazis and it describes the hot-topic of the decades of secret Soviet research; research that led to the discovery that short-chain peptides (found in food) are gene switches.

Dr. Kyriazis has a new book out that details the uses of this technology and it is the first to be written specifically for the public, it is called; ‘the peptide bioregulator revolution.’

Then there is vitamin B17, a natural component of many foods, particularly apricot kernels and apple seeds etc. It is also known by other names such as amygdalin and laetrile, in this super article its controversial role in cancer is highlighted.

Lastly, why should we bother? Taking care of one’s health is a constant fight, not only the application of what is right for us, but also the never-ending learning of new information as it comes to light. Mr. Richard Swift, a brilliant wordsmith and legal expert in the health field shares his opinions with us.

History teaches us that countless peoples have fought hard for their freedoms. Today we demand freedom in healthcare and our right to choose.

Vive la revolution!

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**Testimonials**

**Dr. Aubrey de Grey**

“IAS has shown great vision and leadership, as an organisation focused mainly on the provision of contemporary medical interventions against aging, in also supporting the SENS Foundation’s efforts to hasten the development of much more powerful future interventions.”

**Nicholas Perricone M.D.**

“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.”

**Thierry Hertoghe M.D.**

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

**Jonathan Wright M.D.**

“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.”

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1. Declaration: The IAS Aging Matters™ magazine is intended for ALL private club members (and therefore is not intended for the public). It focuses on the latest international nutritional, herbal and drug therapies to help combat the signs of aging. These therapies 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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Researchers have rejuvenated mice by reversing age-related wrinkles and hair loss. It is possible that humans could get a similar make-over in the future.

Scientists at the University of Alabama at Birmingham asked, “Wrinkled skin and hair loss are hallmarks of aging, what if they could be reversed?”

They introduced a specific gene mutation on a test mouse- this prompted a drastic change in appearance. Within a four week period, the mouse had developed wrinkles and extensive hair loss. Researchers turned off the culprit mutation and regular function was restored in the gene, the mouse returned to its youthful appearance with smooth skin and thick fur only two months later.

Keshav Singh, a professor of genetics who led the study stated “To our knowledge, this observation is unprecedented.”

The professor said in a statement, “This mouse model should provide an unprecedented opportunity for development of preventive and therapeutic drug development strategies to augment the mitochondrial functions for the treatment of aging-associated skin and hair pathology and other human diseases in which mitochondrial dysfunction plays a significant role.”

During the study, the test mice were given an antibiotic which prompted the change within the gene. All of the mice showed grey hair, hair loss and thinning hair- the females has more severe wrinkles than the males.

The study said “Dramatically, this hair loss and wrinkled skin could be reversed by turning off the mutation, the wrinkled skin showed changes similar to those seen in both intrinsic and extrinsic aging; intrinsic aging is the natural process of aging, and extrinsic aging is the effect of external factors that influence aging, such as skin wrinkles that develop from excess sun or long-term smoking.”

Further Reading

Middle aged adults could benefit from a short term treatment to revitalise the immune system and organs that deteriorate with age. Scientists have hailed the success of a clinical trial which found that experimental anti-aging drugs may protect older people from potentially fatal respiratory infections by rejuvenating their immune systems.

The trial consisted of people aged 65 and over, the participants who received the anti-aging drug combination reported nearly half the number of infections over the following year as a control group who received only placebos.

The experimental drugs used in this trial are known as mTOR inhibitors, and also appeared to boost candidate’s responses to the flu vaccine, with tests presenting 20% more flu-fighting antibodies found in the blood up to a month after the vaccine was administered.

Mannick the chief medical officer at a Boston-based company called resTORbio, found that the drugs boosted the immune system responses that specifically target viruses. Mannick stated, “We hope we can keep everybody healthier and with a better quality of life as they grow older.”

Further Reading
DOI: 10.1126/scitransmed.aao1564
New research demonstrations that gene therapy can completely reverse markers of type 2 diabetes and obesity in rodents.

According to recent estimates over 30 million U.S. adults had diabetes in the year 2015 and the rates of newly diagnosed children and teenagers have greatly increased. Worldwide, the number of people diagnosed with diabetes has almost quadrupled between 1980 and 2014, according to the World Health Organization. This new research could bring hope in curing this disorder. Fatima Bosch and her team of scientists at the Universitat Autonoma de Barcelona (UAB) in Catalunya Spain, have successfully reversed the disorder in rodents.

They achieved this using gene therapy, a method that introduces new genetic material into cells to create beneficial proteins or to counterbalance the effects of malfunctioning genes.

Researchers designed two mouse models of type 2 diabetes and obesity. One was diet induces and the other was genetically modified.

By delivering this gene, the researchers stimulated the production of protein, this caused the rodents to lose weight and lowered their insulin resistance - a crucial risk factor in type 2 diabetes. The mice also lost weight and the treatment reduced the fat and inflammation in their adipose tissue.

Using gene therapy is free of side effects, and a single dose is enough to make the mice produce the protein naturally for several years.

First study author Veronica Jimenez, a UAB researcher stated, “This is the first time that long-term reversion of obesity and insulin resistance have been achieved upon a one-time administration of a gene therapy, in an animal model that resembles obesity and type 2 diabetes in humans.”

Further Reading

This summer, my new book, "The Peptide Bioregulator Revolution" is being released. The book subtitled; 'The use of bioactive peptides for aging and health', is a review of available scientific evidence regarding the role of bio-active peptides (i.e. short or long sequences of amino acids), which can be used in several health conditions, and in aging itself. There exist quite a few peptides, both natural and synthetic, which have a regulatory action on many parts of the metabolism. Many details of this action have been studied by Prof. Vladimir Khavinson, Director of the Saint-Petersburg Institute of Bioregulation and Gerontology, who, together with his team, is the main proponent of the use of bio-active peptides.

In this book there are sections on research regarding the function of peptides as bio-regulators, as well as detailed information on the benefits of peptides in several health conditions. Examples include bone disease, circulation and cardiac problems, muscle weakness, kidney and liver conditions, and several other age-related degenerative diseases. The aim is to give a comprehensive introduction and analysis of this important subject, not only from a firm scientific perspective but also from a practical point of view.
Clinical effectiveness of the bio-peptide used. In laboratory animals, it just indicates in general terms the brain. Although this experiment was performed on rats, it was found to have similar biological effects as those of the natural peptide complex present in the epiphysis. A synthetic peptide, which mirrored the structure of the natural peptid complex present in the epiphysis, was found to have similar biological effects as those of the natural one. For example, it normalised melatonin synthesis, and overall improved the retina, the vascular and immune systems. This shows that even synthetic peptides, when constructed in accordance with other naturally occurring ones, may have similar biological effects. Therefore, it may not be necessary to rely too much on extracting natural peptides from different live tissues, but we can use synthetic ones which are cheaper and easier to create.

One new piece of research gives an interesting glimpse into the action of bio-active peptides. Researchers have found epigenetically active peptides in a long-lived species of rat. This means that the peptides can influence the DNA of the animal, depending on stimuli originating from the environment. In other words, these long-lived animals have a mechanism by which they respond positively to adverse or beneficial external challenges and are thus able to live longer. This mechanism was found to be absent in the proteins of other short-lived species of rats or mice, which suggests that it is the action of the specific peptides, operating in accordance with the given environment, that leads to increased lifespan. Another specific experiment gives more details into this life-prolonging mechanism. Using a neuro-regulator peptide (called EDR) lead to an improvement of the structure of mouse neurons in culture by 71%, while a similar peptide (KED) increased it by 20%. The authors concluded that:

Along the same lines, administration of the kidney-specific peptide (EDL) (not to be confused with the EDR above), in laboratory rats had protective effects on kidney function, and it improved protein excretion and energy supply to the kidneys.

These new and positive experiments, give an overall optimistic picture with regards to the use of bio-active peptides which work on specific organs and in specific ways. Of course, experiments in laboratory animals do not always translate into effective clinical therapies for humans, but nevertheless, the research shows that the mechanism is there, it is effective, and this encourages further research.

I quote from my overall Conclusion in the book: “...Based on existing scientific evidence (which may or may not be strong), it appears that the use of these regulatory bio-peptides may be worthwhile in some cases. The specific preparation may help in some respects, the side effects are negligible, and it may be better to try the preparation rather than not try it. In other words, if there is no valid reason not to use it, then use it, unless your physician specifically has a different opinion. The issue with any newly available treatment is that it may give hope for treatment, or it may need time for the researchers to optimise the preparation, dose, and formulation. So, ultimately, it is a matter of personal choice, reflecting the character of the user. An open minded, well informed user will act differently from a pessimist, poorly informed one.”

Therefore, my recommendation is to read the book, get the information you need, and discuss a positive course of action with your physician, with a therapy that is in accordance with the given environment, that leads to increased lifespan. Regulatory bio-peptides may be worthwhile in some cases. The specific preparation may help in some respects, the side effects are negligible, and it may be better to try the preparation rather than not try it. In other words, if there is no valid reason not to use it, then use it, unless your physician specifically has a different opinion. The issue with any newly available treatment is that it may give hope for treatment, or it may need time for the researchers to optimise the preparation, dose, and formulation. So, ultimately, it is a matter of personal choice, reflecting the character of the user. An open minded, well informed user will act differently from a pessimist, poorly informed one.”

References
VITAMIN B17: AN ALTERNATIVE CANCER TREATMENT

By Leslie J. Farer

If you’re a baby boomer or older, you may remember hearing about Laetrile, the highly publicized cancer drug that provoked an unprecedented medical and political controversy that peaked in the 1970’s. Proponents considered Laetrile, a synthetic form of the naturally occurring plant compound amygdalin (derived from apricot kernels), a safe and “natural” alternative to conventional toxic chemotherapy, but the medical establishment called it a “fraud,” dismissing it as an ineffective and toxic drug that should be prohibited from use. A series of mostly negative animal studies from the 1970’s and a clinical trial in the early 1980’s that came up empty put the lid – perhaps too soon – on further human testing of this substance which never gained FDA approval. But interest in amygdalin has been revived in recent years, with new studies on cell cultures revealing previously unknown mechanisms of action against a variety of cancers.

Up until now, those wishing to take advantage of amygdalin’s purported benefits could only do so by consuming apricot kernels or similar pills of unknown purity and potency. But now, IAS offers a superior alternative: B17-Pro™ which is purified amygdalin in 100 mg tablets. In this article, we’ll cover the chemistry and properties of amygdalin, its eventful history, the contentious relationship between the medical establishment and amygdalin (Laetrile) proponents, the pros and cons of its use, new discoveries and potential applications, and its use today.
VITAMIN B17: AN ALTERNATIVE CANCER TREATMENT

AN AMYGDALIN (LAETRILE) PRIMER

Amygdalin, derived from the Greek word meaning “almond,” is a naturally occurring substance found in the pits, seeds, and kernels of hundreds of fruits and plants such as apricots (the richest source), bitter almonds, apples, peaches, plums and berries. Amygdalin belongs to a class of compounds known as cyanogenic glycosides, (containing one or more simple sugar molecules and a nitrile (−C≡N) group that can potentially be metabolized in the body to hydrogen cyanide (HCN)).

Natural amygdalin is an optically active isomer with the chemical name D-mandelonitrile-beta-D-gentiobioside, also referred to as D-amygdalin, (see figure 1). US-patented Laetrile (a synthetic derivative of amygdalin known as L-mandelonitrile-beta-D-glucuronide), is structurally and pharmaceutically like amygdalin (see figure 2) and technically also a cyanogenic glycoside. Both compounds are also called nitrilosides.

Amygdalin and its synthetic derivative have been promoted as alternative cancer treatments since the early 1950s. It’s impossible to discuss one without the other, since they are related substances whose names are used interchangeably in the medical literature and elsewhere.

The main proposed anti-cancer mechanism is localized delivery of cyanide to cancer cells, destroying them. When amygdalin interacts with the enzyme beta-glucosidase and water, it degrades to produce hydrogen cyanide, benzaldehyde, and glucose.4,5 Cyanide release was originally thought to be the main cancer-fighting mechanism,4,5 but benzaldehyde and prunasin (another breakdown product of amygdalin) may also inhibit cancer cells.6 In fact, benzaldehyde has been shown to be effective as a primary cancer therapy in humans.7

The usual course of Laetrile treatment involves intravenous (IV) administration by a physician for a period (several weeks or months, according to response) followed by oral maintenance therapy (tablets), usually as part of a comprehensive “metabolic” program consisting of a specialized plant-based diet, high-dose vitamins and pancreatic enzymes.

The main risk of Laetrile therapy (and a major aspect of its controversial use) is cyanide toxicity, especially when administered orally. Intestinal bacteria and some commonly consumed plants contain enzymes, (beta-glucosidases) that initiate the breakdown of amygdalin and cleave the nitrile group, releasing cyanide into the bloodstream.8 Oral amygdalin is estimated to be 40 times more potent than the IV form due to its enzymatic conversion to cyanide in the GI tract.4 In contrast, IV administration bypasses the GI tract, limiting rates of conversion to cyanide.9

Proponents consider amygdalin (Laetrile) an effective and natural alternative to conventional side-effect-ridden chemotherapy, with decades of safe use if administered by an experienced practitioner, while the conventional medical establishment has, over the past five decades, predominantly labeled it a “fraud,” a “cancer quackery,” ineffective, and potentially toxic.

Laetrile has been banned in the US and the EU for decades, but amygdalin-rich apricot kernels and apricot-based pills are available. However, amygdalin tablets (B17-Pro™), consisting of the isolated active ingredient, must be purchased online. Amygdalin and Laetrile are still permitted to be manufactured and administered in clinics in certain countries, such as Mexico.

Figure 1: Amygdalin (D-mandelonitrile-beta-D-gentiobioside)

Figure 2: US-Patented Laetrile (L-mandelonitrile-beta-D-glucuronide)

* Considering that US-patented Laetrile was probably never manufactured on a large scale, and that Mexican-produced Laetrile is D-mandelonitrile-beta-D-gentiobioside, i.e. amygdalin, made from crushed apricot pits, it seems safe to assume that the chemical identity of the substance used by “Laetrile” practitioners and studied in animal and human trials was and currently is amygdalin. To add to the nomenclature confusion, “Vitamin B17” has also been applied to both Laetrile and amygdalin (we’ll see more on B17 later).

[Note: In this article, as much as possible, especially when discussing the scientific studies, we’ll refer to the substance D-mandelonitrile-beta-D-gentiobioside as “amygdalin.” When discussing its historical significance, as in the next section, and its use by medical practitioners, we’ll use the term “Laetrile,” since this was the designation commonly applied to this therapy starting in the 1960s.]

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RATIONALE FOR AMYGDALIN (LAETRILE) USE

Supporters of amygdalin (Laetrile) base their claim on its anti-cancer properties largely on epidemiological data, citing indigenous peoples such as the Hunzakut tribe of the Karakoram Mountains of northern Pakistan who routinely consume nitrilosides and typically live to 100 years old with very low rates of cancer. (The assumption here is that nitrilose intake, including amygdalin, is directly responsible for longevity and low-cancer incidence, but other factors such as a healthy diet, ample exercise, and a rich social network also contribute to these peoples' health.) And as far as epidemiological observations, though they are informative, they are not proof of efficacy.

One of the main early promoters of amygdalin (Laetrile), biochemist E.T. Krebs Jr., labeled it “vitamin B17,” and believed it to be a natural cancer-fighting food component, that if regularly consumed, as in the Hunzakut diet, would prevent various types of cancer. According to Krebs, cancer is a vitamin B17 deficiency disease. However, “vitamin B17” does not meet the definition of “vitamin,” is not required for normal metabolism, and is not an approved designation.

Besides epidemiological data, Laetrile proponents also point to case reports from doctors who have apparently administered it safely, effectively, and without toxicity for decades. But case reports are difficult to interpret due to lack of uniform documentation, use of conventional chemotherapies in combination with Laetrile, and variations in the dose and duration of treatment.9

As mentioned, cyanide is thought to be the main anti-cancer agent formed from amygdalin metabolism, and the rationale among Laetrile practitioners is to maintain cyanide blood levels high enough, but still below the toxic threshold to ward off cancer and boost the immune system. According to one doctor with a long history of using Laetrile in his practice, Dr. Philip E. Binzel, Jr., “Laetrile is nothing more than a concentrated form of nitrillosides. When ingested, nitrilose has merited recognition by maintaining non-toxic cyanide levels and acting as a potential threat to the immune surveillance, thereby lessening the frequency of cancerous tumors.”10

Various mechanisms have been proposed to explain amygdalin’s purported anti-cancer activity. One is that it is preferentially toxic to malignant cells, since they exhibit higher activity of beta-glucosidase than normal cells and lower levels of another enzyme, rhodanese (thiosulfate sulfurtransferase).12 Beta-glucosidase initiates the breakdown of amygdalin, producing cyanide, and rhodanese converts cyanide to the non-toxic substance thiocyanate. A higher ratio of beta-glucosidase to rhodanese in cancer cells favors increased cyanide production with lower rates of conversion to thiocyanate, making the drug much more lethal to cancer cells than normal cells. Another proposed mechanism involves another altered enzyme ratio, this time between beta-glucuronidase (not to be confused with beta-glucosidase) and rhodanese, which also leads to higher localized cyanide concentrations in cancerous cells. Some studies do demonstrate the difference in concentrations of the enzymes rhodanese, beta-glucosidase, and beta-glucuronidase in normal versus malignant tissues. However, other studies have found that cyanide is also released in normal cells, and highly elevated oral doses have led to cases of deaths and toxicity.8

One cancer-inhibiting mechanism less often proposed by Laetrile proponents – but positively demonstrated in studies – is the amygdalin breakdown product benzaldehyde, which has shown efficacy in humans against tumors.?
DOES IT WORK? WHAT THE STUDIES SHOW

As mentioned, the conventional medical establishment has flatly rejected amygdalin (Laetrile) as a potential chemotherapeutic agent and most studies from the 1970’s and early 1980’s found it ineffective against a variety of cancers, in animals and humans, and potentially dangerous due to cyanide toxicity. Upon reviewing the medical literature, it’s common to find conclusions such as this one, from a panel of independent reviewers: “Laetrile has shown little anti-cancer activity in animal studies and no anti-cancer activity in human clinical trials.” And this one, from a Cochrane review: “The risk-benefit balance of laetrile or amygdalin as a treatment for cancer is therefore unambiguously negative.”

But it should be mentioned that the studies – animal and human – are laced with inconsistencies and ambiguities, and often present conflicting data, of which we’ll see numerous examples below.

ANIMAL STUDIES

Animal studies from the 1970’s evaluating the potential cancer-inhibiting activity of amygdalin reported predominantly negative findings, including two from 1975 sponsored by the National Cancer Institute (NCI). In these studies, various cancers were transplanted into mice and rats (osteogenic sarcoma, melanoma, carcinosarcoma, lung carcinoma, and leukemia). The rodents were then administered either amygdalin alone or in combination with beta-glucosidase (presumably to enhance the degradation of amygdalin to cyanide). Neither study found any significant cancer-inhibiting activity in any of the tumor types or leukemias studied with either the single or combination treatment, and both showed that co-administration with beta-glucosidase led to increased toxicity. An expected result due to the higher rate of conversion to cyanide. Although other animal studies from the 1970’s using transplanted tumors corroborated these negative findings, one study did report success in treating breast cancer in mice with combination therapy (amygdalin, vitamin A and enzymes).

Other positive results were the originally hushed-up and later publicized set of unpublished animal experiments performed at Memorial Sloan-Kettering Cancer Center in the 1970’s in which amygdalin was shown to reduce the spread of cancer. These studies were performed by respected researcher Dr. Kanematsu Sugitani on mice bred to spontaneously develop tumors (not transplanted tumors as in the NCI studies). Sugitani found that amygdalin was 80% effective in preventing the spread of lung cancer in treated mice compared to a control group. Apparently, Sloan-Kettering covered-up these results (for various reasons, perhaps political or economic) until they were leaked to the press by a principled and forthright employee – the subject of a documentary film; “Second Opinion: Laetrile at Sloan Kettering.”

HUMAN STUDIES

Amygdalin (Laetrile) is an unusual case: it never gained IND approval from the FDA (based on negative findings in animal studies), a preliminary step to proceed with clinical trials, yet the NCI agreed to sponsor (and the FDA approved) phase I and II clinical trials nonetheless, bypassing this regulation and most likely responding to public pressure. Prior to the clinical trials, the NCI attempted to compare the efficacy of Laetrile versus conventional chemotherapy by reviewing case reports of patients treated with each method. The problem was, the review panel couldn’t obtain sufficient data on Laetrile – after sending out close to half a million requests to doctors for information on their patients who had benefitted from the drug, the NCI received a meager 93 responses, and many case reports had to be thrown out due to insufficient documentation. In the end, the panel of 12 oncologists, blinded to the actual treatments, evaluated 160 cases (68 Laetrile, 68 chemotherapy, 24 controls). Of the 68 Laetrile cases, the panel found only two complete and four partial responses to the drug, precluding any definite determination as to its efficacy. Yet, the NCI agreed to sponsor clinical trials.

The 1981 phase I trial was a very small study on only six patients that evaluated the safety of oral and IV administration in doses like those commonly used by Laetrile practitioners. Neither the IV nor the oral dose (500 mg tablet, three times daily) produced any toxic reaction, though the tablets did raise blood cyanide levels and led to symptoms of toxicity in one patient who also consumed a large helping of raw almonds. The researchers concluded that: “amygdalin in the doses employed produces few clinical side effects,” i.e., minimal toxicity.

Since amygdalin was shown to be reasonably safe in the phase I trial, a larger phase II efficacy trial was conducted at the Mayo Clinic in 1982. 178 patients with various types of cancer received amygdalin intravenously for 21 days, followed by oral tablets (500 mg, three times daily), using doses and schedules “representative of current Laetrile practice.” The IV vials used in the study contained DL-amygdalin, a racemic mixture, which is a combination of both natural D-amygdalin (the biologically active isomer) and L-amygdalin (an artificial, inactive form) “so that the preparations would correspond with the products distributed by the major supplier.” The oral tablets contained only D-amygdalin. In keeping with the comprehensive metabolic therapy program used by Laetrile practitioners, patients also received vitamins and pancreatic enzymes, and followed a specialized diet. Of 178 patients, only one responded to treatment. And even though amygdalin produced minimal side effects, in the previous safety study, several patients in this trial experienced symptoms of cyanide toxicity (granted, this was a much larger study). The researchers concluded that “amygdalin (Laetrile) is a toxic drug that is not effective as a cancer treatment and does not warrant further study.” It conformed to the overriding view of the medical establishment at the time and ended the prospect of any further human testing some 35 years ago.

PROBLEMS WITH THE PHASE II STUDY

This last study has been critized by Laetrile supporters and there are several points of contention, one of which is the type of amygdalin used for IV administration. As mentioned, D-amygdalin is the biologically active isomer, and this was the substance used in the oral tablets. But the IV vials contained a racemic mixture, a combination of the D and L isomers (one active, one inactive), which would have significantly lowered the potency (by approximately 50 percent). The authors, as stated above, attempted to simulate the product characteristic of the Mexican supplier at the time, but it’s impossible to know decades later if this was an accurate simulation. It makes sense that the active isomer, D-amygdalin, was used in the oral tablets, but why was the racemic mixture used in the IV vials?

Another criticism is the “one size fits all” schedule of IV and oral doses used in the study. All patients were automatically switched from IV therapy to oral tablets after three weeks, regardless of response. Although the study authors stated that “the dosage and schedule were representative of past and present Laetrile practice,” many practitioners generally advocate an individualized protocol, with the IV portion performed until a positive response is seen, often from four to 10 months, or even longer. Patients are then put on oral maintenance therapy only when their cancer is in check and put back on IV if the cancer re-appears or grows. Some practitioners even administer oral tablets while tapering off IV.

Perhaps the correct conclusion to be drawn from this study isn’t that “amygdalin (Laetrile) is ineffective as a cancer treatment,” but rather, that administering a drug of questionable potency on a truncated schedule to advanced cancer patients doesn’t work.
AMYGDALIN’S USE TODAY AND HOW TO USE B17-PRO™

As mentioned earlier, amygdalin (Laetrile) can be legally administered in clinics only in certain countries. Dr. Antonio Jimenez, chief medical officer and founder of Hope4Cancer Institute in Mexico is one of the doctors who uses it in his practice. Besides its role as a chemotherapeutic agent, Dr. Jimenez has observed that amygdalin provides pain relief and well-being enhancement in his patients. He doesn’t use it as a single therapy or “magic bullet,” though, as part of a comprehensive treatment program to slow the progression of cancer. Dr. Jimenez has a realistic expectation, acknowledging amygdalin’s potential to inhibit cancer, but also realizing that it alone is not a cure, but an integral part of a multi-pronged approach to treatment.

Outside of Mexico, those in the US and most European countries don’t have access to clinics such as the Hope4Cancer Institute, but instead resort to consuming apricot kernels, a 2013–root-based pills (with unknown amounts of amygdalin of unknown purity). A superior alternative is B17-PRO™, containing 100 mg amygdalin per tablet, plus pancreatic enzymes and zinc. The recommended dose is one tablet per day with water before a meal, or as directed. Consider your health care professional before using. Remember not to take amygdalin tablets shortly before eating raw almonds or crushed fruit pits, or with fruits or vegetables that contain beta-glucoconidase or beta-glucoronicidase (i.e., celery, peaches, bean sprouts, carrots, etc.).

Dr. Jimenez apparently has never seen a toxic reaction with the IV and oral doses he uses in his clinic, and that observation is shared by other Laetrile practitioners. But, as we saw earlier in the studies, cyanide toxicity is a concern. Symptoms include liver damage, difficulty walking, fever, coma, lethargy, convulsions, nausea, vomiting, and dizziness. Seek medical attention immediately if you develop any side effects. But B17-PRO™ is a low-dose product, and it is highly unlikely those symptoms will develop if taken as directed (one tablet per day, or as recommended by your physician, avoiding the foods listed above).

We have just covered a lot of territory about amygdalin, from its history steeped in controversy and politics, to its various mechanisms of action, to an overview of the favorable assessment of amygdalin’s cancer-inhibiting potential. For example, a 2013 study concludes: “This compound might be applicable in the treatment of various cancer cell types.” 22 Quite the opposite determination from the majority of studies from the 1970s and early 1980s. So, the door has not been closed on amygdalin after all, as new research is uncovering potential applications and previously unknown mechanisms of action.

References
Memory is, therefore, neither Perception nor Conception, but a state or affection of one of these, conditioned by lapse of time. — Aristotle, On Memory and Reminiscence

The Birth of Consciousness

Odysseus, the King of Ithaca and the hero of these tales, is a hero of memory. The Greek word for mind or intellect or consciousness, nóos, is essential to his character, and its opposite, antinóos — defined as forgetfulness, stupidity, or arrogance — is the enemy of Odysseus. Forgetting, in the epic tales, is seen by Odysseus as an affront to memory and is punishable by severe reprisal, in which, as often as not, the perpetrator is killed. In his ten years of wandering throughout the known world, there are many adventures, but in the history of pharmacopoeia, one stands out: his encounter with the beautiful sorceress Circe on Aeaea, on her island home near Italy.
When Odysseus and his crew arrive on Aeaea, they are tired of the hardships of travel and fearful for their safety. Deciding to reduce their risk, Odysseus remains with his ship while half of his crew ventures inland, where they meet Circe, who offers her hospitality. According to Homer, she serves up a banquet of food into which she has mixed malignant drugs so that they might forget to Homer. Hearing of their plight, Odysseus sets out to free them. Along the way, in a forest glen, he is counseled by the god Hermes, in the form of a young man, who cautions him about dealing with Circe and gives him an antidote to protect him from the drugs that have taken down his crew. Hermes shows Odysseus the nature of the medicine, which has “a black root, but milk-like flower. The gods call it moly and it is difficult for men to dig up.”

As recent studies have shown, galantamine is one of the few long-lasting anticholinergic antidotes known, one that could easily have given Odysseus enough time to overpower Circe. In so doing, Odysseus liberates himself, his men, and their memories, giving them the courage and desire to go on. Thus, within this story and throughout the entire epic tale, the knowledge of the past is maintained and transmitted. Civilization is enriched by good history, artfully told, and we as its beneficiaries are less likely to repeat the errors of the past. So, it is when our memories remain intact.

**THE SNOWDROP**

The Snowdrop is small, inconspicuous, and difficult to find, flowering only briefly in the early spring. Its flower is milky-white, as indicated by the name Galanthus (gala = milk, anthus = flower). Its root is dark, and its bulb, when peeled, is onion-like. It can be found growing wild on the Balkan peninsula, where the snowdrop grows moist, sheltered ground. The Snowdrop is small, inconspicuous, and difficult to find, flowering only briefly in the early spring. Its flower is milky-white, as indicated by the name Galanthus (gala = milk, anthus = flower). Its root is dark, and its bulb, when peeled, is onion-like. It can be found growing wild on the Balkan peninsula, where the snowdrop grows moist, sheltered ground.

**Galantamine: The First Nootropic**

According to a paper published in 1983, the drug given to the crew was likely to be an extract from the plant Datura stramonium (thorn apple, or jimsonweed). This makes sense, because not only were their memories taken from them, they were cast into a delusional-hallucinatory state during which they believed they had been turned into animals. D. stramonium, among other drugs known to the ancient Greeks, is an anticholinergic that contains atropine and is known to produce such effects. Based on the description of the antidote moly, together with the immunity it gave Odysseus — thereby allowing him to rescue his crew from Circe and recover their memories — the researchers assert that moly is none other than the acetylcholinesterase inhibitor galanthamine (or galantamine, as it is now more commonly called), derived from the snowdrop (Galanthus nivalis) and related species. Galantamine may be the first nootropic agent — a substance that enhances intelligent, purposive consciousness (indo = consciousness, trope = a turning).

As further evidence, the researchers offer the site of the picking: a forest glen, where the snowdrop grows more readily because of the moist, sheltered ground. The Snowdrop is small, inconspicuous, and difficult to find, flowering only briefly in the early spring. Its flower is milky-white, as indicated by the name Galanthus (gala = milk, anthus = flower). Its root is dark, and its bulb, when peeled, is onion-like. It can be found growing wild on the Balkan peninsula, where the snowdrop grows moist, sheltered ground.

**The Dawn of Cholinergic Enhancement**

Before the so-called consciousness revolution kicked into high gear in the 1960s, a little-known discovery occurred in the unlikely country of Bulgaria. In the 1950s, a Bulgarian pharmacologist noticed that local villagers made use of the wild-growing common snowdrop plant by rubbing it on their foreheads to ease nerve pain. Further investigation led to the isolation of an alkaloid extract of the snowdrop, galantamine, that helped inhibit acetylcholinesterase, an enzyme that breaks down acetylcholine (ACH). An important nerve messenger, ACH is a biochemical that plays a role in muscle contraction and the maintenance of proper muscle tone; this was known throughout the world. Scientific literature indicates extensive use of snowdrop in Eastern Europe, such as Romania and the Ukraine, as well as the Balkan peninsula and other Mediterranean countries, where it was used topically and internally. At first, based on the surviving folkloric usage, galantamine was used in anesthesiology to increase muscle relaxation. Thereafter, it was rapidly introduced in other areas of medicine, such as neurology, ophthalmology, gastroenterology, intensive care and resuscitation, cardiology, and physiotherapy. For example, galantamine has been used successfully for the treatment of neuritis and neuralgia. Also intriguing is the ability of galantamine to increase color differentiation in monkeys, and it has been found to alleviate GI disturbances in rats.

**Fighting Alzheimer’s Disease with Galantamine**

**Memory Dilemma**

The realization of Odysseus, Homer, and Dioscorides is ours too, when the value of two recent, randomized, double-blind, placebo-controlled studies becomes apparent. Their welcome finding is that galantamine may be superior to any other cholinergic supplement. Galantamine may not only slow the decline into the black night of Alzheimer’s disease, but, for the first time, reverse it.

**Keeping Memory Intact**

While other evidence points to the antitodal use of other acetylcholinesterase inhibitors (AChEIs) — e.g., physostigmine (from Physostigma venosum) for atropine toxicity — long before the underlying mechanisms were understood, the Homerian description reflects perhaps the earliest empirical knowledge of an AChEI in distant antiquity, about 3000 years ago.

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CHOLINERGIC PLANTS FOR HEALING

In nature, plants have evolved cholinergic compounds for self-defense, among other self-serving mechanisms. Humans in the ancient world soon learned to use these plants therapeutically for their maladies as well as for the age-related decline in acetylcholine activity. While few, if any, of these plants were adequately understood, dosing knowledge was usually refined by folk herbal doctors and welders of magic, (often the same individuals).

Some plants were used, as Datura was used by Circe, for ritualistic, prophetic, or anesthetic purposes, or to investigate or perpetrate dementia and even madness. Among these other herbal cholinergics were Atropa belladonna (deadly nightshade), Hyoscyamus niger (henbane), and Mandragora officinarum (mandrake). Long before the current biologically based hypothesis of cholinergic derangement in Alzheimer’s disease emerged, plants now known to contain cholinergic antagonists were recorded for their amnesia- and dementia-inducing properties.

Others have been used positively for healing, recuperation, and memory maintenance or memory recovery. These include Melissa officinalis (balm, containing choline) and Salvia officinalis (sage, containing choline) to enhance mental functions; Galanthus nivalis (snowdrop, containing galantamine) for muscle relaxation and memory restoration; and Panax ginseng (Chinese ginseng) and Panax quinquefolius (American ginseng) for age-related cognitive impairment. The active choline-like agents of the ginsengs have not yet been identified. Also, Ginkgo biloba contains active ingredients in the form of ginkgolides that have been found to possess antioxidant, neuroprotective, and cholinergic activities relevant to Alzheimer’s disease mechanisms.

ALZHEIMER’S: PREVALENT AND GROWING

According to the World Health Organization, around 35 million people in industrialized countries suffered from Alzheimer’s disease in 2010. As people live longer, the probability of contracting this disease increases with advancing “memory age.” It may thus be thought of as an age-related memory impairment (ARMI). Currently, the percentage of Alzheimer disease sufferers among those aged 65 to 69 is 1.4%, but between 85 and 89, the incidence reaches 21.6%. As we progress in our ability to stave off other so-called “diseases of aging,” which high levels of well-chosen dietary supplements can help to accomplish, there is still Alzheimer’s looming, not to mention other ARMIs, such as dementia.

CHOLINERGIC SUPPLEMENTATION

As we have been aware for some time now, the use of cholinergic precursors such as choline and CDP-choline, cholinergic agonists such as DMAE, and cholinergic antagonists were recorded for their amnesia- and dementia-inducing properties.

Some plants were used, as Datura was used by Circe, for ritualistic, prophetic, or anesthetic purposes, or to investigate or perpetrate dementia and even madness. Among these other herbal cholinergics were Atropa belladonna (deadly nightshade), Hyoscyamus niger (henbane), and Mandragora officinarum (mandrake). Long before the current biologically based hypothesis of cholinergic derangement in Alzheimer’s disease emerged, plants now known to contain cholinergic antagonists were recorded for their amnesia- and dementia-inducing properties.

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ALZHEIMER’S IMPROVEMENT

A paper appeared in 1996 testing the hypothesis that the central feature of chronic fatigue syndrome is a cholinergic defect. The researchers chose galantamine to see if it could inhibit the irritability that this defect caused, believing that this played a large role in the pathogenesis of the illness. Of 39 subjects taking galantamine at 16 mg/day over an 8-week period, 43% reported a 50% improvement in their pain, sleep, and fatigue levels. A huge 70% reported 30% improvement, while the placebo group reported only 10% improvement. The improvements did not occur overnight, but gradually over 4 to 8 weeks.

HOLY MOLY: BRINGING UP THE PAST

“Odysseus, the great teller of tales, launched out on his story,” begins the ninth book of the epic poem. In addition to having a great episodic memory, he is cast as a hero of memory, a great voyager, a hero of poetry, and a master of rhetoric. Memory is rhetoric (in the classical sense, the art of persuasion), entailing, per Aristotle, a thorough awareness of one’s audience. Thus, rhetoric involves the artistry of memory, and like poetry, is composed of one’s experiences, eidetic images, and the core abilities of the post-memory-word. Thus, at the end of the journey, the heroic survival of Odysseus clearly demonstrates not only the importance of memory and of nōos (mind), but of poetry itself—and, by extension, of language and communication.

Table: FIGHTING ALZHEIMER'S DISEASE WITH GALANTAMINE

![Image](https://via.placeholder.com/150)

**References**

WHY BOTHER?

By Richard Swift

This article is written for a special side of you, let’s start with what and why. We have different mental and emotional states, and these combine to create attitudes. The combination that comes to the forefront at any time is influenced by what we are doing. We have one attitude at the office, another at parties, another with our family and another ‘investor’ attitude when making big decisions. This is the special side of you we invite you to bring out today.

Why? Because this article deals with maximising the return on the biggest investment you have ever made. The aim is to help you take a best practice approach to one of the biggest decisions you need to make from today onward. You will see why making no decision is highly likely to lead to the worst outcome.

Best practice in decision making is well known in the approach that Judges use. They listen to evidence and arguments for and against a proposition, they weigh the evidence and then they come to a reasoned decision. This approach is also used in Parliaments and businesses around the world and also in academic debates. The process can be tough to do, but if it is not corrupted it works every time. The first value of knowing how and why you reached a decision is firstly that you have a decision you can believe in, and secondly if circumstances change then you have a process you already understand. You can insert the change and see if it makes a real difference.
THE QUESTION WE LOOK AT TODAY IS: WHY BOTHER ABOUT AGING?

The most publicised view is a comforting ‘don’t bother, let the medical experts take care of you’. Government sanctioned drug company adverts show happy people taking pills and doctors from big hospitals looking wise.

The article below gives the main evidence and arguments for the opposite view.

“Why bother” is an abbreviation of “why should I bother to invest time and effort into something?”

We put the case for what we feel is worth bothering about and why it’s important. We also look at which people will consider it important and who will not be interested. We also look at why.

Finally, we outline how to get the best result from your effort if you decide to make it. The next article will deal with the detail of how to proceed.

Let’s start the main arguments.

WHAT IS WORTH BOTHERING ABOUT?

A little thought reveals that the popular phrase ‘Anti-Aging’ is not quite right. One cannot slow or reverse chronological aging any more than one can slow time, tides, winds or any other natural force.

But what we can do and what some people will consider well worth the investment of time and effort; is slowing and reversing the decline in our physical and mental vitality.

WHY IS THIS IMPORTANT?

Because we need our physical and mental vitality to get out to and enjoy the special places the real world can show us, and the special times it can give us.

Why is it important to get out to see the world’s special places and have the special times? Because that was our dream when we were young. That is why most of us entered business or professional careers in the first place.

We did not enter careers to wall ourselves away in offices and gaze at spreadsheets. We entered careers to eventually be free and able to get out and gaze in wonder at mountains and oceans and to enjoy life. The difference is that we chose to do it on a foundation of financial security- rather than have the precarious life of a wanderer.

The reason that tackling age-related decline is important is that physical and mental decline robs us of the ability to fulfil our young dreams; it robs us of our ability to fulfil our life purpose. Decline robs us of the return we deserve on the biggest investment we have ever made, the 25+ years of our peak vitality we put into our careers and raising our families.

Decline snatches victory away from us and it puts us on an ever-steepening slope into a depressing and often painful prison. Yes, it really is as bad as that. Look at the less fortunate souls around you who are trying to stay positive and cheerful. But you know it is a mask or a delusion, because you see that the light in their eyes is dying and the song inside them is silent.

These are the main arguments for why we should bother. Now on to the Who, When, How and finally the What.
WHO WILL AVOID THE FATE MOST PEOPLE SUFFER?

The take-away from this next section is: "If you do what most people do, you will get what most people get."

In the context of age-related decline, we argue: "If you are in average health for your age, and you do what most people do, which is going to see a doctor when you feel ill and take his/her advice, then you can expect to decline at the average rate and die at the average age."

Some people will invest time and effort to beat the average, while most people will not. Let's now look at a rational argument for why this happens.

The key is to look at what type of person will consider age-related decline important enough to bother. Then we may see why the majority do not bother.

Basically, people who have a big investment in their lives will see declining vitality as a priority problem and will act. These people will have a good chance of beating the average if their actions are well thought through and sensibly implemented. We cover these in the How and What sections below.

Most people who have no serious investment in their lives will probably nod and pay lip service to this article but are unlikely to do anything. This is no secret; we see it happening around us every day.

Asking 'why' most people do nothing gets us to the root of the problem. It seems to be mainly because most people regard themselves as consumers rather than creators and co-creators.

In this context 'consumer' means people who expect to have things done for them, either for a payment or as a right. An example is an all-inclusive resort. People pay, turn up and consume unlimited food and drink. It is an overall 'consumer experience'. Drive-through fast food outlets are another example—people consume without even leaving their cars. Many people live in commercially produced synthetic worlds in which they passively consume stimulation from sport and films on TV. They also consume thoughts and opinions from TV that they can regurgitate at other times. At the same time synthetic food additives, sugars and alcohols numb their consciousness.

The real problem comes when consumers regard their health the same way, laying off the responsibility to doctors and their medical insurance. Government sanctioned marketing of "a pill for every ill" encourages this attitude.

A passive consumer attitude is appropriate for emergency treatment required after car crashes and other traumas. However, you will see in the How and What sections that a consumer attitude certainly does not work to reverse the chronic conditions brought on by a consumer lifestyle.

Chronic conditions now account for over 80% of premature decline, disability and death in the West and in most other developed countries around the world.

A creator and co-creator attitude means that people feel responsible, or more accurately, "response-able", for their future success or failure.

We first experience this reality and this response-ability in school and university. We find that our teachers and professors are there to help us learn, but we are responsible for doing the study work with their help.

Later we experience creation and co-creation in our business or professional career. Building a business or a professional practice is certainly not a consumer experience; it is very much hands-on creating and building brick-by-brick. Staff and consultants can help you create, but they cannot and should not be asked to plan and build a business; that rarely works for long.

Even beauty is a mainly a creation and co-creation experience. Makeup and clothes certainly can help, but in the end, beauty depends on a sound foundation of a healthy diet and lifestyle. Most of the most attractive people practice calorie restriction and go to bed early most of the time.

WHEN SHOULD WE START TAKING ACTION?

Let's look at a simplified graph of the rise and fall over a lifetime of the average person's ability to get out and enjoy the world. You need freedom, which comes at the end of school. You need physical and mental vitality, which peaks at around 19. You need some money to buy a backpack and get a ticket to somewhere special; most 19-year olds can find that. Finally, you need a dream destination to go for, because; "if you don't have a dream, how are you going to make a dream come true?"

Figure 1 brings us face-to-face with reality and that measure of your remaining enjoyable lifespan.

Around age 37, if we are in normal health, we notice the first signs of decline in mental and physical vitality. This is the age at which most athletes retire. Decline starts in our late 20s but experience holds athletes up for a while. We non-athletes don't drive ourselves to the last 1% so we don't notice until we have dropped a way.

By the time we hit 50, most of us find that peak physical performance is down to about 70% of what it was at age 20. By age 60 it is down to about 50%. To check this, see how far and fast you can run now and compare it with then.

Currently, the average age of death for men is 79, and 83 for women. As mentioned, if we are in average health and we do the average things that people do (see a doctor when we feel ill and take his/her advice) then logic dictates that we can expect the average result.

Figure 1 shows our best estimate of the true decline curve. If you don't agree with the straight line from 37 to 79, then draw your own curve— it makes little difference to the area under the graph and this is the important measure of your remaining enjoyable lifespan.

Figure 1 brings us face-to-face with reality and that can be tough to deal with. However, business and professional people and investors face tough realities and they have the tools to search for and implement real world solutions.
The ‘do nothing’ area of Figure 2 illustrates how much enjoyable life the average 60-year old has left. As the zero-vitality line is death, we should take the bottom 20% out of the category of ‘enjoyable’. That leaves a very small triangle area of enjoyable lifespan. Figure 2 also shows that simply living longer, in this case until 90, does not add much in the above 20% quality life area.

However, halting and reversing decline to regain the average fitness level at age 50 and holding it for as long as possible, which is quite achievable, gives a 200% gain over the average. We have labelled this A-Club because this process is best undertaken by groups of people in a private club or society. We explain why later.

To conclude, the When; when to start bothering, is 45 or 50 or as soon as you possibly can if you are older than 50. The further you slide down the slope, the harder it is to get back up.

AN OUTLINE OF HOW DO WE GO ABOUT ACHIEVING THIS?

The first step is to make a firm decision; the sections above are designed to help you with that.

The second step is to get the information you need to make good decisions, this is a big task, but it shrinks fast when it is shared between a large group of likeminded people. Finding and processing information is not a problem these days, the problem is in how to categorise and lay it out to clarify the picture rather than to obscure it.

One important information area is regarding drugs and other interventions for chronic conditions. Our investigation to date indicate that none of the mainstream drugs prescribed for any of the main chronic conditions even claim to work on the root cause of the relevant condition. They all just claim to treat symptoms.

One explanation is the drug approval requirement for trials that show activity against a drug target. Targets are fine when you have a bacterial or a parasitic infection. If the pathogens die, the drug has worked. This is the basis of Pasteur’s germ theory. However, when you apply germ theory and the drug target requirement to chronic conditions, you end up in a mess because the only clear targets are symptoms.

Chronic conditions are caused by growing and diffuse imbalances in one or more complex body systems, or worse still, between complex body systems. In chronic conditions there is no well-defined target for any drug or surgical intervention.

The sensible approach is to look for the causes of the original imbalance, address them and see what happens. Often the causes are too much of something bad or too little of something good, the trick is finding out exactly what.

FINALLY LET’S OUTLINE WHAT WE NEED TO DO

First, see your body as an investment upon which the success of all other investments depends. If you want to get a real feel of what this means, ask yourself this question: Would I swap places with a billionaire who is trapped in a wheelchair? That puts the value of money into a new perspective.

Second, follow Warren Buffetts advice to understand what you are investing in.

Start to learn about how your body works and what it is made of. The answers are quite remarkable and give you a much grander view of life. Looking through this magazine and the online library will get you off to good start. Make learning about your hobby.

Third, get the information you need to make balanced judgements that you can rely on. This is best done by sharing the load in a club or society.

Fourth, compare the results you get from your treatment choice with those achieved by people like you who have made similar choices and then compare both with the results of other groups who have made different choices. Again, this is best done in a club setting.

Fifth, get out and enjoy the world, make purposeful trips to remember who you are. Remember the dreams of the 19-year-old who decided to start a career as a route to wonder and happiness. Get that person back, it may take two or four trips, but it will work, and it will change everything, you will see.

Sixth, get the power of comradeship and the wisdom of crowds working with you. These are two powerful forces and they will make everything much easier.

We have used our space for this issue. We hope to have a follow-up, part two of this article in a future issue of the Aging Matters™ magazine.
Melatonin is produced by the pineal gland at night to regulate our circadian rhythm, (sometimes called the sleep wake cycle). As we age the amount of melatonin we produce reduces resulting in many older people sleeping less and having a lower quality of sleep. Our melatonin has been formulated by the world’s foremost melatonin expert Dr. Walter Pierpaoli, his Melatonin Zn Se, or MZS™, is totally unique since it is designed to mimic the natural night peak of melatonin- to leave you feeling refreshed and alert the following day.

What does Melatonin do?

Melatonin is vital to protect our hormonal system, regulate immunity and repair our body’s cells. It is commonly used by shift workers and also to treat jet lag and age related sleep disorders. Melatonin is an extremely effective antioxidant; in fact on a molecule to molecule basis; melatonin has proved to be significantly more efficient in neutralizing toxic hydroxyl-radicals than the two well-known free radical scavengers, glutathione and mannitol. Its effect on longevity is well documented. Experts believe melatonin has a positive effect on aging.

Age related macular degeneration (ARMD) comes in two forms, wet and dry and is a notoriously difficult disorder to treat and is linked to blindness. A 24-month study, (published in NY Academy of Science, 2005, 1057:384-392) on 100 patients showed that after 3 months, the majority of patients taking 3 mg of Melatonin Zn Se nightly had halted the progression of their age related macular degeneration and at 6 months many showed reversal of their ARMD. Remarkably this was true for both the wet and dry forms!

Why is Dr. Pierpaoli’s MZS™ more effective than other melatonin supplements?

Firstly it is of pharmaceutical quality at a dose of 3mg. Secondly, it contains the synergistic ingredients of selenium and zinc. Thirdly and most importantly- it is designed to release at a very specific time. Dr. Pierpaoli’s research led him to perfect a formula that exactly mimics the pineal gland’s release of melatonin. MZS is the only melatonin supplement to follow nature’s own night peak. Take half to one 3mg tablet at bedtime only; do not take more than two tablets. By taking MZS™ between 9pm and 11pm you will create a night peak between 1am and 3am, this is the most natural and normal time to have the highest melatonin levels.

MZS is much more than a sleep aid and melatonin has many published benefits. MZS comes with the endorsement of Dr. Pierpaoli. If you’ve tried other melatonin and didn’t notice a significant effect, then we highly recommend you try Dr. Pierpaoli MZS for a superior experience.

OXYTOCIN FOR PASSION AND SEX

Oxytocin is a hormone produced by the hypothalamus, excreted via the pituitary gland. Its orthodox medicine role is to help women give birth, since the large dose that’s injected helps to relax the uterus and alleviates the passage of the child. Dr. Thierry Hertoghe’s book, ‘Passion, sex and longevity, the oxytocin adventure’ highlights that it has many other roles too.

The Love Hormone

Oxytocin has been dubbed ‘the love hormone’. It can induce feelings of bonding and care. Its measurements have been taken between lovers, friends, relatives, parents and their children etc. It has been noted that oxytocin levels are higher when they are in their presence. Mothers naturally bond with their children, but even men, (especially those who experience the live birth), express their emotions as wanting to care and protect their offspring. These effects may be attributable to the release of oxytocin hence triggering the bond. However, psychopaths are notoriously low in their oxytocin levels, which may be a cause of their uncaring feelings towards other humans.

The pain and orgasm connection- Fibromyalgia can be a very debilitating disorder with a lot of pain, sometimes constant for those who suffer with it. In women, it was noted that when they were experiencing an orgasm they felt no pain at all. Women undergone a burst of oxytocin during orgasm. Trails were undertaken to see if oxytocin supplementation could alleviate the pain of Fibromyalgia, there was some success, but the side-effect noted was that those women now enjoyed multiple orgasms!

The effects of Oxytocin

Dr. Hertoghe explained that some will not feel the effects of oxytocin. For two reasons, (if we consider that the dose is correct for that individual). Firstly, some people are ‘low’ in their principal sex hormone, so if a man is low testosterone, or if a woman is low estrogen, it is possible that oxytocin will not elicit its full potential in those persons. The other issue could be low vasopressin, vasopressin is a counterpart to oxytocin, produced and released via the same glands. In cases of vasopressin deficiency, the patient may enhance the oxytocin experience by adding one or two sprays (10IU) each of vasopressin via the Vaso-Pro nasal spray.

Doses are very dependent upon its use. For social or sexual enhancement, 5 IU to 10 IU is a ‘typical’ dose. Dr. Hertoghe reduced the doses that he recommends in his books, (Transmitted via personal conversation to me). Currently IAS is providing Oxy-sub in 20 IU (a soft sublingual tablet). These can be cut into half or a quarter for a dose of 5 or 10 IU and should be placed under the tongue and allowed to melt. The other option is Oxy-Pro which is applied intranasally delivering 10 IU per spray.

BECAUSE NOT ALL MELATONINS’ ARE CREATED EQUAL

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Oxytocin is a hormone produced by the hypothalamus, excreted via the pituitary gland. Its orthodox medicine role is to help women give birth, since the large dose that’s injected helps to relax the uterus and alleviates the passage of the child. Dr. Thierry Hertoghe’s book, ‘Passion, sex and longevity, the oxytocin adventure’ highlights that it has many other roles too.

The Love Hormone

Oxytocin has been dubbed ‘the love hormone’. It can induce feelings of bonding and care. Its measurements have been taken between lovers, friends, relatives, parents and their children etc. It has been noted that oxytocin levels are higher when they are in their presence. Mothers naturally bond with their children, but even men, (especially those who experience the live birth), express their emotions as wanting to care and protect their offspring. These effects may be attributable to the release of oxytocin hence triggering the bond. However, psychopaths are notoriously low in their oxytocin levels, which may be a cause of their uncaring feelings towards other humans.

The pain and orgasm connection- Fibromyalgia can be a very debilitating disorder with a lot of pain, sometimes constant for those who suffer with it. In women, it was noted that when they were experiencing an orgasm they felt no pain at all. Women undergone a burst of oxytocin during orgasm. Trails were undertaken to see if oxytocin supplementation could alleviate the pain of Fibromyalgia, there was some success, but the side-effect noted was that those women now enjoyed multiple orgasms!

The effects of Oxytocin

Dr. Hertoghe explained that some will not feel the effects of oxytocin. For two reasons, (if we consider that the dose is correct for that individual). Firstly, some people are ‘low’ in their principal sex hormone, so if a man is low testosterone, or if a woman is low estrogen, it is possible that oxytocin will not elicit its full potential in those persons. The other issue could be low vasopressin, vasopressin is a counterpart to oxytocin, produced and released via the same glands. In cases of vasopressin deficiency, the patient may enhance the oxytocin experience by adding one or two sprays (10IU) each of vasopressin via the Vaso-Pro nasal spray.

Doses are very dependent upon its use. For social or sexual enhancement, 5 IU to 10 IU is a ‘typical’ dose. Dr. Hertoghe reduced the doses that he recommends in his books, (Transmitted via personal conversation to me). Currently IAS is providing Oxy-sub in 20 IU (a soft sublingual tablet). These can be cut into half or a quarter for a dose of 5 or 10 IU and should be placed under the tongue and allowed to melt. The other option is Oxy-Pro which is applied intranasally delivering 10 IU per spray.
**A BREAKTHROUGH FOR CATARACT**

Can-C™ eye-drops are the original™ brand-developed by Innovative Vision Products (IVP). This group were the first to research, publish and prove how eye-drops can reduce and even eradicate cataract. Accordingly there are active US and EU patents (and others pending) on this unique and special product.

**Unique formula:**

Can-C™ eye-drops are the formula from the original published human trials. They contain a purified and racemized form of n-acetylcarnosine (made in Japan); this natural dipeptide has potent anti-glycating and anti-oxidant properties that prevent lipid peroxidation. Note that the formula is important-it’s not all about the n-acetylcarnosine; the specific carrier agents and their purity are also important. If you look at the Can-C™ formula you will see differences to the copycats, (remember it is only Can-C™ that is patented in recognition of the original work). If you want the best possible results in the fastest possible time, then choose Can-C™ to deliver them according to the clinical trials.

**Clinical trial:**

Patients placed two-drops of Can-C™ into their eyes twice daily for a 6-month period, the outcome was:— 90% saw an improvement in their visual acuity.— 88.9% of patients showed improvement in the clarity of their lens.

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.

**Improving eye-sight:**

More evidence is mounting that Can-C™ is efficacious for many conditions including:— Cataracts (particularly the senile version)— Glaucoma— Presbyopia— Corneal disorders— Eye strain— Ocular inflammation— Blurred vision— Vitreous opacities and lesions— Diabetes mellitus complications— Contact lens users— Dry eye syndrome

Of special interest may be to persons who wear contact lenses. This is because Can-C™ inhibits the accumulation of lactic acid and therefore contacts can be worn for longer periods without pain.

We have also received reports that Can-C™ not only aids dry-eye syndrome with its lubricants, but that Can-C™ helps to unclog proteins from the lacrimal ducts, thus releasing more natural tears onto the eye.

In a similar way, it is also believed that the unclogging of proteins in the eye’s drain, (the Schlemm valve), helps to reduce intraocular pressure and thus aids glaucoma.

**FOR FOCUS AND CONCENTRATION**

Deprenyl is also known as selegiline, it was created in the 1960s by Professor Joseph Knoll, principally as an aid to Parkinson’s patients—because deprenyl has a significant benefit to improve dopamine levels in the brain.

The inhibition of the more common MAO-A can be problematic, leading to something called ‘the cheese effect,’ not a side effect of deprenyl. Although it should be noted that dopamine can inhibit type-A, usually at very high doses of 20mg. Professor Knoll has noted that there is another significant action of deprenyl and this is the raising of PEA levels. PEA is a catecholamine activity enhancer that raises norepinephrine levels, it’s a significant attention agent that is behind the primary mechanism of the famous Eugeroic drug—modafinil (Provigil). Read professor Knoll’s books- ‘The brain and itself’, or ‘How ‘selegiline/deprenyl slows brain aging.’

**Significant longevity studies**

Professor Knoll’s experiments with rats produced some of the most incredible longevity benefits. When fed deprenyl in their food, they lived longer than those that were not. After the last non-treated rats died, the first of the deprenyl rats hadn’t! These results were in another study conducted from research by, Dean, Fowkes and Morgenthaler—published in the book, ‘Smart drugs & nutrients’. It highlights that the loss of dopamine in humans with age, can be mapped against the development of Parkinson’s and even death.

**Typical patient responses**

A patient who has mild cognitive impairment, or age related minor cognitive dysfunction, the most common report is a significant improvement in their focus and concentration. Persons with higher dopamine levels often appear more ‘driven’ and ‘dedicated.’ Avoid overuse since it can lead to what may appear to be an oppressive behaviour, as others around you are not focused and ‘on the ball’ as you! We recommend breaks from deprenyl use.

Some advocate one week off in the month and other use it during the weekdays but not at the weekends.

Doses are based on need and age. Parkinson’s patients will require large doses. A person wanting to improve their cognitive performance may want to consider 1mg to 3mg per day, with occasional breaks. These doses do not take into account synergy with other dopamine enhancing agents and persons using anti-depressants should consult with their physician. Deprenyl tablets are provided in 5mg form (Jumex), some like to take ½ to 1 of these tablets 3 times a week. The use of the deprenyl liquid (Dep-Pro) is particularly attractive for those using deprenyl to generally support, protect and improve neurological function, since 1 drop = 1mg, the liquid can be dosed very precisely by placing those drops into a cold drink. Avoid use in the late evening to prevent any sleep disruption.
A former Soviet military secret!

What their research uncovered - that was used for two decades on many thousands of men and women - was a remarkable link between short chain peptides and DNA. This former military secret is now available to the public as peptide bioregulators. Their published research has identified that each organ / gland / tissue uses a highly specific short chain peptide, obtained from food, to act as a ‘short-cut’ to initiate protein synthesis. These peptides, unlike proteins, can enter the blood through the stomach. Through a comprehensive list of patents and even copyrighted PowerPoint slides, the Russian research group have shown that each of the concentrated peptide bioregulators so far examined, interact with particular strands of DNA - effectively and very specifically activating repair and regenerative processes.

This is a remarkable story since what we are describing here are peptides that act as individualised gene switches. To date, they have been tested for many years on thousands of individuals, without report of any serious side effects or contraindications. We believe that they could be set to ‘out do’ stem cells. Why? Because this peptide therapy is relatively cheap, highly specific, can be taken orally and doesn’t require any suppression of the immune system to operate fully (as stem cells do).

Oral material from the trials

The peptide bioregulators available via IAS are the bovine originals, sourced from carefully chosen Danish calves and processed through pharmaceutical processes and filters. They are not the synthetic versions which have not been studied/ proven. Peptide bioregulators act as they sound-to regulate; for example, Thryreogen® the thyroid peptide would increase thyroid activity if it were too low, but decrease it if were too high.

Dosing

Doses are very dependent upon the need and unlike hormones these peptides do not have to be taken every day, hence making them a cost effective regime. A typical/ average dose and build up more slowly.

– Start with an intensive course: 2 capsules once a day for 30-days.
– Thereafter use 2 capsules once a day for 10-days, repeat every 2, 3, 4 or even as little as 6-months.

The story of the peptide bioregulators is a remarkable one and we recommend that you to read the articles and interviews and see the video on the IAS website.

PIRACETAM, THE ORIGINAL NOOTROPIC

Smart drugs and nutrients, or to give them their correct medical terminology- nootropics, are agents that can not only improve conditions of senile dementias, but in recent times have become popular for older individuals to improve their mental and cognitive processes.

It was Ward Dean, M.D. who highlighted these facts through his very popular ‘Smart Drug’ series of books in the 1980s, since then the term ‘smart drugs’ has become mainstream.

Piracetam has also been used to improve patients recovery from strokes, particularly improving post stroke speech impairment (aphasia). Another use has been in cases of acute and chronic cerebral ischaemia, (decreased blood flow to the brain). Using piracetam has restored speech and the use of limbs in these patients; it has also increased neuronal activity in the brain when measured with EEG.

For regular individuals, piracetam has been shown to enhance idea creation and the ability to ‘see things through;’ in other words to have ideas and being them to fruition. The level of clarity piracetam creates is often described/ perceived as; “the fog has lifted.”

How does piracetam work?

Piracetam’s key and unique method of action is upon the Corpus Callosum, the region of the brain that links the two hemispheres. Most experts believe it is the key that gives piracetam users the ability to channel greater brain potential by connecting the logical side of the brain with the creative side more effectively.

What are the doses of piracetam? A common dose is 800mg tablets three times a day, then lowering to 800mg twice a day after the first month. The effects of piracetam can be enhanced if taken concurrently with centrophenoxine or hydrgine. Side effects are minimal and seldom experienced, but should you experience nausea or a headache then it is usually caused by an overdose. In which case reduce the dose and build up more slowly.
FOR THE HYPOTHYROID EPIDEMIC

Dr. Broda Barnes in the 1970s estimated that 40% of the adult population was deficient in thyroid hormones; he published this statement in his excellent book ‘hypothyroidism, the unsuspected epidemic.’ Since then, pupils of Dr. Barnes, such as Dr. Richard Wilkinson, have suggested that this figure could be even greater now!

This is important because the thyroid gland is of pivotal importance to our overall health, but like the majority of hormones, as we age the production of thyroid hormones decline. This lack of thyroid function is the root cause of a wide range of symptoms such as poor concentration, confusion, memory problems, cold hands and feet and weight gain.

Another serious condition which can be caused by and result from an underactive thyroid are painful musculoskeletal issues that affect tendons, muscles and ligaments.

Choosing between synthetic and natural thyroid supplements

IAS stocks a comprehensive range of both synthetic and natural thyroid, although we advocate the use of a natural supplement over a synthetic, this is because products such as Armour® are of a porcine origin, so they naturally contain the full spectrum of T1, T2, T3 and T4 thyroid hormones. (Note the bottles only list the amounts of T3 and T4 because very few physicians are familiar with T1 and T2).

Natural desiccated thyroids are measured in grains; with one grain being equivalent to approximately 60 mg. IAS carries doses from ¼ grain to 2 grains, with brands including Armour®, ERFA® and Nature®. IAS also provides synthetic T3 in 20 mcg and T4 in 100 mcg tablets.

The hormones produced by the thyroid control the body’s metabolism- the rate at which it burns calories for energy. It also controls the body’s utilization of fat, so a decline in the secretion of hormones from the thyroid gland, (known as hypothyroidism) can result in wide range of symptoms such as memory problems, cold hands and feet and weight gain.

Thyroid supplements provide potent anti-aging protection. Many aging individuals can benefit from taking a thyroid supplement because this remarkable hormone has such a profound affect across so many different conditions.

In this featured section we are focusing on the use of natural estrogens and progesterone for women, normally utilised to aid the menopause. IAS carries a wide range of bioidentical hormones - a term that means ‘natural to and in the body.’

NATURAL ESTROGENS AND PROGESTERONE FOR WOMEN

When hormone replacement therapy (HRT) was developed in the 1920s, estrogens had to be derived from horse urine because a laboratory solution was too difficult or expensive to synthesize. Facts pointed out by Dr. Wright in his best-selling book ‘Stay Young & Sexy’, Estrogens can be easily produced now. Some people believe that the majority of women produce estrogens in the ratios of 90% estril, 7% estradiol and 3% estrone.

Most tri-estrogen preparations attempt to replicate the human hormones estriol, estradiol and estrone, apply them in the ratio of 80:10:10, while some even entirely overlook estriol, claiming it is a weak estrogen. But, women naturally produce high levels of estriol and it is considered to have anticarcinogenic effects.

The Esnatri cream can be applied by daily rotation to your neck, upper chest, breasts and behind your knees, or inner thighs. A typical starting dose is 2mg. Start from day one (of what would have been the start of your menstrual cycle) and continue until day 25. You should stop for five days, before repeating the application at the start of the next menstrual cycle. During these last five days, the estrogen receptors are being allowed to ‘rest’ as they have been accustomed.

Combining Estrogen with Progesterone

Progesterone is the counterbalance to estrogens. Women can significantly decline in estrogen levels during menopause – they rarely reach zero production levels, whereas progesterone continues to be produced and can sometimes not be measured at all in elderly women. It is also the low progesterone that most significantly impacts bone strength, leading onto osteoporosis. There are numerous reasons to ensure that progesterone is also taken alongside an estrogen therapy. IAS provides a 5% strength natural progesterone cream. Typical doses are 25mg to 30mg of progesterone applied on day 10 and continuing to 25. The start date varies according to the usual timing of your ovulation. As with the Esnatri cream, sop for the last 5 days of your cycle so that the estrogen receptors have their accustomed ‘rest’ period. Remember, your hormone replacement therapy should be overseen by a physician and should not be undertaken if you have undergone cancer treatment.
SAVE ON MANY ANTIAGING PRODUCTS.

Simply use the voucher codes below within the stated timeframe and on the websites mentioned. (Products may be restricted in some countries and prices may be subject to taxes and S&H where appropriate).

**THE ANTIAGING STORE**

**4MU-PRO™**
100x1000mg tablets $119.99 Buy 3x and save $20.00 per pack.

**ATP-PRO™ (ADENOSINE TRIPHOSPHATE)**
Save $5.00 normally $24.99 just $19.99 for 60 capsules.

**B17-PRO™ (AMADAYLIN)**
Save $5.00 normally $29.99 just $24.99 for 90x100mg tablets,
VALID UNTIL 31/12/2018 WITH CODE: ANTIAGING-3

**DMSA (DMSA-PRO™)**
Save $5.00 normally $39.99 just $34.99 for 60x 100mg capsules.

**GALANTAMINE (REMINYL®)**
28x 8 mg tablets $29.99 (save $5.00 with voucher at $24.99)
SHORT EXPIRY: 31/12/2018

**MSH2 (MSH2-PRO™)**
Save $10.00 normally $49.99 just $39.99 for 20ml 20mg nasal spray.

**SILDENAFIL-PRO™ (GENERIC VIAGRA®)**
Save $6.00 normally $19.99 just $13.99 for 10x100mg double-scored tablets.

For the above go to: www.theantiaging.store (payments by e-Check and Wire).

**LONGEVITY SUPPLEMENTS STORE**

**ACF-228®**
30-capsules $39.99 Buy 3x and save $6.66 per pack.

**BETA-GLUCANS CREAM (BG-PRO™)**
Save $12.00 normally $39.99 just $27.99 for 50ml tube.

**CAN-C™ EYE-DROPS**
1x pack (2x 5ml bottles) $39.99
Buy 3x and save 10% Buy 6x and save 20%

**GCB70-PRO™ (GREEN COFFEE BEAN EXTRACT)**
Save $6.99 normally $24.99 just $17.99 for 30x 500mg capsules.

**PEPTIDE BIOREGULATORS**
From $59.99 for 20x 200 mg capsules.
Save $30.00 when you buy them in 60-capsule packs.

**GALANTAMINE (REMINYL®)**
28x 8 mg tablets $29.99 (save $5.00 with voucher at $24.99)
SHORT EXPIRY: 31/12/2018

**MSH2 (MSH2-PRO™)**
Save $10.00 normally $49.99 just $39.99 for 20ml 20mg nasal spray.

**SILDENAFIL-PRO™ (GENERIC VIAGRA®)**
Save $6.00 normally $19.99 just $13.99 for 10x100mg double-scored tablets.

For the above go to: www.longevitiesupplements.store (accepts payments by all major credit cards).
www.antiaging-systems.com is your comprehensive resource for information about all the leading commercially available antiaging, preventative and regenerative products and therapies available today. Visit www.antiaging-systems.com and find articles, videos, audio-files, all referenced with a guide of where to obtain your needs.

Currently the site covers topics related to all the following products:

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