

Velvet Antler - A Gift From Nature

by Cindy Ewashkiw & Dr. Marion Allen

A recently published booklet, titled *Velvet Antler - A Gift From Nature*, has already sold over 5,000 copies. This publication was co-authored by Dietary Technologist Cindy Ewashkiw and University of Alberta Professor of Nursing Dr. Marion Allen, provides a wealth of information about velvet antler and its uses. The following excerpt (taken from Issue 7 Volume 2 of the Wisconsin Commercial Deer & Elk Farmers Association) from the booklet describes the physical composition of velvet antler and some of the possible benefits from its use. The booklet's forward clearly states that it is not intended to provide medical advice or take the place of any advice given by health professionals. It does, however, provide answers to many of the common questions regarding the use of the elk velvet antler products. This booklet is an ideal reference for alternative health care providers and marketers of velvet antler products.

What is the composition of velvet antler?

Active ingredients found in velvet antler include a variety of minerals, trace elements, protein, fatty acids, glycosaminoglycans, growth hormones, and growth factors. These ingredients and their use in the body are outlined in the following tables.

Mineral and Trace Elements

Calcium (Ca)	provides structure for bones and teeth, and is essential for nerve impulse conduction, muscle contraction and blood clotting
Copper (Cu)	necessary for red blood cell development, bones, and nerves
Iron (Fe)	essential for blood cells transporting oxygen through out the body
Manganese (Mn)	needed for development of bones and connective tissue, and for normal functioning of the nervous system
Magnesium (Mg)	needed in metabolic reactions and storing and releasing energy cells
Phosphorous (P)	provides structure for bones and teeth, and is a component of nearly all metabolic reactions
Potassium (K)	need for nerve and muscle function
Selenium (Se)	powerful antioxidant
Sulfur (S)	is a component amino acids and insulin
Zinc (Zn)	part of the enzymes involved in digestion and respiration, and is necessary for normal wound healing and skin health

Proteins/Collagen/Lipids

Proteins - are the structural materials in cells, and aid in growth and repair of tissues.

Collagen	a major structural component of bones, tendons, ligaments, and cartilage
Lipids	build cell parts and boost energy for cellular activities (all essential fatty acids including omega 3 and 6 including all essential amino acids):

Growth Hormones and Growth Factors

Insulin-like Growth Factor (IGF-1) and Epidermal Growth Factor (EGF)	Growth hormones and factors have an effect on growth and maintenance of bones and promoting protein and fat metabolism, stimulating cartilage growth, and thickening and lengthening bones in children. They also have growth promoting actions on the skin
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Glycosaminoglycans (GAGs)

Hyaluronic acid	is the cement material of connective tissue and a component fluid that cushions the joint
Chondroitin Sulfate	extremely potent anti-inflammatory agent
Glucosamine Sulfate	an amino sugar that occurs naturally in the body. Its glue-like qualities help to hold tissues together. It is also a major component of synovial fluid, lubricates and serves as a shock absorber for the joints
Erythropoietin	a hormone produced in the kidneys and released into the bloodstream in response to low oxygen levels, thus helping to increase oxygen-carrying capacity of the blood
Prostaglandins	chemical messenger produced in virtually all tissues, causing a broad range of positive effects on many of the body's defense systems
Phospholipids	chemical messenger produced in virtually all tissues, causing a broad range of positive effects on many of the body's defense systems
Glycosphingolipids	involved in cell metabolism and growth

What benefits can be expected?

The list of benefits demonstrated by research and noted through anecdotal evidence on velvet antler is lengthy: Though investigation has only just begun in North America, research findings and medical accounts from Asia and New Zealand are already convincing. The reports suggest that velvet antler stimulates the body's metabolism and protects and restores damaged organ tissues by accelerating healing. Velvet antler is also thought to help the body battle invaders that produce inflammation by increasing phagocytic functions. Phagocytic cells, such as white blood cells, surround, eat, and digest cell waste and microorganisms.

There is also some suggestion that blood pressure is lowered with velvet antler consumption and enhanced thyroid function.

Velvet antler has gonadotrophic function, which means it enhances the hormone that causes the testes and ovaries to do their work. Historical accounts from Korea refer to velvet antler being used for infertility, miscarriage prevention, and helping pregnant women have an easier delivery.

Research findings, clinical trials, and anecdotal evidence certainly demonstrate the value of velvet antler for health issues. Four key areas of investigation as the effects of velvet antler are: immune system, energy and stamina, arthritis and inflammation, and the aging process.

Help for the Immune System

The human body has its own internal healing and protection mechanism called the immune system. It fights off invaders caused by disease, stress, poor nutrition, meager living habits, and drugs. Some common signs of a weakened immune system is fatigue, listlessness, continuous infections, and slow healing.

Having and maintaining a strong immune system is essential to good health. Eating sensibly, getting proper rest, and exercising are all very important factors in staying healthy. Think of your immune system as your own little internal army. Tiny soldiers are fighting off any invaders that dare to enter their territory. The stronger the soldiers are in that army, the better the chances are of stopping invaders before they can cause any damage. This is why constantly nurturing and supporting the immune system is so important to staying healthy.

Researchers in New Zealand investigated velvet antler's effect on human white blood cells because of its long history of being taken for immune system support. Studies demonstrated that aqueous extracts of velvet antler were highly potent in causing an increase in human white blood cell count. This, of course, is a good thing as white blood cells are one of the immune system's first lines of defense when invaders come attacking.

Increasing Energy and Stamina

Athletes, who are in strength training programs, often seek effective nutritional supplementation programs. One such supplement may be velvet antler because of its excellent amino acid composition and mineral content. Fourteen different essential and non-essential amino acids are available in velvet antler. Velvet antler has been shown to have performance enhancing effects in both humans and animals based on the results of numerous studies. For example, research was done in Russia in which anabolic agents known to improve performance and muscular strength in athletes were analyzed. When studies using velvet antler were done, it showed the kayakers, weightlifters, bodybuilders and powerlifters all increased both muscular and nerve strength. The aim of taking velvet antler, according to one Russian scientist with the Russian bodybuilding Federation, is to resist unfavorable external influences, and accelerate the restorative processes (quicker recovery) of the body after intensive activity.

Easing the Symptoms of Arthritis and Other Inflammatory Disorders

Rheumatoid arthritis is a disorder resulting in chronic inflammation of the joints, tissue around the joints, and other organs in the body. The cause of this painful disease is unknown, though there are several theories.

These include:

- The immune system not working properly.
- Genetic makeup passed down from parents.
- An unexplained immune system response to a virus, bacteria, or mycoplasma (microscopic organisms without rigid cell walls).
- The body's response to environmental factors.

Some of the symptoms of rheumatoid arthritis include joint pain, heat, and swelling, particularly in the morning and after long periods of inactivity. As the disease progresses, the cartilage, joints, ligaments, and tendons begin to breakdown, causing further loss of joint function. Further advancement can affect one's daily activities such as work, social functioning, and eventually even personal independence.

While rheumatoid arthritis is an inflammatory type of disease, osteoarthritis is a degenerative joint disease. Actual breakdown of the cartilage that covers the ends of bones occurs. Osteoarthritis also causes bones to become brittle which, of course, increases the risk of the bones cracking or breaking. It can be a hereditary disease and affects three times as many women over the age of 60 as men.

Some common causes of osteoarthritis are:

- Bone injury
- A defect in the protein that makes up cartilage
- Wear and tear of aging

Many of the nutrients found in velvet antler are important for arthritis sufferers. Glucosamine, chondroitin, sulfate, essential fatty acids, calcium, phosphorous, magnesium, copper, zinc, selenium, growth hormones, and growth factors are all vital for growth and maintenance of joints, tissues and synovial fluids.

Compliance has been met with U.S. Food and Drug Administration regulations to allow a claim to be made about velvet antler products. The specific claim substantiated by scientific evidence, states that the velvet antler "provides nutritional support for joint structure and function."

Modern research studies continue as people suffering with rheumatoid arthritis and osteoarthritis claim relief from painful and swollen joints.

Inhibiting the Aging Process

A number of changes continually occur in the body as part of the aging process. The skin, ligaments, and tendons begin to lose elasticity. Even larger arteries lose elasticity, causing increased blood pressure, decreased heart rate, and decreased blood flow through the heart. The body may also become less able to adapt to environmental changes such as cold weather. The immune system weakens with age, leaving the body less able to heal and repair itself. Some people experience memory loss and decreased ability to solve problems. As one grows older, a decrease in the body's ability to digest food properly often leads to nutritional deficiencies and diseases related to these deficiencies. Available research suggests that components, such as growth hormones and growth factors (and possibly some yet to be discovered components) available in velvet antler, may be key in slowing aging process.

One of the growth hormones in velvet antler is IGF-1 (insulin like growth factor). A study conducted at Oxford University in England led researchers to believe that the IGF-1 contained in velvet antler has medicinal value for humans. IGF-1 was shown to promote muscular development, prevent muscular atrophy (breakdown), and slow the deteriorating effects of aging. Further research on the anti-aging effects to velvet antler need to be done.
