### Why should everyone take Hydrolyzed Collagen Protein?

After water, **protein** is the next most plentiful component of our bodies. The body manufactures proteins to make up hair, muscles, nails, tendons, ligaments, and other body structures such as body fluids; but not bile or urine. Proteins also function as enzymes, hormones, and as important components of other cells such as our genes. The central nervous system cannot function without protein – amino acids – that act as neurotransmitters or as precursors to the neurotransmitters. Neurotransmitters are necessary in order for the brain to receive and send messages. Adequate protein intake is essential to good health. Just considering the importance of the central nervous system, obesity control, and heart disease – heart muscle – these areas alone, is enough of a concern to interest the professionals to get their patients to improve their protein intake.

**Collagen** is the most abundant protein in the body and is responsible for maintaining the integrity of ground substance, tendons, ligaments, and cartilage. In **bones**, hydrolyzed collagen can assist with bone density by promoting the growth of cells that build bone. This makes bones stronger and can help fight **osteoopenia** (decreased calcification or density of bones due to inadequate protein synthesis) and **osteoarthritis** (reduction in the quantity of bone or atrophy of skeletal tissue; usually age-related). Collagen is also the support structure of the skin and the blood vessels. **Collagen** is destroyed during inflammatory processes that involve bones, joints, cartilage, and other connective tissue.

Yes, too much protein, whether animal or vegetarian, is not healthy. But so is not enough. A person should intake **1 gram** of protein for every **2.2 pounds** of weight every day. Some people have a problem with digestion of protein and therefore are not assimilating the necessary amino acids because the protein molecules are too large for their stomach and small intestine to handle. When this happens, the large protein molecules can cause food allergies or even many other health problems. Food allergies are increasing in number every day, and when muscles, including the heart, are not receiving adequate useable protein nutrition for maintenance and repair, many problematic symptoms occur. That’s why it’s imperative to intake a **protein** source that is **small** enough for the body to handle and appreciate. Enzyme hydrolyzed collagen protein that is most fashionable for the body’s use will be in the 1,000 to 5,000 Dalton size (itty-bitty and teeny-weeny).

Ingesting fresh hydrolyzed collagen protein can increase tissue concentrations of antioxidant phytochemicals, and this in turn will support many protective mechanisms and at the same time block free-radical and oxidative damage to cells of the body. One of the best opportunities in preventing virtually every chronic disease (such as heart disease, cancer, strokes, high blood pressure, diabetes, gallstones, arthritis, and many more) is a diet rich in amino acids. It is not just the amino acid peptides that get to do all the wondrous works. It is collectively having the chemo-preventers and phytochemicals do their magic. Phytochemicals include pigments such as carotenes, chlorophyll, and flavonoids; dietary fiber; enzymes; vitamin-like compounds; and many other dietary constituents. As they work in harmony with nutritional antioxidants like vitamin C, vitamin E, and selenium the body receives the power it needs for optimal function and protection against the onslaught of disease.

Could **weight management** be better achieved if the person could break down and assimilate proteins more efficiently to build more lean muscle mass and improve metabolic rate? The answer is a definite yes! Could **heart function** be improved by supplying the muscle with proper strengthening and repairing nutrients, by better protein intake and better digestion and assimilation of protein? Again, the answer is an emphatic yes!
Tell me again what Collagen “really” is.

Collagen is the major structural protein in connective tissue and the most abundant protein in the human body. It is what binds and supports us. Collagen is responsible for maintaining the strength and flexibility of bones, joints, skin, tendons, ligaments, hair, nails, blood vessels and a plethora of other body structures. Collagen molecules are particularly rich in the amino acids glycine, proline, hydroxylysine, and hydroxyproline. The hydroxylysine and hydroxyproline are two amino acids “specific” to collagen and are not regularly found in most amino acid supplements; yet they are very important to collagen regeneration and production.

Hence, collagen that has been hydrolyzed with fruit enzymes (not with heat or acids that can destroy the matrix and peptide bonds) will genetically parallel the amino structure of the body’s collagen. Collagen such as this that is biocompatible with the host cells and tissue interactions are for the good. Before being absorbed either in the skeleton as a new organization or being assimilated into the surrounding matrix with the cells, there has to be a “good” interaction. This means it becomes a part of the normal cell and tissue physiology function. Enzyme hydrolyzed collagen protein from a bovine source meets this requirement. This type of collagen also offers a great feature in that it has a low immunogenicity (this means it doesn’t cause problems with the genes).

Are there different “types” of Collagen?

Collagen is to the tissues in the human body what steel rods are to reinforced concrete. If the steel rods of the frame are weak, all the structure weakens. More than 20 kinds of collagen are found in the tissue of the body. Depending on the different types of collagen contained in our body, we find a variation in the sequences of the amino acids.

Types I through V represent 99% of all the collagen found in our body, and bovine collagen supplies all five types.

- **Type I** Bones, Tendons, Ligaments and Skin
- **Type II** Cartilages and structure of the Eyes
- **Type III** Liver, Lungs, and Arteries
- **Type IV** Kidneys and several Internal Organs
- **Type V** Surface of Cells, Hair and Placenta

Why is Bovine Collagen the preferred amino acid protein?

Bovine collagen is the best choice for providing the perfect protein mixture of amino acids because it provides the most specific concentration of amino acids found in nature that perfectly match the necessary needs of the human body. We call this “bio-identical” protein. These peptide amino acid links genetically parallel the amino acid structures of the human body. How the collagen is hydrolyzed also makes the major difference in how healthy the body will respond to it.

When collagen is properly hydrolyzed, the enzymes from fruits break down the protein into many little fragments called “peptides.” Because the peptides from fruit enzyme breakdown are much smaller, they will have a greater assimilation (incorporation of digested materials into the tissues). Using plant enzymes from fruit to predigest the bovine dermis (collagen), the resulting digested collagen is then sent through a process of filtration to separate out large protein molecules. This method of extraction is especially ideal for preserving the most valuable compounds that are the polypeptides (small amino-acid chains) and other water-soluble fractions. This natural, wholesome state leaves the highest quality of raw materials for the body to work with. Unlike many amino acid protein products that have been pasteurized or heat treated or bathed in some acid solution, these
amino acid peptides are not warped or bent out shape. High temperatures and acids are devastating on amino acid structures and damage the natural material. Bovine collagen handling uses a cold-processing technique to avoid high temperatures that would destroy and damage the natural material.

It still behooves me how today’s whey protein powders have been “pasteurized” and still expect the total amino acid to be functional. To get the best-of-the-best protein powder, it requires a high-tech processing that allows the drying to occur with virtually no loss of the vital nutrients. As a result, the bovine collagen protein that is cold-processed contains the same nutrients (amino acids) as found in the human body and in the same sizes and amounts the human body utilizes (making it the most bio-identical). The low-temperature, gentle drying cycle ensures that biologically active state of all co-factors and amino acids peptides remain intact. Thus the end product will have a higher concentration of unaltered protein as near as possible to the human body. The biologically active material in a bovine collagen protein sample will include the following: enzymes, soluble proteins, natural lipid factors, vitamins, minerals and many other nutritional precursors. Any of these materials could be destroyed or eliminated if the product was not prepared properly. There’s no doubt, the fruit enzyme hydrolyzed collagen protein is the most effective because of the content.

Thus, enzymatically hydrolyzed collagen means there is virtually no loss of the vital nutrients. When the hydrolyzation process is treated with fruit enzymes, the bovine collagen releases the rich biochemicals and amino acids. Because predigested collagen needs little or no further digestion, your body can assimilate the natural factors quickly and easily. Assimilation means pulling the nutrients into the tissues. Now the body can absorb and use this source of collagen with very little effort or energy expenditure. It is an amazing health enhancing journey when these easily absorbable amino acid peptides are assimilated and redistributed into areas where the collagen is most needed.

Predigesting is a must to make collagen hydrolyzed (water soluble). The resulting “soluble concentrate” is more easily digested and better absorbed by the human body. Again, using plant enzymes from special fruits to partially digest and hydrolyze the bovine material is the “extra” step to produce the highest quality nutritional material. After the concentrate is partially digested, it then goes through a process of filtration to separate out large protein molecules. This method of extraction is ideal for the bovine collagen, where the most valuable compounds are the polypeptides (small amino acid chains) and other water-soluble fractions.

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Can you break down and summarize the nineteen amino acids specifically found in Bovine Collagen?

**Glycine**

This amino acid is found in the highest percentage of all the aminos, and it happens to be the smallest of the amino acids in size. Glycine helps turn back the hands of time and enhances a better sleep – start sleeping like a baby. It simultaneously improves your quality of sleep and daytime alertness and helps you stay in better physical condition with the passage of time. You’ll fall asleep significantly quicker and enter into the “slow wave” sleep commonly called “deep sleep” appreciably faster as well; all with less daytime grogginess. Glycine improves performance on memory recognition tasks. “Liveliness,” “peppiness,” “clear-headedness” are some the buzzwords commonly used to describe the effects of glycine. Taking glycine before bedtime is often used for best sleep pattern results. Glycine is anti-aging promoting. Glycine is a very important component of collagen (almost 30%). Collagen being the number one protein in the human body is obviously very important to better health. Glycine improves tendons, ligaments, skin, cartilage, bone, blood vessels, intestines, intervertebral discs, and even the cornea of the eye. Unlike bone, which has a very low turnover rate, most high-collagen content tissues are in constant need of renewal and repair. Glycine helps neurotransmitters in the brain and nervous system to carry messages between the nerve cells.
(cell-to-cell communication). It’s an “inhibitory” or calming neurotransmitter. By raising the serotonin in the prefrontal cortex (front part) of brain, there is an improvement in mood and attitude. Glycine helps prevent “nodding off” or unintentional falling asleep during the daytime. Anything that’s under constant physical stress will need repair much more often than the more inactive tissues (these stressed out parts include the bones and the brain). Obviously, keeping collagen in good repair is an important component of healthy aging, and since more glycine goes into collagen than anywhere else, if your body doesn’t make enough glycine, you will come up short. We need lots of glycine for all the metabolic uses, including more collagen synthesis.

**Proline**

This very important amino acid is most productive in the manufacture of collagen, cartilage and connective tissue. It’s a must in tissue repair and wound healing. Proline is most productive in the maintenance of skin. It even provides stability for our blood vessels – very important in the process of reversing atherosclerotic deposits (plaque in the arteries). Cholesterol-carrying fat globules (lipoproteins) attach to the inside of the blood vessel walls via a biological “adhesive tape.” Proline is a formidable “Teflon-like” agent that can neutralize the stickiness of these fat globules. Thus, proline helps to prevent the buildup of atherosclerotic deposits and helps to release already deposited fat globules from the blood vessel walls into the bloodstream. This makes the plaques in the artery walls decrease. Low proline levels always indicate a high risk for cardiovascular disease.

**Glutamic Acid / Glutamine**

This amino acid is very beneficial for the liver and intestinal health – helps maintain the gastrointestinal tract (Crohn’s, IBS -- irritable bowel syndrome, colitis, diverticulitis). It is the primary energy source of the intestinal tract. Glutamic acid even strengthens the immune function, as well as improves exercise endurance. Glutamine helps to maintain muscle mass because it’s a natural “nitrogen” donor. This is very important for recovery from injuries or surgery. Glutamine is also very unique in quality as to its ability to inhibit fatty buildup inside the liver (cirrhosis preventing). In weight loss it preserves the lean tissue. Glutamine is a natural mood balancer and a major energy source for brain cells.

**Lysine**

Noted for fighting cold sores and herpes viruses and Epstein Barr virus. It’s very important in children’s growth and development of bone formation. Lysine helps in the formation of antibodies to help fight disease. This is also another of the collagen building stability molecules. It stabilizes blood vessels and other organs in the body, as well as providing optimum strength to connective tissue. Lysine is another of the “Teflon-like” agents that help release deposited fat globules from the blood vessel deposits. Lysine is a precursor to carnitine.

**Arginine**

This one is a nitric oxide enhancing amino acid, thus it helps maintain cardiovascular health. Nitric oxide relaxes the blood vessel walls and helps to normalize high blood pressure. In addition, nitric oxide helps to decrease the stickiness of platelets and has an anti-clogging effect. Endothelial support for circulatory health depends on the arginine molecule; so does good immune support. Even the urea cycle (proper excretion of nitrogen metabolism) depends upon this amino acid. Arginine corresponds to the anabolic response (the building up of proteins from amino acids) for those interested in athletic physique.

**Cysteine**

This is one of the building blocks for glutathione – one the most important detoxifying antioxidants in the body. Glutathione is a small protein composed of three amino acids manufactured in our cells
that assists in the detoxification of heavy metals such as lead as well as in the elimination of pesticides and solvents. Whether our body can meet the demand for glutathione is contingent on how much amino acid peptides is being consumed each day.

Cysteine protects the inside of the blood vessel walls from free radical and other kinds of damage. It supports healthy liver function (cleanse and build) as well as acting as a blood purifier. This amino acid promotes detoxification of ingested chemicals and inhaled pollutants. It’s very healthy to the kidneys and intestines as well. Cysteine has the ability to intercept and neutralize toxins even before they are absorbed. It’s a heavy metal chelator (binds to organic toxins, solvents, and pesticides) so the body can excrete these unwanted substances through the kidneys or liver. Cysteine fortifies the immune system by improving the function of the white blood cells, including T cell lymphocytes – the frontline soldiers of the immune system. It also stimulates the natural killing ability of immune cells.

**Phenylalanine**

This is the feel good, no pain amino. Phenylalanine is the primary building block for neurotransmitters that promote alertness, a positive disposition and even pain relief. Many have found immediate improvement in mood and mental outlook. It helps erase apathy and lethargy. This nutraceutical has helped some to “kick” the habit. People with back pain, menstrual cramps or arthritic aches have used phenylalanine with great success. It provides the body with a better endorphin (the feel good chemical) release. Because it elevates catecholamine neurotransmitters it has been known to lessen depression (moody-blues & mully-grubs). Phenylalanine can mean better neurological health pertaining to multiple sclerosis and Parkinson’s disease.

**Methionine**

This amino acid helps to lower “bad” cholesterol. It too has anti-depressant, liver helping, and pain control qualities. Methionine is helpful in the conversion of estradiols into estriols, the safer form of estrogen. It is very liver friendly and has therefore become nutrition of choice for those with hepatitis, cirrhosis, or alcoholic and non-alcoholic fatty liver. Fibromyalgia relief is often felt with methionine, as well as an improvement in Chronic Fatigue Syndrome. Methionine lowers the bad-for-the-heart chemical called homocysteine. It prevents adhesion (sticking) of pathogenic microorganisms in chronic urinary tract infections such as cystitis.

**Histidine**

This is one of the nitrogen containing amino acids required for the manufacture of both red blood cells and white blood cells. It helps to protect the body from damage caused by radiation and in removing heavy metals from the body (such as overloads of copper or iron). Histidine is a precursor of histamine, the compound released by the immune system cells during an allergic reaction. The neat thing about histidine is how it controls the histamine levels (reducing “too” much histamine controls the itch or hives). It is needed for growth and for the repair of tissue, especially the maintenance of the myelin sheath that protects the nerve cells. In the stomach, histidine is involved in producing gastric juices; thus people with a shortage of gastric juices or suffering from indigestion often find much benefit from this amino acid. Histidine is an important part of the clotting factors and can minimize internal bleeding from trauma. Because histidine is part of zinc-binding proteins, it becomes essential for proper zinc absorption and transport to tissues. Better zinc absorption will thicken the growth plate in bone and make for healthier bones. Histidine helps control diarrhea. Low histidine levels have been found in the serum of rheumatoid arthritis patients, thus it is speculated that histidine will be helpful to them.
Tyrosine

Tyrosine is a building block for several important brain chemicals such as epinephrine, norepinephrine, serotonin, and dopamine, all of which work to regulate mood. Tyrosine aids in the production of melanin (pigment responsible for hair and skin color). Tyrosine is also involved in assisting the organs responsible for making and regulating the adrenal, thyroid and pituitary hormones. It helps to minimize the symptoms of stress. Tyrosine has helped many people in their weight loss efforts. Consider it a nutraceutical of choice for those with anxiety-related hypertension (high blood pressure).

Serine

This amino acid is involved in the synthesis of immune system proteins and promotes brain health. Serine is required for the metabolism of fat and the healthiness of tissue growth. Serine serves a glycogenic function (healthier glycogen/glucose) by aiding in the storage of glucose by the liver and muscles. Serine also supports nerve tissues by synthesizing the fatty acid sheath (membrane covering) of nerves. It also aids in the production of hemoglobin and antibodies. When serine hooks up with phospholipids in the blood, the compound Phosphatidylserine is formed – an amazing memory enhancing nutraceutical.

Tryptophan

Because bovine collagen is lacking in only one amino acid, L-tryptophan, it is often added into the amino acid polypeptide blend in the manufacturing processes to make a total and complete protein mixture. Only a smidgen is need to complete the bio-identical profile – 0.8% of the total amino acid composition. This precursor to the key neurotransmitter serotonin helps to exert a calming effect. It is also necessary for the release of growth hormones. Tryptophan improves the sleep patterns and helps overcome insomnia and anxiety. Ladies like it for the premenstrual syndrome (PMS) relief.

Valine

This branched-chain amino acid (BCAA) is found in high concentrations in the muscles and is very necessary for muscle health. It is needed for muscle metabolism, repair and growth of tissue. It is an energy source in the muscles. This preserves the use of glucose to healthier levels. Valine helps body to maintain the nitrogen balance in the body. People who have liver disease, injuries, or who have undergone surgery are always in need of more valine. Valine has a positive influence on the brain uptake of neurotransmitter precursors such as tryptophan, phenylalanine, and tyrosine.

Threonine

This amino acid is found in high concentrations in the heart and skeletal muscles and central nervous system. It is also known as a detoxifier. Threonine helps prevent fatty buildup in the liver. It is a very important component of collagen; and is generally very low in vegetarians. When combined with aspartic acid and methionine, threonine performs lipotropic duties (corrects excessive fat deposits in the liver). When threonine levels are low, anxiety and depression can be more exasperating.

Aspartic Acid

This amino acid facilitates the use of carbohydrates as an energy source for the body. Thus, it helps improve stamina and fend off fatigue by helping convert carbohydrates into muscle energy. Aspartic acid also aids in the excretion of toxins such as ammonia from the body (a problem for many who exercise heavily). When ammonia enters into the circulatory system it acts as a toxin that can be harmful to the central nervous system. It builds immune system immunoglobulins (Ig) and antibodies. Aspartic acid assists in the mineral transport systems in the body (especially magnesium and potassium). It is of paramount importance in the metabolism during construction of other amino acids.
and biochemistry in the Kreb's citric acid cycle (where energy is massively produced into ATP molecules). Among the biochemicals that are synthesized from aspartic acid are asparagine, arginine, lysine, methionine, threonine, isoleucine, and several nucleotides (very important in the functioning of DNA and RNA). It is needed for endurance, brain and neural health.

**Isoleucine**

This amino is very **muscle** involved – muscle protein synthesis (promotes healthy muscles) and muscle glucose uptake (this helps stabilize blood sugar and improves energy levels). Isoleucine is very important for reducing muscle breakdown in bedridden patients. Post surgical patients need isoleucine for tissue repair of muscles, bone and skin. Isoleucine is needed for **hemoglobin** formation and blood clot formation. It prevents muscles from breaking down during exercise. Better endurance comes via this amino.

**Leucine**

This amino acid occurs primarily in skeletal muscle. It is required for formation of blood. Medically, leucine has been used in reversing liver induced brain atrophy. Leucine supplementation has been reported to decrease exercise-induced protein breakdown and unnecessary release of muscle enzymes that create pain and inflammation. It is also a helper people lose weight when they have diet-induced obesity problem. Promotes healing of broken bones.

**Alanine**

This amino acid is major player sugar/glucose metabolism and certainly energy metabolism. It is required for healthy growth and maintenance of muscle. Alanine boosts the **immune** system by assisting in production of healthier antibodies. Alanine is a major component of connective tissue (required for growth and maintenance of muscle and elastin tissue). As a result, this amino makes you stronger and more flexible. It has been show to reduce unhealthy levels of "bad" cholesterol and reduce an enlarged **prostate** gland.

**Hydroxylysine & Hydroxyproline**

These two amino acids are necessary for reversing **cardiovascular** abnormalities. These two aminos are need for strength in the **vascular** (blood vessel) cell walls. Without hydroxylysine and hydroxyproline there is a high probability of instability of the blood vessel walls, lesions and cracks, and atherosclerotic deposits (plaque buildup). Eventually this leads to heart attacks and strokes. A daily optimal intake of these essential **artery-protecting** nutrients is the primary measure to preventive medicine and even helping to repair existing artery wall damage.

**Detoxification and Internal Cleansing**

Amino acid peptides reduce the toxic load on the body by giving the body the proper nutritional support it needs. Amino acids promote improved **liver** function. A toxic liver sends out alarm signals that are manifested as psoriasis, acne, chronic headaches, inflammatory and autoimmune problems, as well as chronic fatigue. **Glutathione**, the most important antioxidant for neutralizing free radicals produced as by-products of the detoxification process, is a small amino acid peptide molecule composed of cysteine, glutamic acid, and glycine. The body uses several amino acids (glycine, taurine, glutamine, arginine, and ornithine) to combine with and neutralize toxins. Of these, **glycine** is the most commonly utilized in **Phase II** amino acid detoxification.

**Food Allergies**

**Incomplete digestion** of proteins creates a number of problems for the body, including the development of food allergies. In order for a food molecule to produce an allergic response it must be
fairly large. Hence, the very small amino acid peptides are the way to instill protein for the body without the complications of allergic responses. Most food allergies are mediated by the immune system as a result of interactions between ingested food, the digestive tract, white blood cells, and food-specific antibodies such as IgE, IgG, or IgM. IgE is involved primarily in the “immediate” reaction, while the others, including IgD and IgA, are involved in the allergies that “come and go.” Because abnormal immune responses can lead to tissue injury or degenerative problems, it is best to have amino acids in the peptide size to assimilate the needed protein and collagen of the body.

Aging Skin & Fine Hair

It’s all about the collagen matrix. Collagen gives structural support to the human body – especially hair, skin, nails, joints and bones. With amino acid peptides supplying the 20 building block amino acids, the collagen fibers will become a richer and more abundant collection of fibers that run in all directions (multi-directional) instead of running in one direction only (called “single directional” collagen). This creates a tighter and stronger collagen “mesh” or matrix. This equates to the condition of youthfulness. Starting at age 21, the body’s collagen content diminishes. Hence, as the collagen begins to run in single directional patterns, the hair becomes weaker and thinner, the skin wrinkles, the nails become brittle, the joints more painful, and the bones weaker, among other things. As collagen is generated, the blood flow is increased in the scalp and the body begins to produce more keratin, the “hair bulking” protein. As collagen levels improve, the fibroblasts located at the base of the hair root (called dermal papilla) volumizes. Increasing the volume of the papilla in turn increases the volume of the hair follicle and the thickness of the hair. More collagen means greater blood flow to the hair, ensuring the delivery of an abundant supply of growth-rich nutrients to the hair. Like hair, nails are made up primarily of keratin. Keratin production, like collagen, slows down with age. That’s why adult’s nails chip more easily than a child or a teenager. Collagen helps to turn on the cells in the body that naturally produce keratin. Collagen plumps the skin from the inside out, reducing fine lines and wrinkles. As the minerals flow in, the collagen becomes a tighter “mesh” within the skin and the elasticity of the skin is remarkably improved -- less chance of tearing and snapping. Now the skin can bounce back after a crease or a fold.

Digestion and Elimination

Amino acid peptides are easily and properly digested, absorbed and eliminated. Peptides are very easy for the digestive system to extract the necessary nutrients it needs. Amino acid peptides like to do most of their doing in the jejunum area (an 8 foot portion of the small intestine). Incomplete digestion of proteins creates a number of problems for the body, including the development of allergies and the formation of toxic substances during the breakdown of protein by bacteria in the gut.

How does Hydrolyzed Collagen Protein combat inflammation?

People in motion are constantly involving their joints, muscles, bones and tendons. It doesn't matter if they are walking, sitting, writing, standing, driving, cooking, typing on the keyboard, or climbing the stairs, the tendons that hold it all together always get the worst end of the deal.

Thus when an ache or pain sets it, most people grab an over-the-counter pain relief such as aspirin, ibuprofen, or ketoprofen. But the problem therein is that any of these over-the-counter non-steroidal anti-inflammatory drugs (NSAIDs) can create ulcerations of the stomach and with use over time will actually, literally degenerate the cartilage. Although these drugs provide short-term symptomatic relief, they do not address the root cause of the problem and may actually increase the rate of degeneration of the joint cartilage because they inhibit collagen matrix synthesis and accelerate cartilage destruction.
No doubt when the purest and best Enzyme Hydrolyzed Collagen that has been infused with high grade nutrition, this medical-grade formula will go right to the root cause and problem. The peptide amino acids are more proactive.

Especially protecting the tendons that support the cartilage will make the bending, reaching and moving a lot more possible. Putting back flexibility and mobility begins with the tendons and works it way through and through. It sure beats the side-effect producing NSAIDs!

### Does Hydrolyzed Collagen Protein help with weight loss?

Because protein is an absolute necessity for a health-promoting diet and a major key to achieving weight loss and maintaining ideal body weight, adding the Hydrolyzed Collagen Protein to the regimen makes for a more successful venture. The amino acids that are direct precursors to the brain chemical serotonin (tryptophan, tyrosine, alanine) help prevent “overeating.” This can result in a significant reduction in food intake. The brain gets the message to stop eating at a much sooner period of time. Reducing calorie intake then promotes substantial weight loss. Amino acid peptides from hydrolyzed collagen promote satiety, leading to consumption of fewer calories.

Another weight loss advantage to using hydrolyzed collagen on a daily basis is the positive effect the amino acid peptides have on the energy factories of the cells (called mitochondria) and the muscles themselves. The muscles and mitochondria are intricately interwoven. All chemical reactions in the body need branch-chained amino acids (BCAAs). These specialized amino acid peptides make the muscles more active and that means better blood sugar levels. In turn, this increases muscle mass even without exercising. Since the basal metabolic rate (BMR) is linked to muscle mass, the body will produce as much as a 30% improvement in metabolism with the advent of amino acid peptides.

### How does Hydrolyzed Collagen Protein affect the skin?

You'll love the effect of amino acid peptides from collagen on your skin – especially the tensile strength and resiliency. By lessening the chance for loose, flaccid skin and wrinkles, the outward appearance should take on a new glow. Beautiful skin is way more than skin deep. Collagen peptides work where many topical creams and lotions simply cannot go. Traveling through the bloodstream, the collagen is delivered to the dermis, where wrinkles first take shape and new skin cells are formed. After all, 75% of the skin is comprised of collagen. Since collagen begins to decrease beginning at age 30 at a rate of about 1% per year, by the age of 50 there is usually an abrupt and noticeable decrease in collagen. Therefore it is imperative that amino acid supplementation be instituted on a daily basis. Feeding your hungry skin amino acid peptides should allow the skin tone to get clearer, the texture become smoother, and the age spots to begin fading away. It is absolutely amazing when cells begin to spring back to life, and the skin all over the body becomes softer, moister, firmer, and develops a healthy radiance; and once the “internal” collagen has begun its repairing ways, then a topical preparation containing hydrolyzed collagen protein + the arctic cloudberry should make for one of the best “external” preparations around. Perhaps it’s time to kiss those itty-bitty lines around the lips good-bye!

The information contained in this document is for educational purposes only and intended to treat, prevent, or cure any disease.