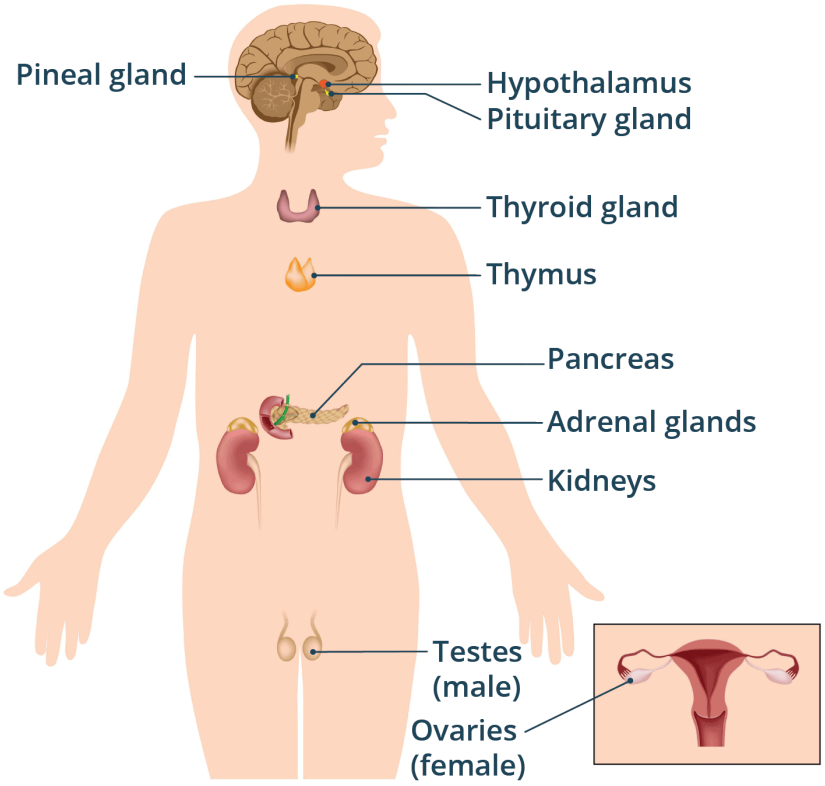
What's Up Doc?

Glandulars

Organ meats, also known as offal, were a staple in the diets of many indigenous cultures worldwide. These nutrient-dense parts of animals, including the liver, heart, kidneys, brain, and intestines, were highly valued for their health benefits, cultural significance, and efficient use of resources. Organ meats are some of the most nutrient-dense foods available. Indigenous peoples recognized their health benefits, even without modern nutritional science. In many indigenous cultures, organ meats were revered as sacred foods that provided strength, health, and even spiritual power. The liver considered the most prized organ for its nutrient density. For instance, the Inuit gave liver to pregnant women for its high vitamin A content. The heart symbolized courage and was consumed by warriors to imbibe the strength of the animal. Finally, the brain was believed to enhance intelligence or spiritual connection in some cultures.



Liver: Rich in vitamin A, iron, folate, and B vitamins like B12. A small amount provides more nutrients than many other foods.
Heart: Contains coenzyme Q10 (CoQ10), essential for energy production and cardiovascular health, as well as iron and zinc.
Kidney: High in selenium, iron, and B vitamins.
Brain: Contains omega-3 fatty acids and essential fats like DHA, crucial for brain health and development.
Bone Marrow: A source of collagen, healthy fats, and minerals like calcium and phosphorus.

In contrast modern societies have largely moved away from eating organ meats. This shift can be attributed to several cultural, economic, and industrial factors. As industrialized farming scaled up, muscle meat (like steaks, chicken breasts, and pork chops) became the primary focus of production because it was more marketable and palatable to consumers. Muscle cuts are easier to standardize, store, and cook, making them more convenient for the modern food

system. The rise of processed and fast foods further pushed organ meats out of the average diet as people prioritized convenience over traditional cooking. Some people mistakenly believe that organ meats are "toxic" because organs like the liver filter out toxins. In reality, the liver processes toxins but does not store them. Properly sourced organ meats are safe and highly nutritious. In the 20th century, public health campaigns demonized cholesterol and fats, contained in organ meats discouraging their consumption. While modern science has debunked much of this fear, the stigma persists.

Revival of Organ Meats Currently.

Despite years of decline, of late, there is a growing interest in organ meats due to their nutritional benefits and sustainable practices. This revival is driven by:

Paleo and Ancestral Diets: These movements emphasize a return to traditional eating, including organ meats.

Nutritional Awareness: People are rediscovering the nutrient density of organ meats, especially for conditions like anemia or deficiencies in vitamin B12 and Vitamin A.

Sustainability: Nose-to-tail eating reduces food waste and supports sustainable farming practices.

Culinary Trends: Chefs in high-end restaurants are bringing back organ meats as delicacies (e.g., pâté, foie gras, sweetbreads).

Sautéed sweetbreads

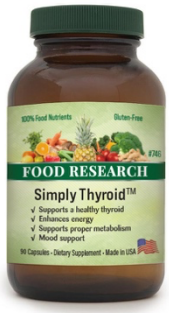
Glandular Therapy

The therapeutic use of animal organs dates back thousands of years. In traditional Chinese medicine (TCM), consuming animal organs was believed to nourish the corresponding human organ. Liver was consumed to strengthen the liver, and animal heart was believed to support cardiovascular health. Similarly, Egyptian, Greek, and Roman physicians prescribed organ extracts for various ailments, often based on observation and trial-and-error.

The formalization of glandular therapy began in the 19th century with the discovery of hormones and the understanding of glandular functions. Scientists realized that glands like the thyroid, adrenal, and pancreas secreted substances - hormones, essential for bodily functions. Early pioneers like Dr. Charles-Édouard Brown-Séquard (1817–1894) experimented with glandular extracts. In 1889, Brown-Séquard famously injected himself with testicular extracts from animals, claiming rejuvenating effects and sparking an interest in glandular medicine. By the early 1900s, glandular therapy became more refined. Pharmaceutical companies began producing glandular extracts for specific medical conditions. One of the earliest successes was the use of desiccated thyroid gland extracts to treat hypothyroidism. This practice began in the 1890s and became widespread in the 20th century. Insulin, derived from the pancreas of cows or pigs, was first used to treat diabetes in 1922, marking a significant breakthrough in glandular

medicine. By the 1930's glandulars became widely available in powdered or desiccated forms and were marketed as dietary supplements for general health and vitality. Adrenal glands became popular as tonics for stress and fatigue. As did liver extracts as a supplement for boosting energy and treating anemia. By the middle of the 20th Century with the rise of the Pharmaceutical industry synthetic alternatives to glandular therapies, such as levothyroxine (synthetic T4) and hydrocortisone, became widely available. These synthetic products which were much cheaper and easier to produce and were sold to the public on the basis of more consistent dosages, fewer risks of contamination, and later concerns with the risk of Prion disease (Mad cow disease). This led to a decline in the use of glandulars in mainstream medicine. The use of natural glandular products shifted from medical treatments to dietary supplements, particularly for hormone support and general wellness.

Of late with the revived interest in natural health and a growing dissatisfaction with side effects from Pharmaceuticals a number of studies have been undertaken to offer validity in the use of glandulars over synthetic alternatives.



Natural Desiccated Thyroid vs. Levothyroxine in Hypothyroidism. University of Colorado Hospital - Ongoing 2023 -2025

Outcomes of Desiccated Thyroid Treatment in Hypothyroidism Patients. Mayo Clinic - 2024 2025

Bovine Brain Extracts for Cognitive Decline. Neurological Research Institute- Early-phase trial - 2024/25

Adrenal Glandular Extracts for Subclinical Adrenal Insufficiency. University of San Diego -2023 -2025

The preference in all cases is glandulars from grass fed beef and lyophilization **(freeze-drying**). Freeze Drying is widely regarded as the **gold standard** for preserving enzymes, peptides, and other bioactive compounds.
Porcine-derived enzymes are effective but may pose ethical, religious, or allergenic concerns.

The consensus from scientific studies and industry practices confirms that freeze-drying is the most efficient and effective method for preserving meats, glandulars, and other bioactive products. It ensures:

Retention of Enzymes, Peptides, and Proteins: Bioactivity is preserved due to minimal exposure to heat, oxygen, or chemicals.

Nutrient Stability: Heat-sensitive vitamins and nutrients remain intact during the process.

Long Shelf Life: Freeze-dried products are stable for years without refrigeration.

Superior Quality: Compared to salt preservation, freezing, or air drying, freeze-drying consistently maintains the highest levels of potency and bioavailability.

Many studies proclaim the benefits of freeze drying in terms of maintaining the efficacy and cofactors of glandular intact. Studies show enzymes and peptides to be between 95 and 99%

intact after the freeze-drying process. It is generally accepted that the salt drying process results in a loss of up to 50% of peptides, enzymes and co-factors, due to oxidative and enzymatic degradation during prolonged processing. Not normally advertised there is a high heat element to salt drying which further damages co factors.
Desiccated glandulars are dried with high heat this kills the enzymes in the tissues.
NASA uses freeze-drying to preserve food for astronauts because it retains nutrients and bioactivity while providing a long shelf life without refrigeration.

Grass Fed V USDA

With BSE concerns and the use of antibiotics in US cattle this should not really even be a consideration. Remember currently US meats are unable to be exported to the EU or the UK as USDA produce does not meet European safety and quality standards.

Uses

Adrenal glandular support is often used by people who are under stress, fatigued, having difficulty getting up in the morning, who have adrenal stress headaches, or have an abnormal craving for salts. Adrenal tissue is normally taken with meals.

Brain glandulars contain “specific brain cell activators” and have been advised for slowness of thought, loss of memory, uncontrolled mental activity, nightmares, mental retardation, and epilepsy. A double-blind study involving bovine-brain derived phosphatidylserine found it was able to improve both behavior and cognition in elderly people with cognitive decline. “…phosphatidylserine enhances the ability of enzymes in membranes of nerve cells to relay messages in and out of the cells. Research suggests that the glandular source phosphatidylserine is more effective than soy isolate sources.

Cardiovascular glandulars are normally made from bovine heart. This tissue is sometimes used by people with low blood pressure, overwhelming fatigue, people who need strength, people who feel cold, and athletes interested in improved performance. It is normally best not to take heart tissue late in the day (at breakfast and lunchtime is best for most people), as any heart glandular support product can affect sleep if taken late in the day. Heart tissue, if appropriate, tends to show its benefits rather quickly (within a week or two for most people), though this varies. Heart tissue has historically also been used as an aid in glucose uptake and the manufacture of ATPs.

Ear glandular tissue, if available, is often taken for people with hearing concerns. If also taken with a form of moss, some report assistance with tinnitus.

Eye glandular tissue, if available, is often taken for eye and vision issues, including macular degeneration. It has been written that eye glandular extracts have been shown to improve "the general integrity of the eye tissue" and may be useful for eye strain as well as… "for failing vision associated with the aging process".

The hypothalamus is the body's master endocrine gland. As such, it can affect basically all body systems and hormones. The hypothalamus also can increase feelings of tranquility.

Liver is probably the most widely used glandular supplements. The liver is the chemical factory of the body and feeding the liver can help when other approaches have not been effective. Historically, bovine liver has also been used for some enlarged livers, forms of anemia, and for support when chronic degenerative diseases are encountered. Clinically, it seems helpful for many who have raised liver enzymes, especially if given with detoxifying herbs like silymarin, red beet, and garlic.

> Once the value of oral thyroid extracts was established, there was an explosion of interest in the use of other glandulars.
>
> Price-Pottenger Foundation

Bovine lung tissue has historically been used by those with respiratory disorders (such as bronchitis, asthma, chronic coughs, chest colds), convalescent stages (of pneumonia, colds, flu), and pulmonary involvements (including accidents, industrial fumes, dust inhalation, and even adrenal insufficiency).

Some women take bovine mammary tissue. The breasts are involved in lactation, sexual attraction, and sexual response. Bovine mammary tissue has been sometimes advised for disorders related to female breasts such as nipple pain, lymph node enlargement, breast underdevelopment, mastitis, menstrual pain, nipple inflammation, congestion, and lactation difficulties. It may be of interest to note that the National Cancer Institute has studied bovine mammary tissue to find out what may be in it that helps prevent cows from getting breast cancer.

Orchic is a word for testicle. Royal Lee claimed bovine orchic gland extracts could be indicated for those with nervous tension, lowered tolerance to stress, depression, loss of psychic tone, bruising on slight trauma, loss of appetite, skin lesions, adrenal insufficiency, nervousness, insecurity, mental aberrations, lack of feeling of well-being.

The ovaries are involved in female reproduction. Bovine ovarian tissue is sometimes advised to help some women sleep at night, reduce the production of acne, improve mood, sometimes aid in menopausal issues, and for some women, increase fertility. As it has effects that differ from thyroid support, it is often advised to take ovarian tissue before bed.

The pancreas is instrumental in the regulation of blood sugar and is one of the most important organs related to a healthy digestive system. The pancreas produces trypsin and is operational in intermediate protein metabolism. Bovine pancreas is often used to assist in the digestion of grains and other foods.

Cytotrophic bovine spleen extracts have historically been taken by people with allergic reactions (hives, canker sores, cold blisters), lymph node swelling, blood concerns (anemia, lymphocytosis), demineralization accompanied by hyperirritability, as well as those with lowered resistance to infections and boils. Some have suggested that bovine spleen “may aid in the elimination of allergic breakouts”.

Bovine thymus tissue is often used for immune system support. It is sometimes taken by people with staph, strep, and other bacterial concerns. Because it has few ingredients, it is useful to consider for those with other allergies, young children, and even pregnant women when they need immune system support. Bovine thymus has also been historically recommended when hyper glandular conditions, like hyperthyroid, hyper adrenal, etc., are encountered. Oral supplementation with bovine thymus has been shown to be capable of enhancing T-lymphocyte activity, probably due to a thymosin-like activity.

Bovine thyroid tissue (note: bovine thyroid glands are thyroxine-free, thus do not result in a shutting down of the thyroid gland when taken). Thyroid tissue is used by people with symptoms associated with low thyroid such as afternoon tiredness, poor circulation, poor temperature tolerance, headaches, low metabolism, diminished female libido, weight concerns, and sometimes dry skin. It is normally best not to take thyroid tissue late in the day (at breakfast and lunchtime is best for most people), as any thyroid support product can affect sleep if taken late in the day. Some people will find that their appetite will temporarily increase when taking it, but not only does this tend to normalize, it normalizes to the point that most people will find that they crave junk food, caffeine, and similar items less, but water, fruits, and even vegetables more.

Bovine uterus extracts have long been used for women with leucorrhea, uterine cysts, fibroids, uterine displacement, excessive or scanty menses, some types of sterility, menstruation cramps, prolapse uterus. Some practitioners have found uterine glandulars to be helpful for female moods. Some practitioners recommend uterine glandulars during the last month of pregnancy to provide nutritional support for the uterus in order to strengthen it to make it easier to push out a baby. Some also believe, that if continued after parturition, that supporting the uterus in this manner improves recovery by aiding the uterus, reducing its swollen condition. Furthermore, women have tended to report little or no postpartum depression if they began consuming uterine glandulars a few weeks before delivery through several weeks after delivery.

Doctors Research Glandulars

All sourced from Grass Fed cattle predominantly from New Zealand occasionally from Australia or Argentina, farmers tend to raise their cows and sheep naturally more than those raised in places like the USA. The animals almost exclusively consume unfertilized natural grasses as are found in the pastures of those lands. we do not source from the US. All glands have been freeze dried to ensure they maintain natural enzymes, peptides and hormone

precursors. It is worth noting that raw or freeze dried ovine (sheep) and bovine (cow) glandulars contain enzymes that are identical to those in the human body, which can be of incredible benefit to ailing Patients. Freeze dried glands also have the benefit of being able to be ground into smaller particles which improves bioavailability over older methods.

Simply's: Dose 1-3 Per day

Simply designates the main range of Glandulars from Food Research these are bovine glandulars described as cytotrophins (cell foods). They are sourced from New Zealand freeze dried and each capsule contains simply 200mg of the bovine glandular.
There are 14 Simply's in the range covering all major male and female organs Simply's are the perfect product to support and rebuild your Patients stressed organs . For example, stressed or over tired Patients could benefit from Simply Adrenal to support and rebuild overworked adrenal glands. Because of their purity Simply's are **ideal products for pregnant woman or children** and offer therapeutic support without the concerns of synthetics or herbal products and potential contraindications. Simply's contain the whole gland and enzymes, peptides and hormone precursors similar or identical to our own. **Consider for weak or struggling Patients, Patients with compromised digestion, Patients with sensitivity issues.**

Enzomorphogens: Dose 3-6 per Day

In 1947 Royal Lee with William Hanson cowrote "Protomorphology: The Principles of Cell Autoregulation." Protomorphgens (PMG's) were introduced as a specific material extracted from animal glands and organs to retain what they described as "cell determinants." These extracts improved efficacy which was typically degredated in the drying and salting process of the gland. While Lee started what we now know as Standard Process Inc. Hanson created Enzyme Process and went on amongst other things in 1952 to win a patent for the first chelated mineral - calcium. Before bringing the process inhouse some years later Enzyme Process extracted and manufactured PMG's for Standard Process. Doctors Research approached Enzyme Process in the 2000's and asked them to create Enzomorphogens (EMG's) in essence a similar extract to the PMG's but using tissue from grass fed New Zealand cattle and instead of drying and salting, the extracts were freeze dried and combined with Collinsonia root. The benefits of freeze drying we have already discussed. Collinsonia root helped with digestion (sometimes an issue with the heavily salted PMG's) and improved circulation. Doctors Research has 4 EMG products.

Hypothalamus EMG, Pituitary EMG, Thymus EMG and Thyroid EMG

These products are used to support specific glands as they contain cell nuclei specific to each organ. In feedback I have received from many Practitioners the same or similar results are obtain by using the Simply range. Obviously, the EMG's are extracted from the whole gland, so

they are present in the Simply range. The consensus seems to be the improvements in the gland quality plus the modern methods of processing, freeze dried over salt leads to a more bioavailable and efficacious product.

Glandular Inclusion In Products.

A number of Food Research have glandulars added to them. These are similar to the glands used in the Simply range. These extracts contain essential nutrients, peptides, enzymes, and other bioactive compounds that can help restore balance and promote overall health in individuals with nutritional deficiencies or imbalances. One of the beauties of bovine glandular is the essential co-factors they contain are the same or similar to those within us this means even Patients with compromised digestion and systems can feel immediate benefits. These glands along size vitamin and herbs offer support to the organ or system under stress. For vegetarian Patients there are non-glandular options.

Supplement Facts

Serving Size 1 Capsule **Servings per Container 90**

Amount per Serving			% Daily Value▼
Vitamin C	(in 30 mg food)	7.5 mg	8%
Thiamin (Vitamin B-1)	(in 0.7 mg food)	.16 mg	14%
Riboflavin (Vitamin B-2)	(in 2 mg food)	.20 mg	15%
Niacinamide (Vitamin B-3)	(in 4 mg food)	1 mg NE	6%
Vitamin B-6	(in 1 mg food)	.2 mg	11%
Folate (Vitamin B-9)	(in 0.8 mg food)	8 mcg DFE	2%
Vitamin B-12 - Methylated	(in 0.5 mg food)	2.5 mcg	104%
Biotin (Vitamin B-7)	(in 1 mg food)	.5 mcg	1%
Pantothenate (Vitamin B-5)	(in 4 mg food)	1 mg	20%
Choline	(in 12 mg food)	3 mg	*
Inositol	(in 12 mg food)	3 mg	**
Collinsonia Root Powder	*Collinsonia Canadensis*	100 mg	**
Wildcrafted Passion Flower	*Passiflora Incarnata*	100 mg	**
Organic Brown Rice Flour	*Oryza sativa*	44 mg	**
Acerola Cherry	*Malpighia Glabra*	30 mg	**
Bovine Thymus Cytotrophin		25 mg	**
Bovine Hypothalamus Cytotrophin		15 mg	**
Food Extracted L-Tyrosine (Vegan GMO-Free)		15 mg	**
Wildcrafted Atlantic Kelp	*Laminaria Hyperborea*	15 mg	**
Wildcrafted Ginkgo Bark	*Ginkgo Biloba*	15 mg	**
Organic Alfalfa Leaf	*Medicago Sativa*	2 mg	**
Bovine Parotid Cytotrophin		1 mg	**

* Contains less than 2% of the RDI
** Recommended Daily Intake has not been established

PRL

While Premier Research Labs does not offer Glandular products. I thought **Premier Marine Collagen** was an excellent product to include in this newsletter.

Collagen is the most abundant protein in the human body, making up 30% of our total protein. It provides the fundamental structure and strength for making and repairing connective tissues in your body including skin, bones, tendons, ligaments, cartilage, blood vessels, and intestines.
Collagen molecules assemble into long, fibrous bundles called Collagen fibers that give structural integrity to these tissues.

Our body's collagen levels start to decline in our mid 20's and by age 50 they are depleting by 2% to 3% per year
Signs of Collagen-deficiency include, wrinkled or sagging skin, stiff and aching joints, brittle nails, weak muscles and bones, more frequent injuries, poor wound healing, and digestive issues. Your Patients overall vitality often suffers. Collagen deficiency becomes more common as we age but can also occur due to, inactivity, smoking, excessive sun exposure, chronic inflammation or disease, and genetics. Much of our collagen comes from the consumption of meats and broths, so not always but in many cases vegetarians may need supplemental collagen.

Premier Marine Collagen: Dose: 1 -2 Scoops per Day

a Hydrolyzed form of collagen that has been broken down into smaller chains of amino acids this improves bioavailability. It is extracted from 100% wild-caught, cold-water fish skins—cod,

haddock, and pollock, providing Types I, II, III, and IV collagen for systemic support across skin, joints, connective tissue, and epithelial membranes. Marine collagen is generally preferred over bovine collagen for the following reasons:-

Bioavailability: Marine collagen is more easily absorbed by the body due to its smaller peptide size, which enhances its effectiveness.

Type of Collagen: **Premier Marine Collagen** is a full spectrum collagen product. Typically, marine collagen is mostly Type I and bovine collagen is Type I and III.

Allergen Profile: Marine collagen is suitable for individuals with allergies to bovine products or those who prefer vegetarian supplements

Skin Health: Marine collagen is particularly effective in improving skin hydration, elasticity, and reducing wrinkles

Lower Contaminants: Marine sources typically have lower levels contaminants which can be found in USDA bovine sources.

Taste and Odor: Marine collagen typically has a milder taste and odor compared to bovine collagen, making it easier to incorporate into foods and beverages.

Premier Marine Collagen uniquely includes:

- **Type** I – Skin, bones, tendons
- **Type II** – Cartilage (joint support)
- **Type III** – Vascular walls, skin, organs
- **Type IV** – Basement membranes (skin, kidneys)

A pure product containing no excipients or binders and tested intensively for contaminants.

Colostrum-IgG: Dose 3 capsules or 2 teaspoons per day.

Colostrum is a special immune-active fluid secreted by the mammary glands of female cows for about three days after giving birth. Bovine colostrum contains a wide range of naturally occurring immune factors, amino acids, nucleotides and growth factors to support the newborn's immune health. Dairy cows can produce up to five gallons of colostrum just within in their first milking. Since baby calf only consumes about one gallon in the first couple days, excess colostrum is ideal for use as a nutritional supplement. Colostrum from pasture-fed cows is known to contain highly concentrated immunoglobulins specific to many human antibodies, such as Immunoglobulin G (IgG) – an important type of antibody of the body's immune system. IgG is the most common type of antibody found in circulation representing 75% of serum antibodies in humans. Research has shown that supplementation with bovine colostrum is able to positively modulate immune function.

Colostrum offers several athletic benefits that can be valuable for enhancing performance, recovery, and overall health for athletes.

Muscle Recovery and Repair: Colostrum contains insulin-like growth factors (IGF-1 and IGF-2) that promote muscle repair and regeneration, helping athletes recover faster from intense training and injuries.

Improved Endurance: Studies suggest that colostrum can enhance endurance performance by promoting better energy utilization and reducing the perception of fatigue during prolonged exercise.

Cytokines and Lactoferrin: These components have anti-inflammatory properties that help

reduce exercise-induced muscle soreness and inflammation, allowing for quicker recovery and less downtime.
PRL Colostrum IgG is from a select group of grass-fed cows and is available in either a capsule or powder form.

Colicron: Dose 1 per day.

The microbiome is crucial for maintaining health across multiple systems in the body. Its impact on **digestion, immunity, metabolism, mental health**, and **chronic disease** underscores the importance of nurturing a balanced and diverse microbiome which inevitably leads to enhanced overall health and well-being.

Colicron™ is a combination of 3 different species and 9 different strains of Probiotics each strain has been clinically researched. There are 5 Billion Colony Forming Units (CFU's) per strain giving a total of **45 Billion CFU's per capsule**.

Three key additional ingredients are included in the formula:-

Palmitoylethanolamide (PEA)
a cannabimimetic mediator, naturally present in our body, which offers analgesic and anti-inflammatory properties in addition to regulating intestinal transit.

UNDARIA (Wakami Edible Seaweed)
a brown seaweed as a source of fucoxanthin. Fucoxanthin is hydrolyzed in the gastrointestinal tract to form fucoxanthinol. Fucoxanthinol binds to the NAAA enzyme, reducing its activity and its ability to degrade PEA.

HERICIUM ERINACEUS (Lion's Mane Mushroom)
An edible and medicinal fungus which in addition to its the ability to modulate the immune system, stem inflammation and repair the gut is a prebiotic.

Colicron is produced using a freeze dry process followed by a unique internal and external coating which is used to protect the probiotics. An external polysaccharide coating protects the probiotics from both heat and humidity changes in the environment. A second internal coating stops the Probiotics reactivating. During GI transit the Probiotics face harsh condition from acid pH, digestive enzymes, and bile salts, the internal coating protects the Probiotics and is slowly and gradually released during the GI transit. When the probiotics reach the gut, they reactivate themselves, proliferate, and adhere to the intestinal mucosa.

1 months supply Practitioner Price $22.50 **Free shipping on 6 units**

Alivedalabs.com