



AvinotropinTM

CONCENTRATED GROWTH FACTORS

PRODUCT GUIDE

Distributed By:



Anova Health
Simply Effective Biological Technologies
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There has never been a supplement with the **STRENGTH GAINS OF HGH**, the **HEALING POWERS OF A HYPERBARIC CHAMBER**, **ENDURANCE GAINS OF EPO**, the **HORMONE BALANCING OF HCG**, the **TOTAL SYSTEM REGENERATION** of a full matrix of GF(s), **100 MCG'S OF IGF-1 PER BOTTLE**, all administered with a **BREAKTHROUGH PATENT PENDING GLAND STIMULATING FORMULA**.

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INTRODUCTION.

A brief understanding to the confusion...

Let's get the facts straight on IGF and HGH products that might be on the market today. First, a brief understanding on how this works. HGH or Human Growth Hormone (somatotrophin) is a hormone created and secreted from the pituitary gland. Once this hormone enters your blood stream it combines with insulin to create growth factors including IGF-1. This final process happens in the liver as it filters the growth factors (GF) in a ready to use form called a metabolite. This IGF-1 metabolite is responsible for producing a various array of growth factors that perform specific actions for many different body functions and parts.

Clinical research has shown that Avinotropin's proprietary extract is a **READY TO USE MATRIX** of all of the growth factors in a metabolite form delivered with an advanced Ethanol Transport Buccal Mucosa Delivery System. This growth factor matrix technology has bypassed supplements that are precursors to hormones or secretagogues. The issue with those types of supplements is that they can over-stress and over-work the glands to produce irregular amounts of hormones and significantly raise blood pressure. Avinotropin's proprietary extract is **not a synthetic form of IGF-1 or HGH**. Synthetic forms can be toxic to your liver and extremely expensive as well as inconvenient with daily shots taken in the mid section. In addition, synthetic IGF-1 and HGH still leaves your body having to work to produce the full matrix of growth factors that Avinotropin™ instantly provides.

Avinotropin's proprietary extract is the ready to use form of your body's full matrix of growth factors.



PRODUCT FACTS

Serving Size: 30 drops (1mL)
Servings Per Container: 30

Avinotropin™

(Derived from Velvet Antler)

A natural matrix containing:

- Insulin like Growth Factor I (IGF-1)
- Insulin like Growth Factor II (IGF-2)
- Transforming Growth Factor Alpha
- Transforming Growth Factor Beta
- Epidermal Growth Factor
- Vascular Endothelial Growth Factor
- Nerve Growth Factor
- Neurotrophin Growth Factor 3
- Fibroblast Growth Factor (3 Types)
- Interleukins
- Bone Morphogenetic Protein 4
- Related co-Factors

Other Ingredients: Purified Water, 52% v/v
USP Alcohol

HISTORY.

Among the thousands of herbs in the Chinese pharmacopoeia that treat specific diseases there are only a select few that are regarded as pure tonics. They are the royal herbs, the precious substances that are held to nourish both body and spirit. The first recorded use of velvet as a medicine in ancient times dates back over two thousand years to a Han tomb in Hunan Province. This is where a silk scroll was recovered that listed over fifty different diseases for which antler velvet was prescribed. Several hundred years later, in the 16th century medical classic Pen Ts'ao Kang Mu, the master herbalist Li Shizen devotes several pages to deer products including velvet which was prepared into powders, pills, extracts, tinctures and ointment

Deer velvet is named after the soft velvet-like covering of deer antlers while they are growing and still in a cartilaginous state, before they harden into bone. Every year the stag's antlers grow with remarkable swiftness and every year, after the roar and mating season, the antlers are cast to begin the cycle again in the spring. On New Zealand deer farms the antlers are removed painlessly under veterinary supervision before they harden, in order to protect the stags from each other, and also to harvest the velvet, which is then processed in government licensed facilities.

More than 250 papers have been published since 1930 on the manufacture, composition, and biochemical effects. Much of this research covers the same ground, and the results have consistently shown benefits in a host of areas. Some of those areas being blood pressure, increase hemoglobin levels, increase lung efficiency, improve recuperation, improve muscle tone and glandular functions, sharpen mental alertness, relieve the inflammation of arthritis and heal stomach ulcers.

THE PRODUCT.

Clinical research has shown that Avinotropin™ can provide the strength gains of HGH. Avinotropin™ brings muscular endurance that only high altitude training or blood doping could mirror. Avinotropin™ delivers the healing and tissue regeneration that could only be achieved by a hyperbaric chamber.

Avinotropin™ Amino Acid and growth factor matrix is standardized to 100 mcg of IGF-1. Avinotropin's patent pending formula dramatically increases testosterone production while blocking/impeding excess estrogen production. IGF-1 is also clinically proven to shred fat while allowing you to gain pure lean muscle mass. This patent pending formula improves sexual performance and libido. Avinotropin™ eliminates negative side effects typically seen in body building supplements by its ability to prevent face and body acne, prevent hair loss, and in some cases stimulate regrowth.



ABSORBING GROWTH FACTORS & RECEPTORS

Growth factors (purple and yellow) bind to receptors (blue and green) that protrude from a cell's surface. A cross-section view shows how the opposite end of each receptor reaches the inside of the cell (deep red area). [Art: Nicolle Rager Fuller]

..... **PRODUCT SUMMARY**

Deer Velvet in is a highly complex substance that is approximately made up of 50% Protein, 35% Ash, 12% calcium, 8% nitrogen and 6% Phosphorous.

>> GROWTH FACTORS

- Bone morphogenetic proteins (BMPs)
- Epidermal growth factor (EGF)
- Erythropoietin (EPO)
- Fibroblast growth factor (FGF)
- Platelet-derived growth factor (PDGF)
- Transforming growth factor alpha(TGF-A)
- Growth differentiation factor-9 (GDF9)
- Interleukins
- Insulin-like growth factor (IGF) I
- Insulin-like growth factor (IGF) II
- Nerve growth factor (NGF) and other neurotrophins
- Transforming growth factor beta (TGF-B)
- Vascular endothelial growth factor (VEGF)
- Myostatin (GDF-8)

>> AMINO ACIDS* (Essential & Non-Essential)

- Alanine
- Asparagine
- Aspartic acid
- Arginine
- Cysteine
- Glutamine
- Glycine
- Glutamic acid
- Histidine
- Isoleucine
- Lysine
- Leucine
- Phenylalanine
- Methionine
- Serine
- Proline
- Tryptophan
- Threonine
- Tyrosine
- Valine

>> FREE FORM AMINO ACIDS

- β -Amino Acid
- Amino Acid De-carboxylase
- Di-Hydroxyl Phenylalanine (DOPA)
- Gamma-Amino butyric Acid (GABA)
- Amino-N-butyric acid
- Amino Adipic Acid
- β -Alanine
- β -Amino-iso-butyric acid
- Carnitine
- Citrulline
- γ -Amino butyric acid
- Hydroxylysine
- 1-Methylhistidine
- 3-Methylhistidine
- Ornithine
- Phosphoethanolamine
- Phosphoserine
- Taurine
- Aspartic Acid
- Sacrosine



>>HORMONES

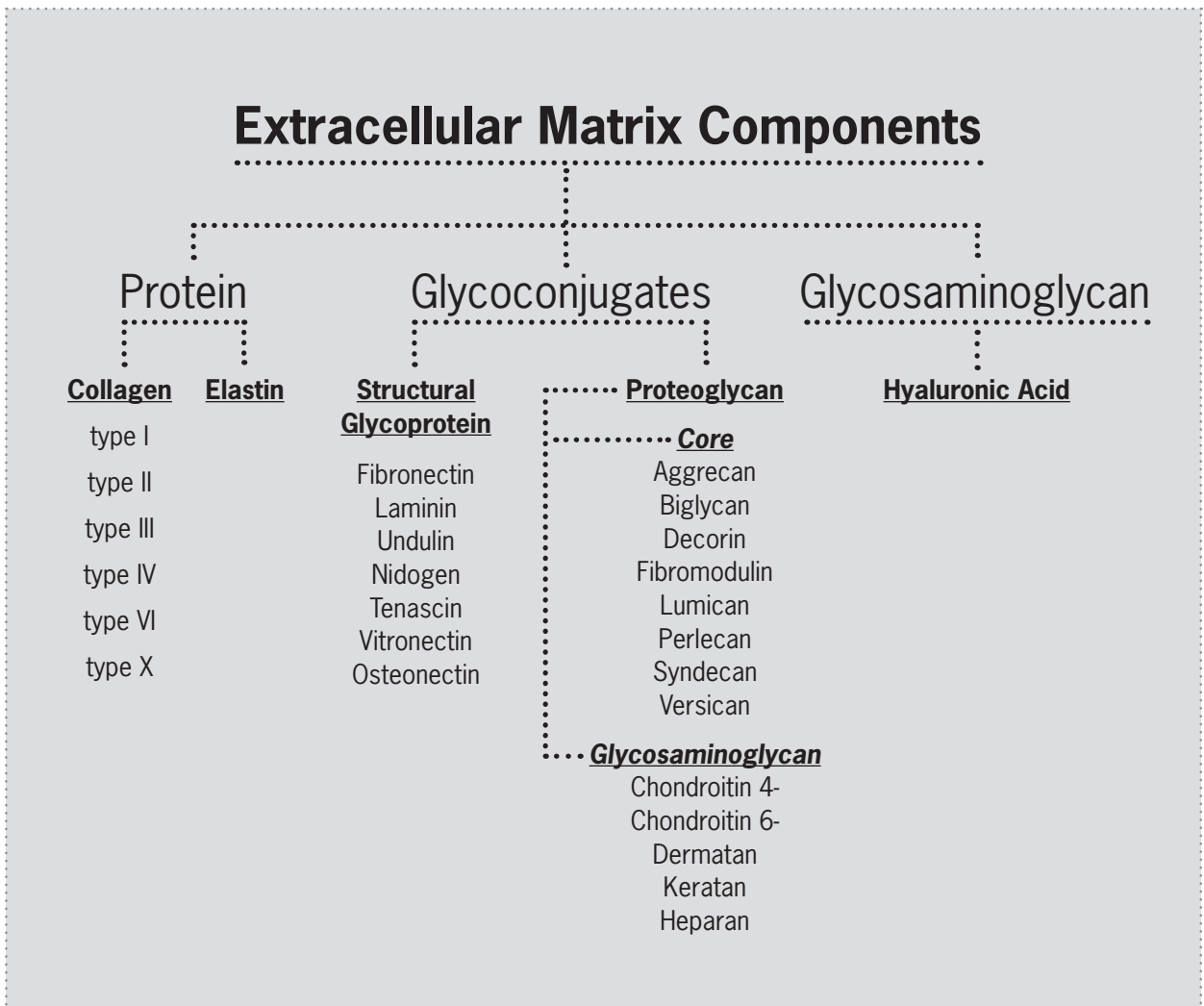
- Androstendione
- Dehydroepiandrosterone
- Progesterone
- Luteinizing hormone
- Estone
- Estradiol

>>MINERALS

- Calcium
- Copper
- Iron
- Maganese
- Magnesium
- Phosphorus
- Potassium
- Selenium
- Sulphur
- Zinc

>>VITAMINS

- Vitamin A Retinol
and various
Retinoic receptors



>>GLYCOSAMINOGLYCANS

- Chondroitin sulfate
- Hyaluronic acid
- Dermatan sulfate
- Keratan sulfate
- GAG proteoglycan decorin
- PGE₂
- 15epi PGE
- PGE₁
- PGF_{1α}
- PGF_{1β}

>>MONO/POLY SACCHARIDES

- Arabinose
- Deoxyribose
- Fructose
- Galactose
- Glucose
- Mannose
- Ribose
- Xylose

>>SATURATED FATTY ACIDS

- C14:0 Myristic acid
- C16:0 hexadecanoic acid
- C18:0 stearic acid

>>MONO UNSATURATED & POLY UNSATURATED FATTY ACIDS

- Palmitoleic acid
- Oleic acid
- Linoleic acid
- Linolenic acid
- Gadoleic
- Arachidonic acid
- DHA

>>PHOSPHOLIPIDS & SPINGOLIPIDS

- Lecithin
- Cephalin
- Lysophosphatidyl choline
- Phosphatidyl inosite
- Sphingomyelin
- Lysocephalin
- Lysolecithins
- Ceramide

WHAT MAKES AVINOTROPIN™ SUPERIOR?

Avinotropin™ is the only all-natural 43:1 extract and the only IGF product that contains a full matrix of growth factors uniquely delivered and processed to allow for maximum absorption and effectiveness. It is the only all-natural proprietary matrix to deliver 100 mcg of IGF-1 per bottle (in addition to the full GF matrix). It is also the only IGF supplement that is produced with a revolutionary reverse suspension ethanol filtration system. This system is technologically designed to stimulate buccal mucosa glands which are responsible for maximum absorption.

Delivering a full range of growth factors at an alarming 43:1 ratio means there is no stronger formula on the market today. This ratio means it requires 43 lbs of velvet antler tips to create 1 lb of this complete formula. Only antler tips are used because clinical research has proven they contain the highest concentration of growth factors and free form amino acids (this in comparison to the middle and base sections of the antler). This unique extraction occurs over a 3 week period in a cold water fusion process that is vital for not damaging the growth factors.

Avinotropin™ contains a powerful blend of growth factors in a naturally occurring matrix. These naturally occurring growth factors are involved in every cellular function in the human body, from metabolism to immune response. It provides a solution to the age-old quest for the fountain of youth, by giving us a naturally occurring concentration of anti-aging components that can turn back the hands of time.

Clinical research shows that this proprietary IGF matrix supplement has a profound ability to produce more red blood cells that help deliver oxygen to your muscles. Therefore, dramatically aiding muscular endurance in addition to providing enhanced muscle and injury recovery. Clinical research also shows the ability for this extract to produce more immune system aiding white blood cells. These are essential for aiding in the combat of free radical cellular development which are the main proponents of muscle degeneration and wasted work out sessions.

WHAT DO GROWTH FACTORS DO?

>>Bone Morphogenetic Proteins (BMPs)

Bone Morphogenetic Proteins (BMPs) are a group of growth factors and cytokines known for their ability to induce the formation of bone and cartilage.

BMP-2 is a member of the TGF- β super family that induces bone formation and regeneration, and determines important steps during early stages of embryonic development in vertebrates and non-vertebrates

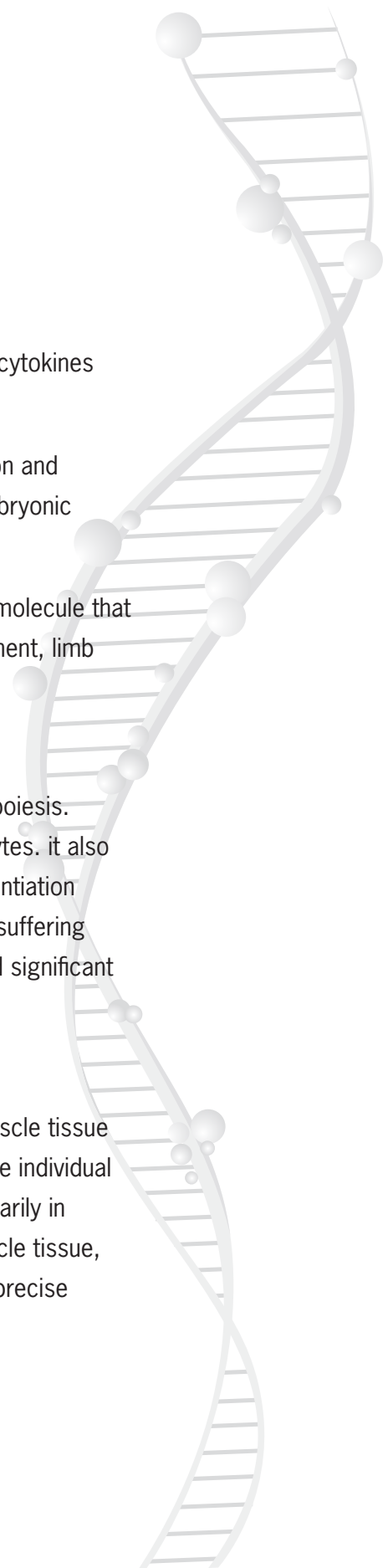
BMP-4 (BMP-2B) is also part of the TGF- β family and is a vital regulatory molecule that function throughout development in mesoderm induction, tooth development, limb formation, bone induction, and fracture repair.

>>Erythropoietin (EPO)

EPO is synthesized by the kidney and is the primary regulator of erythropoiesis. EPO stimulates the proliferation and differentiation of immature erythrocytes. it also stimulates the growth of erythroid progenitor cells and induces the differentiation of erythrocyte colony-forming units into proerythroblasts. When patients suffering from anemia due to kidney failure are given EPO, the result is a rapid and significant increase in red blood cell count.

>>Myostatin Growth Differentiation Factor 8

Myostatin growth differentiation factor 8 is a growth factor that limits muscle tissue growth, i.e. higher concentrations of myostatin in the body may cause the individual to have less developed muscles. The myostatin protein is produced primarily in skeletal muscle cells, circulates in the blood and lymph and acts on muscle tissue, apparently by slowing down the development of muscle stem cells. The precise mechanism remains unknown.



>>Platelet-derived Growth Factor (PDGF)

Platelet-derived growth factor (PDGF) is one of the numerous growth factors, or proteins that regulate cell growth and division. In particular, it plays a significant role in blood vessel formation.

>>Insulin-like Growth Factors 1 and 2 (IGF-1 and IGF-2)

Insulin-like Growth Factors 1 and 2 (IGF-1 and IGF-2) increase lean body mass, reduce fat, build bone, muscle, and nerves while assisting in glucose metabolism. Research indicates that IGF-1 encourages the absorption of both chondroitin and glucosamine sulfate. Research has shown that a decline in IGF-1 levels is among the causes of the development of bone disorders. IGF-1 is considered by many scientists to be a marker of overall growth hormone status. IGF-1 looks and acts enough like insulin so that your cell receptors may be suppressed, causing growth hormone to release stored fat. Through this mechanism, cells will use up fat rather than sugar or other carbohydrates. IGF-2 promotes tissue growth and is expressed primarily in embryonic and neonatal tissues.

>>Transforming Growth Factors A and B

TGF-A promotes normal wound healing through a concerted effort with Epidermal Growth Factor and Platelet-Derived Growth Factor (PDGF). Without TGF-A, wound healing would be nearly impossible. TGF-B has an anti-inflammatory response to cytokine production and mesenchymal (MHC) expression. Promotes wound healing in a concerted effort with TGF-A, EGF and PDGF. Inhibits both macrophage and lymphocyte proliferation. Without TGF-B wound healing would be nearly impossible and an important “feedback loop” for cytokine anti-inflammatory production would not be in place. It is important to note that for normal tissue development to occur, whether it occurs through wound healing or regeneration, TGF A & B must be in a natural matrix of cofactors.

>>Epidermal Growth Factor

EGF promotes healthy tissue development while impeding abnormal growth. EGF has also been shown to decrease gastric acid production. Promotes mesenchymal (lymphatic), glial (nerve), and epithelial (skin) cell proliferation.

>>Vascular Endothelial Growth Factor

Promotes venous, venule, artery, arteriole and capillary health by providing the essential cofactors for repairing and restoring damaged vessels.

>>Nerve Growth Factor

A protein that stimulates the growth of sympathetic and sensory nerve cells and is required for neural repair. Found in a variety of peripheral tissues, nerve growth factor attracts neurites to the tissues by chemotropism, where they form synapses. The successful neurons are then protected from neuronal death by continuing supplies of nerve growth factor. Besides its peripheral actions, nerve growth factor selectively enhances the growth of cholinergic neurons that project to the forebrain and that degenerate in Alzheimer's disease.

>>Neurotrophin Growth Factor

Also known as neurotrophic factor. Any of a group of neuropeptides (as nerve growth factor) that regulate the growth, differentiation, and survival of certain neurons in the peripheral and central nervous systems. It also works synergistically with nerve growth factor to promote neurite and nerve survival and development

>>Nerve growth factor 2 NGF-2

Also known as NGF-2 (nerve growth factor 2). A neurotrophic factor involved in regulating the survival of visceral and proprioceptive sensory neurons. It is closely homologous to nerve growth factor beta and Brain-derived neurotrophic factor. NT3 & NT4 work synergistically with NGF, to promote neurite and nerve survival and development.

>>Fibroblast Growth Factor

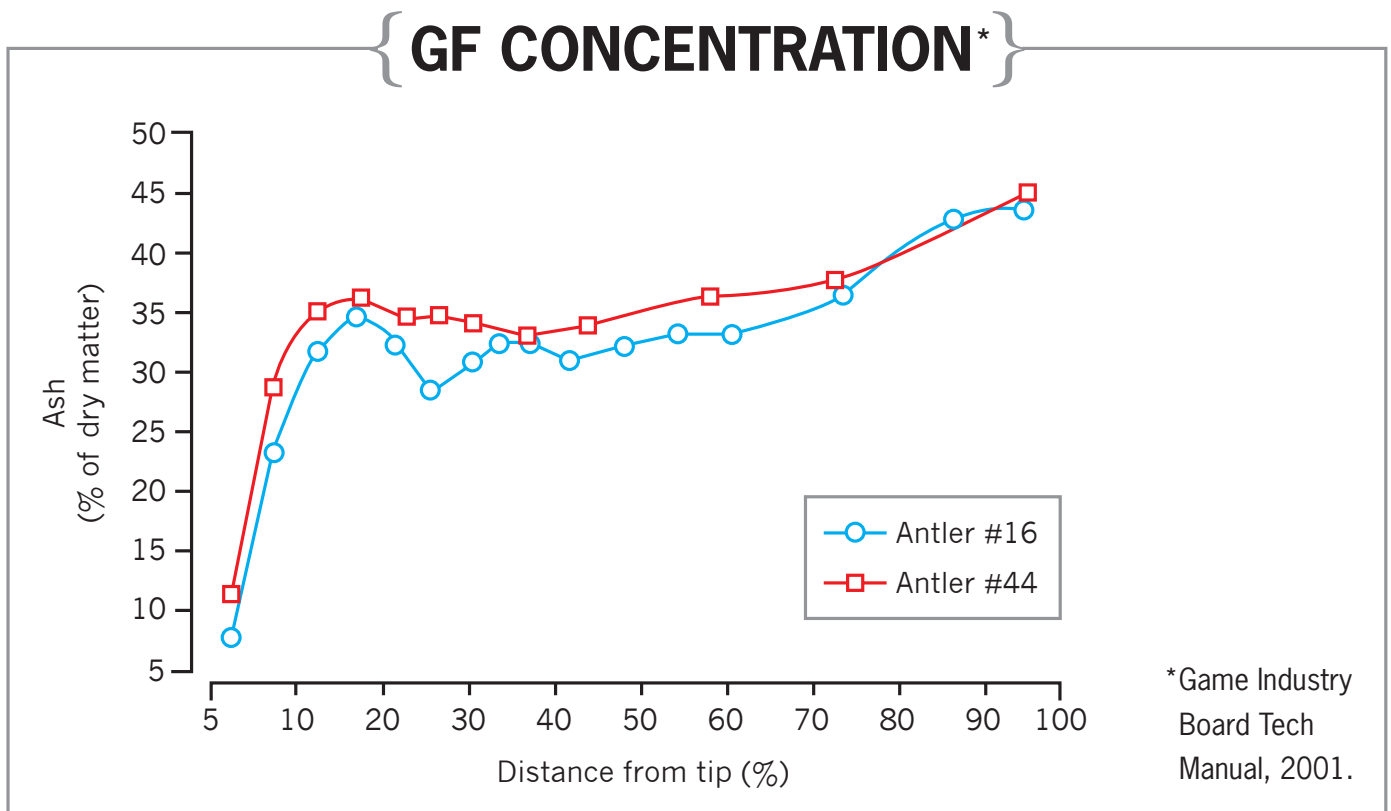
Contain at least 19 different types of which their prominent role to be in the development of skeletal and nervous system in mammals. FGF is also located in the central nervous system and in peripheral nerves, with less prominent effects including the regulation of both pituitary and ovarian cell function. FGF induces formation of new blood vessels and is used to heal pressure sores and venous ulcers in skin graft donor sites.

>> Interleukins

Growth factors also include a unique family of cytokines. Cytokines stimulate the humoral and cellular immune responses, as well as the activation of phagocyte cells. Cytokines secreted from lymphocytes are called interleukins, of which the list grows continuously with the number of individual activities now at 22.

Some of these interleukins include:

- **Interleukin 1** is mitigated by an inflammatory response that stimulates both T cells and B cells.
- **Interleukin-2** stimulates the proliferation and killing activities of T cells.
- **Interleukin-6** stimulates the proliferation and killing activities of T cells.
- **Interleukin-12** stimulates the proliferation of Natural Killer cells and promotes cell-mediated immune functions.



>>Interleukin-1 (IL-1)

IL-1 is one of the most important immune response-modifying interleukins. The predominant function of IL-1 is to enhance the activation of T-cells in response to antigen. The activation of T-cells, by IL-1, leads to increased T-cell production of IL-2 and of the IL-2 receptor, which in turn augments the activation of the T-cells in an autocrine loop. IL-1 also induces expression of interferon- β (IFN- β) by T-cells. This effect of T-cell activation by IL-1 is mimicked by TNF β which is another cytokine secreted by activated macrophages. There are 2 distinct IL-1 proteins, termed IL-1 β and -1 β , that are 26% homologous at the amino acid level. The IL-1s are secreted primarily by macrophages but also from neutrophils, endothelial cells, smooth muscle cells, glial cells, astrocytes, B- and T-cells, fibroblasts and keratinocytes. Production of IL-1 by these different cell types occurs only in response to cellular stimulation. In addition to its effects on T-cells, IL-1 can induce proliferation in non-lymphoid cells.

>>Interleukin-2 (IL-2)

IL-2, produced and secreted by activated T-cells, is the major interleukin responsible for clonal T-cell proliferation. IL-2 also exerts effects on B-cells, macrophages, and natural killer (NK) cells. The production of IL-2 occurs primarily by CD4+ T-helper cells. As indicated above, the expression of both IL-2 and the IL-2 receptor by T-cells is induced by IL-1. Indeed, the IL-2 receptor is not expressed on the surface of resting T-cells and is present only transiently on the surface of T-cells, disappearing within 6-10 days of antigen presentation. In contrast to T-helper cells, NK cells constitutively express IL-2 receptors and will secrete TNF- β , IFN- β and GM-CSF in response to IL-2, which in turn activate macrophages.

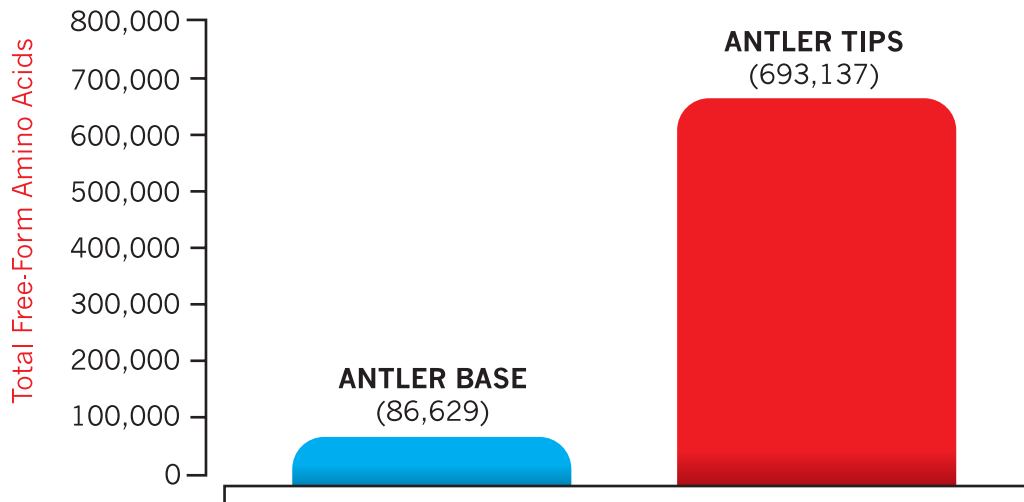
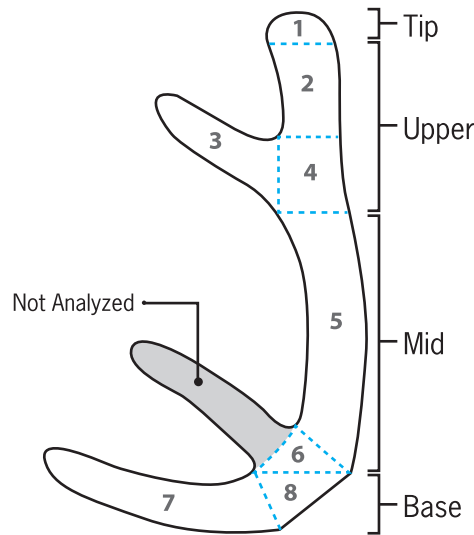
>>Interleukin-6 (IL-6)

IL-6 is produced by macrophages, fibroblasts, endothelial cells and activated T-helper cells. IL-6 acts in synergy with IL-1 and TNF- β in many immune responses, including T-cell activation. In particular, IL-6 is the primary inducer of the acute-phase response in liver. IL-6 also enhances the differentiation of B-cells and their consequent production of immunoglobulin. Glucocorticoid synthesis is also enhanced by IL-6. Unlike IL-1, IL-2 and TNF- β , IL-6 does not induce cytokine expression; its main effects, therefore, are to augment the responses of immune cells to other cytokines.

>>Interleukin-8 (IL-8)

IL-8 is an interleukin that belongs to an ever-expanding family of proteins that exert chemoattractant activity to leukocytes and fibroblasts. This family of proteins is termed the chemokines. IL-8 is produced by monocytes, neutrophils, and NK cells and is chemoattractant for neutrophils, basophils and T-cells. In addition, IL-8 activates neutrophils to degranulate.

ANTLER ANATOMY



New Zealand velvet antler is the only mammalian organ that completely regenerates, growing at a rate of almost 2 cm daily. No deer are harmed in the process and are fed organically while living in a free range farm facility that is regulated by the New Zealand government. The process of removing the antler is stress-free for the animals and is only performed once a year by licensed and trained veterinarians. The reason we use only the upper tips of New Zealand velvet antlers is because clinical research has shown, without question, that this portion of the antler contains the greatest concentration of growth factors and amino acids. Avinotropin™ prides itself in using the finest raw material to produce the highest concentration of beneficial qualities in order to ensure that this extract stands head and shoulders above the competition.

VELVET REMOVAL.

The New Zealand deer industry is committed to the welfare of stags during velvet removal (known as 'velvetting') and has undertaken extensive scientific research into this subject. These research findings underpin the Code of Practice for the Welfare of Stags during the Removal of Velvet, published by the government's Animal Welfare Advisory Committee. The Code was developed in association with the New Zealand Veterinary Association and animal welfare groups.

On-going research funded by the industry investigates alternative velvetting techniques, the development of optimal systems and procedures and improved methods as part of its continual improvement process.

The Code of Practice, in turn, forms the basis of a training and certification program managed by the National Velvetting Standards Body (NVSBS). This program specifies that in New Zealand, velvet may only be removed by a veterinarian or by a certified farmer who has successfully completed the veterinarian-supervised training program.

Key points of the NVSB certification program are:

- Velvet is removed using a local anaesthetic so that the stag feels no pain and the whole procedure is designed to minimize stress.
- Hygiene standards are set out for facilities and equipment
- Farmer training is carried out by a 'supervising veterinarian' and covers both the theory and practice of velvetting
- Farmers must pass a written theory exam, an oral test and a practical assessment by an independent veterinarian before gaining certification
- On-going training and monitoring involves an annual assessment by the supervising veterinarian

>>Random independent audits are carried out annually by the NVSB on both certified velvetters and veterinarians to test compliance and to ensure the program's integrity.

These 20 amino acids are the most vital amino acids, which are the building blocks for proteins. These Amino acids regulate brain, muscle, organ, and endocrine related functions.

*Free amino acid levels comparison in sections of New Zealand red deer antlers.

*Values given are the means (n=4) in nmol/g.

NOTE: Antler tips have an 800% higher concentration of amino acids.

{AMINO ACID}	{DEER ANTLER}	
	BASE	TIPS (43:1)
ALA - Alanine	12,566	120,675
ARG - Arginine	2,000	10,299
ASN- Asparagine	387	10,783
CYS - Cysteine	134	1,730
GLU - Glutamic Acid	6,144	137,192
HIS - Histidine	12,566	120,675
ILE - Isoleucine	1,408	11,132
LEU - Leucine	5,703	24,827
LYS - Lysine	3,499	22,656
MET - Methionine	1,021	5,526
PHE - Phenylalanine	2,000	7,649
PRO - Proline	4,553	19,157
SER - Serine	2,747	26,633
THR - Threonine	2,972	23,504
TRP - Tryptophan	962	8,589
TYR - Tyrosine	1,258	8,944
VAL - Valine	4,698	30,347
ORN - Orthinine	962	8,589
TAU - Taurine	11,110	40,474
GLY - Glycine	9,939	53,756
TOTAL FREE-FORM AMINO ACIDS:	86,629	693,137

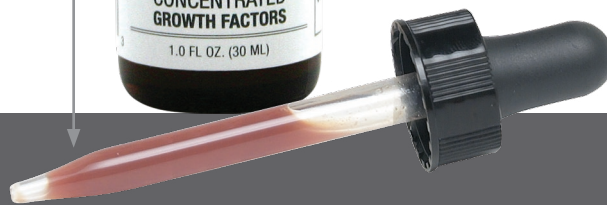
THE DELIVERY SYSTEM.

Avinotropin's complete growth factor matrix is delivered via a one-of-a-kind two step process specially designed for maximum absorption. Step one is the advanced Ethanol Transport Buccal Mucosa Delivery System. This step is a designed reverse suspension ethanol filtration system that allows the mucosa glands to become stimulated for enhanced absorption under the tongue. The Avinotropin™ matrix is absorbed five to ten times more effectively via the mucosa glands over merely swallowing the supplement. Step two is standard ingestion. Ingesting the remaining formula from under the tongue allows the body to absorb all remaining amino acids and polypeptides that did not bypass the receptor glands.

Why is Avinotropin™ only contained in a complete glass environment?

Growth factor molecules bind to plastic (plastic bottles, droppers and/or spray nozzles) **and not glass**; therefore rendering the product useless over a short period of time.

PHOTO DEPICTS A 30 DROP (1 ML) DOSE OF AVINOTROPIN™. THE ENTIRE DOSE MUST BE HELD UNDER THE TONGUE FOR 90 SECONDS. THEN FOLLOW THE REMAINING DIRECTIONS BELOW...



HOW TO ADMINISTER THE FORMULA:

>>> Hold the liquid formula under your tongue for 90 seconds. Then swish the formula around your mouth for an additional 30 seconds for further absorption. Then you may swallow the remnants of the formula for the final stage of absorption.

DARE TO COMPARE

How does all-natural Avinotropin™ compare to other HGH/IGF products on the market today?

How does Avinotropin's growth factor matrix compare to HGH Products? **IT CONTAINS NO GROWTH HORMONES.** HGH is released by the pituitary gland in your brain in response to hypothalamic pulses of growth hormone releasing hormone (GHRH). As the body ages it loses its natural ability to produce/release HGH. HGH products cannot include HGH unless they are regulated by the FDA and prescribed by a physician.

Most HGH products are stimulator/releasers (otherwise known as secretagogue) that will stimulate the pituitary to unnaturally produce HGH. This HGH should then cause the production of the sought after growth factors. These products are attempting to jump start the same pituitary gland that is already showing indications of burning out. Considering the importance of this master gland, it does not seem wise to over-stimulate this gland. **Avinotropin™ is the safe and all-natural alternative** that includes a full matrix of growth factors as well as IGF-1 in their final form (metabolite).

YOU SHOULD KNOW THAT Avinotropin™:

- >> **CONTAINS NO GROWTH HORMONES!**
- >> **IS NOT JUST ISOLATED IGF-1!**
- >> **IS A FULL MATRIX 43:1 EXTRACT!**

IGF-1 ISOLATES

Avinotropin™ is not isolated IGF-1. It is a natural concentrated portion of the proteins that contain the growth factors found in deer velvet antler. The risks related to IGF-1 are largely attributed to the body having a disproportionate amount of available IGF-1. Avinotropin™ provides a matrix of growth factors (including IGF-1), as they are found in nature, in their proper balance. This natural balance helps keep IGF-1, as an isolate, in its safe ratio.

HOW DOES AVINOTROPIN STACK UP?

This supplement was specially formulated to aid the most physically exhausting training that only the most dedicated athlete could achieve.

Only question is, how much do you want to train?

Avinotropin™ BENEFITS*

- Improved endurance training (like high altitude training)
- Improved recovery with massive O₂ cell production
- Improved joint health from powerlifting
- Improved recovery from intense training
- Improved muscle definition & maturity
- Reduce belly fat without lean muscle loss
- Improved face & body skin clarity
- Improved hair growth and health
- Improved libido and sexual functions
- Stop muscle breakdown at night as an all natural anti-catabolic (like ZMA)
- Acts as an amino acid supplement including all 20 major amino acids
- Regulates cortisol levels
- Balances hormones, stop excess estrogen release & production (like HCG)
- Supports the endocrine system (master glands)
- Improves memory, mood & mental acuity (brain and nerve function)
- Improves sleep & restful sleep (REM - wake up more refreshed)
- Improves all organ function (especially detoxing & kidney/liver functions)
- Supports cardio vascular functions
- Helps with glucose metabolism (fat burning)
- Improves athletic performance by creating fast/slow twitch muscle fibers
- Helps with absorption of glucosamine & chondroitin
- All-natural NSAID or anti-inflammatory

OTHER BODY BUILDING SUPPLEMENTS

- Gynecomastia (causes fluid retention in chest)
- Hair loss or thinning hair
- Mood swings
- Fat gain after discontinued use (especially in mid-section)
- Bloating or retaining water
- Deregulation or over-use of endocrine system
- Acne on face & body
- Loss of sex drive after discontinued use
- Don't contain any insulin-like or other growth factors (just precursors)
- Depression after discontinuing prolonged use
- Contain artificial fillers, flavorings & sugars

OTHER POPULAR COMPARISONS...

How does this compare to Creatine or other BCAA supplements?

Avinotropin™ contains over 100 amino acid combinations, including the 20 basic essential and non-essential amino acids. Unlike creatine which causes your muscle cells to hold more water (and bloat in size), Avinotropin™ creates what is called hyperplasia. Hyperplasia is the creation of new muscle fibers. The increased O₂ in the red blood cells feeds muscles to allow for the strength of a power lifter, endurance of a triathlete, physique of a body builder, important fast twitch for explosiveness/speed, and slow twitch for endurance/strength.

What about pre-workout drinks?

Too much caffeine can disrupt the functions of the adrenal glands, which are responsible for hormonal production and release. This hormonal deregulation can cause the over-production of stress hormones that cause you to store belly fat. Avinotropin™ is actually an all-natural anti-catabolic, which means it **STOPS** your muscles from breaking down, especially while sleeping. It is also an anabolic that allows you to achieve significant gains in strength and lean muscle. The Avinotropin™ matrix stimulates an erythropoietin (EPO) like effect, with the interleukin growth factor's ability, that produces tremendous amounts of red blood cells for muscular endurance and recovery.

How does it compare to “super-testosterone” building supplements?

The issue with these types of supplements is that they affect and over-stress glands to produce large amounts of testosterone. The downfall with producing too much testosterone is that your body reacts to, and then produces, large amounts of estrogen. That is why, after using these supplements, some have reported fat gains (especially in the mid section), strength loss, muscle loss, loss of libido, and gynecomastia (fluid retention in your chest). Avinotropin™ has a human chorionic gonadotrophin (HCG) like effect on the body, profoundly regulating hormone production and release from your adrenal glands, which is vital for maintaining gains and performance ability.

ADDED BENEFITS...

Avinotropin's transforming growth factors alpha and beta are responsible for producing myostatin and the all important receptors. Without the receptors and the over production of myostatin by the transforming growth factor alpha, it would cause muscles to deteriorate. Avinotropin™ not only contains the myostatin producing TFG-A, it is specially formulated with the TFG-B, which is responsible for producing the receptors. Recent studies have found that people who are considered to be genetically gifted in athletic abilities have shown that their bodies possess an abundant ability to produce myostatin and the receptors. For this reason, Myostatin recently was dubbed the athletic gene.

The Interleukin Growth Factor in this IGF proprietary extract can act as an all-natural NSAID (Non-Steroid Anti-Inflammitory). The proprietary matrix contains the interleukin growth factor that has been clinically proven to act as an anti-inflammatory, which is a complex reaction to body trauma or infections. This reaction creates hematopiesis, which causes your body to produce and release immune building myeloid cells (macrophages), lymphoid cells (white blood T and B cells), and erythrocyte cells (red blood cells). These also aid in blood clotting, and both innate and adaptive immunity.

Research published in 2000 by Scientists at Yale University supports the idea that emotional stress contributes to weight gain in both over weight and lean people. Researchers found a connection between stress and obesity that was due to an excessive secretion of cortisol and the adverse metabolic effect of the hormone in people with chronically elevated levels. Elevated cortisol levels are associated with the reduced levels of testosterone and IGF-1. Since both IGF-1 and testosterone are anabolic, people with the decreased blood levels were found to have higher BMI and higher waist to hip ratio and abdominal obesity. Also researchers at the university of California in San Francisco have linked excessive cortisol levels to depression, anxiety, and Alzheimer's as well as the direct atrophy of the brain leading to cognitive defects.

STACKING AND USAGE

For maximum effectiveness we recommend using Avinotropin™ 2-3 times daily, preferably after rinsing your mouth out with water and 30 minutes before eating. This method is recommended especially for ultimate athletes looking to recover rapidly from intense training. The only question you need to ask yourself when considering stacking multiple bottles is **HOW FAST DO YOU WANT TO RECOVER?**

We recommend using Avinotropin™ for a continuous period of at least 3 months to observe the total system regeneration. You should cycle off this product for 4 weeks to allow for maximum absorption and effectiveness before resuming use of this patent pending formula.

Avinotropin's profound ability to increase your workout length by nearly 110% a session, while also cutting recovery time in half, allows you to train an additional 2-3 times more weekly. That is like adding over 13 more sessions a month, leading to almost 156 more intense training sessions a year. All this is done while prevent/healing minor injuries, protecting the immune system, and regenerating/creating new muscle fibers for enhanced performance and look.

**REACH MAXIMUM RESULTS
WITH Avinotropin™!**

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

FURTHER RECENT REFERENCES...

Exploring the mechanisms regulating regeneration of deer antlers.

Deer antlers are the only mammalian appendages capable of repeated rounds of regeneration; every year they are shed and regrow from a blastema into large branched structures of cartilage and bone that are used for fighting and display. Longitudinal growth is by a process of modified endochondral ossification and in some species this can exceed 2 cm per day, representing the fastest rate of organ growth in the animal kingdom. However, despite their value as a unique model of mammalian regeneration the underlying mechanisms remain poorly understood. We review what is currently known about the local and systemic regulation of antler regeneration and some of the many unsolved questions of antler physiology are discussed.

Molecules that we have identified as having potentially important local roles in antlers include parathyroid hormone-related peptide and retinoic acid (RA). Both are present in the blastema and in the rapidly growing antler where they regulate the differentiation of chondrocytes, osteoblasts and osteoclasts in vitro. Recent studies have shown that blockade of RA signalling can alter cellular differentiation in the blastema in vivo. The trigger that regulates the expression of these local signals is likely to be changing levels of sex steroids because the process of antler regeneration is linked to the reproductive cycle. The natural assumption has been that the most important hormone is testosterone, however, at a cellular level oestrogen may be a more significant regulator. Our data suggest that exogenous oestrogen acts as a 'brake', inhibiting the proliferation of progenitor cells in the antler tip while stimulating their differentiation, thus inhibiting continued growth. Deciphering the mechanism(s) by which sex steroids regulate cell-cycle progression and cellular differentiation in antlers may help to address why regeneration is limited in other mammalian tissues.

Price, J; Allen, S

Philosophical Transactions of the Royal Society of London
Series B, Biological Sciences. 2004; 359(1445): 809-822.
London, UK: Royal Society.

Expression of PTHrP and the PTH/PTHrP receptor in growing red deer antler.

Antler growth is highly co-ordinated, so that trabecular bone and antler skin (velvet) develop together, at a rapid rate and in a manner reminiscent of their development in the fetus. Parathyroid hormone-related peptide (PTHrP) is expressed in both bone and skin, and is therefore a candidate to effect co-ordination between these tissues. The aim of this study was to localize the expression of PTHrP and its principal receptor, the parathyroid hormone/parathyroid hormone-related peptide receptor (PTH/PTHrPR), in antler ("spiker") of one-year-old red deer. Using immunohistochemistry and in situ hybridization, intense and overlapping expression of PTHrP and its receptor was seen in developing

osseocartilaginous structures and in the underlying layers of velvet epidermis. PTHrP was located on both the cell surface and within the nuclei. Our results strongly suggest that PTHrP, acting via the PTH/PTHrPR and possibly other intracrine mechanisms, plays a central role in the co-ordinated regulation of cell division and differentiation of developing antler bone and skin.

Barling, PM; Liu-Hong; Matich, J; Mount, J; Lai KaWai [Lai, K W A]; Ma Li; Nicholson, L F B
Cell Biology International. 2004; 28(10): 661-673.

Velvet antler polypeptides promoted proliferation of chondrocytes and osteoblast precursors and fracture healing.

AIM: To study the effects of velvet antler (VA) total polypeptides (VATP) and VA polypeptides, VAP-A, VAP-B, and VAP-C on proliferation of chondrocytes and osteoblast precursors. METHODS: Chondrocytes (rabbit and human fetus) and osteoblast precursors (chick embryo) were incubated in the culture medium containing VATP or VAP-A, VAP-B, and VAP-C. [3H]TdR incorporation into DNA was measured. Fracture healing-promoting action of VATP was determined in rats. RESULTS: VATP 50-200 mg.L-1 and VAP-B 12.5, 25, and 50 mg.L-1 showed most marked proliferation-promoting activity for rabbit costed chondrocytes and increased incorporation of [3H]TdR from (73 +/- 9) Bq (control group) to (272 +/- 55), (327 +/- 38), and (415 +/- 32) Bq, respectively (P < 0.01). The activity of VAP-A was weaker than that of VAP-B, and VAP-C had no activity. VATP 10 and 20 mg.kg-1 by local injection into the cross-section fracture area accelerated healing of radial fracture. The healing rate of VATP-treated group was higher (75%) than that of control group (25%) (P < 0.05).

CONCLUSION: VATP accelerated fracture healing by stimulating proliferation of chondrocytes and osteoblast precursors.

Zhou QL, Guo YJ, Wang LJ, Wang Y, Liu YQ, Wang Y, Wang BX.
Research Centre of New Drug, Changchun College of Traditional Chinese Medicine, China.

Comparative analysis of contents of amino acid, total phospholipid, calcium and phosphorus in sika deer velvet bone slices with blood and without blood.

In this study, the amino acid, total phospholipid, Ca and P contents of bones from sika deer (*Cervus nippon*) were determined. Total amino acid(44.47%), total phospholipid (1.048%), Ca (6.625%) and P (6.661%) contents of the bone slices with blood were not different from those (42.67, 1.027, 7.394 and 7.347, respectively) without blood (P > 0.05).

Wang YanMei; Chu LiWei; Wang YanHong; Wang ShuLi; Wang YM; Chu LW; Wang YH; Wang SL
Journal of Economic Animal. 2003, 7: 2, 21-23; 8 ref.

Concentrations of insulin-like growth factor-I in adult male white-tailed deer (*Odocoileus virginianus*): associations with serum testosterone, morphometrics and age during and after the breeding season.

Our understanding of insulin-like growth factor-I (IGF-I) in cervids has been limited mostly to its effects on antler development in red deer (*Cervus elaphus*), roe deer (*Capreolus capreolus*), fallow deer (*Dama dama*), and pudu (*Pudu puda*). Although IGF-I has been found to play a critical role in reproductive function of other mammals, its role in reproduction of deer is unknown.

The objectives of the present study were to determine if serum levels of IGF-I change during the breeding season, assess whether age influences serum IGF-I, compare levels of IGF-I measured during and following the breeding season, and determine if IGF-I is associated with body and antler characteristics in free-ranging adult, male white-tailed deer (*Odocoileus virginianus*). We collected serum and morphometric data from hunter-harvested and captured white-tailed deer to investigate these objectives. Mean level of serum IGF-I during the breeding season was 63.6 ng/ml and was greatest in deer between 2.5 and 5.5 years old (57.4-79.9 ng/ml). Levels of serum IGF-I decreased by approximately 40% as the breeding season progressed, but levels were less in deer following the breeding season (34.6 ng/ml). Both body and antler size were associated positively with IGF-I when controlling for age. Serum testosterone was also associated positively with IGF-I. Levels of serum testosterone during the breeding season generally increased with age from 4.82 (1.5 years old) to 18.79 ng/dl (5.5 years old), but decreased thereafter. These data suggest that IGF-I may be an important hormone in breeding, male white-tailed deer.

Ditchkoff SS; Spicer LJ; Masters RE; Lochmiller RL
Comparative Biochemistry and Physiology. A,
Molecular and Integrative Physiology. 2001, 129: 4, 887-895; 57 ref.

Effects of insulin-like growth factor 1 and testosterone on the proliferation of antlerogenic cells in vitro.

The aim of this study was to use cell culture techniques to investigate how testosterone and IGF1 affects the proliferation of antlerogenic cells from the four ossification stages of pedicle/antler in vitro. The results showed that in serum-free medium IGF1 stimulated the proliferation of antlerogenic cells from all four ossification stages (intramembraneous (IMO), transitional (OPC), pedicle endochondral (pECO) and antler endochondral (aECO)) in a dose-dependent manner. In contrast, testosterone alone did not show any mitogenic effects on these antlerogenic cells.

However, in the presence of IGF1, testosterone increased proliferation of the antlerogenic cells from the IMO and the OPC stages (pedicle tissue), and reduced proliferation of the antlerogenic cells from

transformation point (TP) and aECO stages (antler tissue). Therefore, the results from the present in vitro study support the in vivo findings that androgen hormones stimulate pedicle formation but inhibit antler growth. The change in the mitogenic effects of testosterone on antlerogenic cells from positive to negative occurs approximately at the change in ossification type from OPC to pECO. Therefore, these results reinforce the hypothesis that the transformation from a pedicle to an antler takes place at the time when the ossification type changes from OPC to pECO rather than at the time when the pedicle grows to its full species-specific height.

Li ChunYi; Littlejohn RP; Suttie JM; Li CY
Journal of Experimental Zoology. 1999, 284: 1, 82-90; 27 ref.

Modification of concanavalin A-dependent proliferation by phosphatidylcholines isolated from deer antler, Cervus elaphus.

Kim KiHwan; Lee EuiJung; Kim Kilhyoun; Han SoYeop; Jhon GilJa; Kim KH; Lee EJ; Kim K; Han SY; Jhon GJ
Nutrition. 2004, 20: 4, 394-401; 29 ref.

Lysophosphatidylcholine derived from deer antler extract suppresses hyphal transition in Candida albicans through MAP kinase pathway.

Min Juyoung; Lee YounJin; Kim YoungAh; Park HyunSook; Han SoYeop; Jhon GilJa; Choi Wonja; Min J; Lee YJ; Kim YA; Park HS; Han SY; Jhon GJ; Choi W Biochimica et Biophysica Acta, Molecular and Cell Biology of Lipids. 2001, 1531: 1-2, 77-89; 35 ref.

Cells in regenerating deer antler cartilage provide a microenvironment that supports osteoclast differentiation.

Faucheux-C; Nesbitt-SA; Horton-MA; Price-JS
Journal-of-Experimental-Biology. 2001, 204: 3, 443-455; Many ref.

Effect of water-soluble extract from antler of wapiti (Cervus elaphus) on the growth of fibroblasts.

Sunwoo-HH; Nakano-T; Sim-JS
Canadian-Journal-of-Animal-Science. 1997, 77: 2, 343-345; 7 ref.

Glycosaminoglycans from growing antlers of wapiti (Cervus elaphus).

Sunwoo-HH; Sim-LYM; Nakano-T; Hudson-RJ; Sim-JS
Canadian-Journal-of-Animal-Science. 1997, 77: 4, 715-721; 33 ref.

The Effects of Deer Velvet Antler Supplementation on Body Composition, Strength, and Aerobic & Anaerobic Performance!

In the present study, we investigated the physiological and potential performance enhancing effects of New Zealand Deer Antler Velvet (NZDAV) supplementation in men.

Thirty-two males between the ages of 18 and 35 with at least 4 years of weight lifting experience were randomly assigned using a double-blinded procedure into either a placebo or NZDAV treatment group. Placebo group members received sugar pills and the NZDAV group received 1500 mg NZDAV once in the morning and immediately prior to bed-time. Random assignment was done in matched pairs (1 placebo; 1 NZDAV). Prior to and immediately following the 10-week supplementation use, each subject participated in a series of measurements. These procedures included the measurement of maximal aerobic capacity ($\dot{V}O_{2max}$), maximal power output on a cycle ergometer, a determination of maximal strength (1-RM) for the bench-press and squat, a comprehensive blood chemistry profile, body composition analyses (DEXA), and a 3-day dietary recall. Of the original 32 subjects recruited for this study, 56% of the subjects completed all aspects of the study properly which was evenly divided between the two treatment groups leaving the placebo group $n = 9$ and NZDAV group $n = 9$ subjects. At the start of the study, there were no significant differences between the groups in their respective body composition profile variables. In the NZDAV group, DEXA % body fat ($p = 0.04$), DEXA Fat Wt ($p = 0.07$), and Trunk-to-limb Fat Wt ratio ($p = 0.02$) either significantly declined or neared significance. According to the results for the placebo group, only the 1-RM values for this group's absolute bench (Pre: 123.2 ± 24.0 kg; Post: 128.3 ± 27.5 kg, 4.1% ; $p = 0.04$) and squat (Pre: 150.5 ± 28.2 kg; Post: 156.6 ± 30.4 kg, 4.1% ; $p = 0.04$) 1-RM improved after the intervention period. When normalized for kilogram of total body weight, the placebo group did not show any significant differences for the 1-RM measurement in both the bench and squat. In contrast, the NZDAV showed a significant improvement in the 1-RM values in absolute terms and relative to total body weight. In absolute terms, the 1-RM for the bench press increased 4.2% (Pre: 120.0 ± 23.6 kg; Post: 125.0 ± 25.7 kg; $p = 0.02$) while the squat 1-RM improved 9.9% (Pre: 159.3 ± 42.7 kg; Post: 175.0 ± 43.5 kg; $p = 0.002$) in NZDAV group. In contrast to the placebo group, when 1-RM values were expressed relative to total body weight, the bench press and squat also significantly improved 4.0% and 10.1%, respectively ($p = 0.02$) in the NZDAV. One of the most interesting findings of this study was the fact that there was also a significant improvement in aerobic capacity in the NZDAV treatment group. In liters \cdot min⁻¹, $\dot{V}O_{2max}$ increased significantly by 9.8% from the pre- to post treatment period (4.30 ± 0.45 to 4.72 ± 0.60 liter \cdot min⁻¹; $p = 0.002$). When expressed relative to total body weight in kilograms, $\dot{V}O_{2max}$ remained significantly elevated 9.4% (46.5 ± 8.1 to 50.0 ± 8.9 ml \cdot kg⁻¹ \cdot min⁻¹) following the training-supplement intervention. This study's results suggest that NZDAV may have positive effects on body composition and strength/power in resistance training men!

C.E. Broeder (Benedictine University), R. Percival & T. Wills (East Tennessee State University), J. Quindry (University of Florida), L. Panton (Florida State University), K.D. Browder (University of Idaho), C. Earnest (The Cooper Institute), A. Almada (Imagine Nutrition & MetaResponse Sciences), S.R. Haines & J. M. Suttie (AgResearch - Mosgiel, New Zealand)

ACTIVE INGREDIENT GLOSSARY.

Active ingredients found in New Zealand Velvet Antler include: minerals and trace elements; growth hormones and growth factors; protein, collagen, and lipids; and glycosaminoglycans. Glycosaminoglycans help form cartilage proteoglycans, which regulate water retention and cell differentiation. They also help proliferate chondrocytes in cartilaginous tissue. **Velvet antler contains nearly 40 key compounds including:**

Minerals 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 throughout 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 in cells.

Phosphorus (P): provides structure for bones and teeth and is a component of nearly all-metabolic reactions.

Potassium (K): needed for nerve and muscle function. Potassium, for nerves and muscles.

Selenium (Se): powerful antioxidant. Selenium, which reduces infections, and protects blood cells, the heart, liver and lungs.

Sulphur (S): is a component of various 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.

Protein, Collagen, and Lipids

Protein (including all essential amino acids): 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. Collagen, a major structural protein that binds joints together and serves as a main component of cartilage.

Lipids (all essential fatty acids including omega 3 and 6): build cell parts and boost energy for cellular activities. Lipids, to build cells and boost energy omega-3 and omega-6 fatty acids.

Glycosaminoglycans (GAGs)

HLA - Hyaluronic acid: A viscous glycosaminoglycan (mucopolysaccharide) found in connective tissues and in the synovial fluid of joints, and the vitreous humor of the eyes and acts as a binding, lubricating, and protective agent.

Chondroitin sulphate: extremely potent anti-inflammatory agent. Chondroitin sulfate, is a carbohydrate that attracts fluid into proteoglycan molecules and protects cartilage from destructive enzymes.

Glucosamine sulphate: 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, which lubricates and serves as a shock absorber for the joints. Glucosamine sulfate, the building block of cartilage and a reported anti-inflammatory easily absorbed by the body.

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: a chemical messenger produced in virtually all tissues, causing a broad range of positive effects on many of the body's defense systems. Prostaglandin's stimulate contractibility of smooth muscles and are powerful anti-inflammatory agents.

Phospholipids: effective structural materials in cell membranes. They help to facilitate the passage of fat in and out of cells and blood.

Monoamine-oxidase inhibitors: enhance mood.

PC - Phosphatidylcholine: *Also known as lecithin.* A phospholipid that is a major component of cellular membranes and functions in the transport of lipoproteins in tissues. Choline is attached to phosphatidic acid by a phosphodiester linkage. Major synthetic route is from diacyl glycerol and CDP choline. Forms monolayers at an air water interface and forms bilayer structures (liposomes) if dispersed in aqueous medium. A zwitterion over a wide pH range.

PE – Phosphatidylethanolamine: A major structural phospholipid in mammalian systems; any of a group of phospholipids that occur especially in blood plasma and in the white matter of the central nervous system. Also called cephalin. Tends to be more abundant than phosphatidylcholine in the internal membranes of the cell and is an abundant component of prokaryotic membranes. Ethanolamine is attached to phosphatidic acid by a phosphodiester linkage. Synthesis from diacyl glycerol and CDP-ethanolamine. The condensation product of a phosphatidic acid and ethanolamine; found in biomembranes. They (PS and PE) are widely distributed in the body, especially in the brain and spinal cord, and are used as local haemostatics and as reagents in liver function test.

PS - Phosphatidylserine: A phospholipid found in mammalian cells. The condensation product of phosphatidic acid and serine, found in biomembranes. It is an important minor species of phospholipid in membranes. Complete hydrolysis yields 1 mole of glycerol, phosphoric acid and serine and 2 moles of fatty acids. Synthesis is from phosphatidylethanolamine by exchange of ethanolamine for serine. Distribution is asymmetric, as the molecule is only present on the cytoplasmic side of cellular membranes. It is negatively charged at physiological pH and interacts with divalent cations, involved in calcium dependent interactions of proteins with membranes (e.g. Protein kinase C). They (PS and PE) are widely distributed in the body, especially in the brain and spinal cord, and are used as local haemostatics and as reagents in liver function test.

SM - Sphingomyelin: Any of a group of phospholipids that are found especially in nerve tissue especially in a high concentration in the brain and yield sphingosine, choline, a fatty acid, and phosphoric acid upon hydrolysis. A close analogue of phosphatidylcholine. In many cells the concentration of sphingomyelin and phosphatidylcholine in the plasma membrane seems to bear a reciprocal relationship.

Glycosphingolipids: involved in cell metabolism and growth.

Gangliosides: Any of a group of galactose-containing cerebroside found in the surface membranes of nerve cells. Gangliosides are found in highest concentration in cells of the nervous system, where they can constitute as much as 5% of the lipid.

Sugars: Arabinose, Glucose, Deoxyribose, Mannose, Fructose, Ribose, Galactose, Xylose.

Polysaccharides: helps regulate blood clotting activity.

Steroids/Hormones: Androstendione, Dehydroepiandrosterone, Progesterone, Luteinizing hormone, Estone, Estradiol.

Cytokines: Any of several regulatory proteins, such as the interleukins and lymphokines, that are released by cells of the immune system and act as intercellular mediators in the generation of an immune response.

Interleukins: Growth factors also include a unique family of cytokines. Cytokines stimulate the humoral and cellular immune responses, as well as the activation of phagocyte cells. Cytokines secreted from lymphocytes are called interleukins, of which there are many.

Lymphokine cytokines: A special type of growth factors. Lymphokines are involved in the two major types of immune response, humoral (antibody formation) and cell mediated.

Gamma-aminobutyric acid (GABA): a non-essential amino acid that helps promote normal brain function by helping to block stress-related messages from reaching receptor sites in the central nervous system. GABA helps reduce feelings of anxiousness, and may be helpful for treatment of disorders linked to emotional stress, such as reduced sex drive and hypertension. This amino acid plays a key role in balancing and regulating levels of sex hormones in the body. Some studies indicate that GABA actually increases levels of human growth hormone (HGH) in the body, which can lead to an increase in muscle mass and decrease in overall body fat as well. Individuals with enlarged prostate glands may benefit from GABA supplementation.

L-Dopa: On its own, L-dopa is an important amino acid that is the precursor of dopamine. What dopamine does is help a lot of important brain functions like sleep, mood, learning, behavior, and regulating prolactin production from the pituitary. Dopamine is also involved in the HGH loop cycle, mainly by increasing the responsiveness of the hypothalamus towards any release of growth hormone in the bloodstream.

Aromatic L-amino acid decarboxylase (AAAD): involved in the synthesis of dopamine, a neurotransmitter crucial in cognitive, neurobehavioral and motor functions.

All 20 essential/ non essential amino acids:
the building blocks of protein.

ESSENTIAL AMINO ACID LIST

Arginine Isoleucine Histidine Leucine Methionine Lysine Phenylalanine Tryptophan Threonine Valine

NON-ESSENTIAL AMINO ACIDS

Alanine Arginine Asparagine Aspartic Acid Cysteine Glutamic Acid Glutamine Glycine Proline
Serine Tyrosine

Avinotropin™

STANDARDIZED TO 100 mcg of IGF-1

SUGGESTED WHOLE SUPER FOOD DOSAGE:

As a Growth Factor Supplement, take 30 drops (2/3 dropper) and hold in mouth under tongue for 90 seconds. Swallow afterwards. Administer on empty stomach in the morning.

Avinotropin™ is a pharmaceutical grade Growth Factor Formula standardized to 100 mcg of IGF-1 per bottle.

WARNINGS: If you are pregnant or lactating, consult a health care practitioner before using.

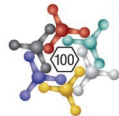
DO NOT USE IF SEAL IS BROKEN OR MISSING.



PROFESSIONAL USE ONLY

Avinotropin™

STANDARDIZED TO 100 mcg OF IGF-1



CONCENTRATED GROWTH FACTORS

1.0 FL. OZ. (30 ML)

Supplement Facts

Serving Size: 30 Drops	% Daily Value
Servings Per Container: 30	
Amount per Serving	
Avinotropin™	**
(Derived from Velvet Antler)	
** Daily Value (DV) not established	

Other Ingredients: Purified Water, 52% Alcohol.
Manufactured by: BiPharma Technology
www.biopharmatech.com



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