

# Ultra-Enzyme Support®

With L.E.A.D.S.®

Live Enzyme Activated Delivery System®



## A High Performance Broad Spectrum Digestive Formula

**Ultra-Enzyme Support®** may be the most complete way to support your body on an enzymatic level. This formula is a high performance, broad-spectrum vegetarian digestive enzyme with **19 different digestive** enzymes. Using the highest quality vegetarian enzymes and mineral cofactors it provides support on many levels.



Many digestive enzyme products use pancreatin, trypsin and chymotrypsin, which are harvested by juicing the organs of cow and pig cadavers in slaughter houses. These animal based enzymes can encourage dependency and only work in a very narrow Ph range and are often destroyed in the stomach. This formula uses only vegetarian enzymes and is manufactured under the strictest standards for optimal function of the digestive system.

It's no secret that as we age it becomes harder to enjoy a meal without suffering from some type of digestive discomfort. The reason is that every 10 years of life the pancreas produces fewer digestive enzymes. In addition, our modern diets are largely void of natural plant enzymes and we eat less and less raw food. This overall lack of enzymes causes the body to work harder, putting a strain on our internal organs and digestive system. This results in symptoms as minor as heartburn and bloating but can lead to more serious issues

**Ultra-Enzyme Support®** also includes enzyme activating mineral co-factors like calcium, magnesium, manganese, copper, chromium, potassium and zinc. This special proprietary blend of chelated minerals has been included to help maximize the performance of this enzyme formula.

Brief Description of Enzymes	What they digest
<b>Protease, Peptidase</b>	<b>Proteins</b>
<b>Amylase, Alpha-Galactosidase</b>	<b>Carbohydrates</b>
<b>Glucoamylase, Invertase, Malt Diastase</b>	<b>Glucose/sugars</b>
<b>Lipase, Lipase AN</b>	<b>Fats and oils</b>
<b>Cellulase, Pectinase</b>	<b>Fiber</b>
<b>Lactase</b>	<b>Lactose and milk sugars</b>
<b>Phytase, Hemicellulase, Xylanase</b>	<b>Releases plant minerals</b>

The enzyme activity in just two capsules of **Ultra-Enzyme Support®** is enough to digest:

- The carbohydrate content of eight baked potatoes
- The protein in thirty ounces of steak
- The Lactose in four glasses of milk
- The fat content of three orders of Mac Donald's French Fries

**Ultra-Enzyme Support®** includes a special feature called **n•zimes PA-L™**. This proprietary enzyme blend is derived from isolated plant sources, as a pancreatic enzyme alternative, to further increase the body's ability to metabolize proteins, carbohydrates and fats. It is ideal for diets high in saturated fats.

**L.E.A.D.S.®** - like all of NWC's products Ultra-Enzyme Support® contains our exclusive **L.E.A.D.S.® Live Enzyme Activated Delivery System®**. It is NWC's delivery system that guarantees assimilation and utilization of the nutrients at the cellular level. **L.E.A.D.S.®** is a proprietary system of adding a blend of select enzymes to botanical and whole-food products for the purpose of improving the release and absorption of nutrients contained in these products. This special blend of supplemental enzymes works to extract the nutrients from the formula in the most bioavailable form so the body can use them easily and efficiently. The **L.E.A.D.S.®** enzyme delivery system is formulated to match the specific needs of each individual product made by Natural Wellness Centers of America Inc. and is based on a unique and proprietary method. It is especially beneficial with products providing a whole-food source of vitamins and minerals.

## Ingredient Overview

**Protease** - proteases refers to a group of enzymes whose function is to break down proteins; they're also referred to as proteolytic enzymes or proteinases. The proteins are broken down to their basic building blocks - amino acids. In order to have the amino acids available to the body, these enzymes have to break down the proteins to free them; this important enzymatic compound is the key to digestive health. This formula contains four different proteases.

**Peptidase** - Peptidase contains a very high level of exo-peptidase activity and is able to provide a high degree of protein hydrolysis breaking down peptides completely into amino acids. Peptidase works synergistically with endogenous enzymes to provide protein digestion throughout the entire digestive tract. Scientific evidence suggests that proteolytic enzymes, such as peptidase, can be useful supplements for digestive support, immune support, cardiovascular support and general nutritional support.

**Amylase** - amylase refers to a group of enzymes that break down sugars and starches. They are required to digest carbohydrates (polysaccharides) into smaller units (disaccharides), and then, eventually converting them into even smaller units (monosaccharide), such as glucose.

**Alpha-Galactosidase** - this enzyme breaks down carbohydrates, such as raffinose, stachyose and verbascose. It can help prevent gas and other gastrointestinal symptoms that occur after eating a high-fiber diet of beans and grains.

**Diastase** - or maltase is an enzyme that is the catalyst in the hydrolysis of disaccharide maltose to the simple sugar form - glucose. When starch is eaten, it is partially digested and transformed to maltose by both the saliva enzymes and pancreatic enzymes called amylases. The maltase secreted in the intestines, converts this maltose into glucose, where it's ready to be used or can be stored in the liver for future use.

<b>Supplement Facts</b>	
Serving size: 2 Capsules Servings per container: 100	
Amount per serving	% D.V.
Zinc (as Zinc glycinate chelate)	1.2 mg 8%
Copper (as Copper glycinate chelate)	0.066 mg 3%
Manganese (as Manganese glycinate chelate)	0.5 mg 25%
Chromium (as Chromium nicotinate glycinate chelate)	55 mcg 46%
Beet root	333 mg **
n-zimes PA-L® (amylase, protease, lipase) (100 PALU)	100 mg **
Enzyme Blend	221 mg **
Protease 6.0	20,000 HUT
Amylase	3000 DU
Exo-peptidase	7500 HUT
Dipeptidyl peptidase IV	150 DPP-IV
Glucoamylase	10 AGU
Protease 3.0	20 SAPU
Invertase	135 SU
Diastase	350 DP°
Protease AM	8 AP
Protease 4.5	6000 HUT
Alpha-galactosidase	100 GalU
Phytase	7.5 FTU
Pectinase	6 endo-PGU
Xylanase	150 XU
Cellulase	175 CU
Lactase	200 ALU
Lipase	100 FIP
Hemicellulase	100 HCU
L.E.A.D.S.® blend	62 mg **
Calcium glycinate chelate, Magnesium glycinate chelate, Potassium complex, Zinc glycinate chelate, Manganese glycinate chelate, Chromium nicotinate glycinate chelate, Copper glycinate chelate	
** Daily Value (D.V.) not Established	

All minerals are Albion TFAACS®

**Other Ingredients:** Vegetable cellulose and water.

Manufactured Exclusively for  
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**Lipase** - is the enzyme required to break down fats and lipids. In order for fat to be digested properly, the liver starts the process by emulsifying the large fat molecules. Then bile breaks the fat down to small droplets, allowing the lipase to start its work.

**Lactase** - lactase is required to break down lactose (a primary sugar found in mammalian milk) and is produced in the small intestine, which breaks lactose into two simpler sugars. It is required for the digestion of milk and milk products.

**Glucoamylase** - is used to breakdown carbohydrates, specifically polysaccharides.

**Invertase** - this enzyme breaks down carbohydrates, especially sucrose.

**Pectinase** - breaks down carbohydrates, specifically pectin in fruits, such as apples.

**Phytase** - breaks down carbohydrates, specifically phytates in plants. It can increase mineral absorption and the bioavailability of iron, zinc, calcium and magnesium.

**Hemicellulase** - is used to breakdown carbohydrates, especially polysaccharides such as hemi-celluloses, which are found in plant foods.

**Cellulase** - breaks down cellulose, an indigestible fiber found in many fruits and vegetables.

There are many advantages of using supplemental vegetarian enzymes as opposed to animal derived enzymes. Fermented enzymes have been used in foods for centuries. Microbial enzymes have been specially selected on the basis of each enzyme's unique characteristics. Fermented enzymes exhibit broad ranges of pH, temperature and substrate specificities. Supplemental microbial enzymes are chosen on their ability to work within the gastrointestinal system of mammals.

Specially selected for compatibility with the body's temperature, microbial enzymes also exhibit activity across a broad pH range. Unlike supplemental enzymes of animal origin, microbial enzymes work at the pH found in the upper stomach. Food sits in the upper portion of the stomach for as long as an hour before gastric secretions begins action. Several studies conducted at major universities have shown that the enzymes in saliva continue their digestive activity in the upper stomach and can digest up to 30% of the ingested protein, 60% of ingested starch and 10% of ingested fat during the first 30 to 60 minutes after consumption. Although salivary enzymes accomplish a significant amount of digestion, their activity is limited to a pH level above 5.0. Supplemental microbial enzymes are active in the pH range of 3.0 to 9.0 and can facilitate the utilization of a much larger amount of protein, carbohydrates and fat before hydrochloride is secreted in sufficient amounts to neutralize their activity. In contrast, supplemental enzymes of animal origin are destroyed by the low pH within the stomach unless they are enterically coated. Yet, this coating can prevent the dissolution of the enzymes and prevent any digestive benefit. Studies have shown that non-enteric coated products can be more effective than coated products. Furthermore, animal-based enzymes function only at the narrow pH ranges found at specific anatomical sites. Pepsin is only active in the highly acidic environment of the active stomach. Pancreatin, trypsin and chymotrypsin are only active in the alkalinity of the duodenum. Supplemental microbial enzymes exhibit activity throughout the entire digestive process. Therefore, microbial enzymes can play a significant role in improving food nutrient utilization.

Another advantage of microbial enzymes is the variety of enzymes available for supplementation. While pancreatin offers only protease, lipase and amylase activities, microbial enzymes offer protease, peptidase, lipase, amylase, glucoamylase, invertase, malt diastase, lactase, alpha-galactosidase, cellulase, hemicellulase, pectinase and phytase activities. Pancreatin is a pre-defined blend and the only alternatives are proportional increases in total activity that may not be necessary. Customization and flexibility to match the appropriate enzymes to the diet is another strength of supplemental microbial enzymes. Plus, microbial enzymes are animal-friendly as they are vegetarian and cruelty-free.

# Questions

## 1. How do I use Ultra-Enzyme Support ® properly?

Ultra-Enzyme Support ® should be taken with every meal. Take 1-2 capsules, depending on body weight and the size of the meal. Ultra-Enzyme Support ® should be taken just before, or during, meals for help with stomach related symptoms like gas, sensitive stomach, poor digestion, water retention, bloating, fatigue, etc.

## 2. Why aren't the enzymes in this formula measured in milligrams?

Enzymes are measured by reaction time, rather than by amount or weight. The unit measurements used for each enzyme refers to the length of time and the intensity of the reactions it creates.

## 3. Who should be taking this formula?

People suffering from gas, occasional heartburn, bloating, cramping, fatigue after eating or cravings, may expect these symptoms to diminish after just a few weeks of regularly taking this formula. Other enzyme deficiency related conditions will improve over time depending on the individual. Better bowel habits, improved mobility or normalized inflammation to name a few. You should notice significant improvement within 2-3 weeks if you are taking the formula faithfully.

## 4. What is the difference between plant and animal based enzymes?

Plant-based enzymes are derived from many sources including pineapple, papaya and mushroom-based fermentation. Animal-based enzymes are extracted from the pancreatic tissue of slaughtered pigs and cows. The high pH environment of the small intestine is the only place animal-based enzymes can function, as they are extremely sensitive to low pH ranges. This means that animal based enzymes may not survive outside of this environment. Plant-based enzymes are not destroyed by the acidic conditions of the stomach and are therefore stable in the upper stomach, where they can begin processing food immediately. NWC Inc. will never use animal-based enzymes from slaughterhouses.

## 5. Can I take Ultra-Enzyme Support ® while I am on medication?

This formula has not been shown to interact with any medication. However, if you have any specific questions, please direct them to your physician.

## 6. Are there side effects with Ultra-Enzyme Support ®?

When taken as directed there are no known side effects with this formula.

## 7. Can I give Ultra-Enzyme Support ® to my kids?

This formula can be safely given to children. If they have trouble swallowing pills, open the capsules and add the contents to any cold or room temperature food or beverage. Remember heat and cooking destroys enzymes. We also recommend our fruit flavored Ultra-Enzyme Support® children's chewable for any child who can chew a tablet.

## 8. I have been using the enzymes for a while but I still have excess gas. What causes this?

With excess gas, digestive enzymes are the first line of defense, but well digested food is only half the issue. A good intestinal environment balanced with probiotics is essential to good digestion and the elimination of excess gas. We recommend Pro-Biotics Plus™® chewable or Pro-Biotics Plus® capsule.

## 9. What is the importance of L.E.A.D.S. ® Live Enzyme Activated Delivery System ®?

The L.E.A.D.S. ® SYSTEM supplies all the enzymes and cofactors necessary to enhance digestion and delivery. Other formulas not utilizing L.E.A.D.S. ® will strip minerals and other nutrients from the body in their effort to activate the enzymes. Without L.E.A.D.S. ® the formula will not be as effective.



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