



Cranberry Health: Beyond the Juice

In typical juice processing, the fruit is frozen, thawed, enzymatically treated, and pressed to extract the liquid and some dissolved solids. It is mostly made up of water and fruit sugars with a host of nutrients. The remaining materials not recovered in the juice extraction process have in the past been regarded as waste and usually ended up in landfills.

We have been continually reminded by our parents to eat the skin and other less desirable parts of foods such as potatoes and fruits that we commonly eat. These parts are where most of the original nutrition lies. Cranberries that have been harvested for the juice use 85% of the fruit, leaving the solids (skin, pomace and seeds) to waste. This waste is where the most powerful nutrients lie in the fruit.

In that unwanted waste stream we have a wide variety of nutrients that include oil, phytosterols, vitamin E, phospholipids, antioxidants, EFAs, fiber, minerals and proteins (all of which we will later discuss). We simply don't have access to many of these compounds by drinking juice nor can we get substantial amounts of these materials by consuming the fruit in its organic state. Humans and other mammals lack the enzymes and organs needed to unlock and utilize certain powerful nutrients that lie within the seeds.

The Power of Plant & Fruit Seed Extracts

Seeds are known for being "nutrient powerhouses." A seed is essentially a "suitcase of information for the next generation." In order for a new plant to grow, the seed not only must carry the genetic code, but also essential nutrients to spark and nourish the new life.

To understand how a seed germinates and develops into a plant is quite a long process that we won't get into. But it is important to understand that if a seed were only a genetic code within a protective hull, it would simply not be enough to be a new plant. Evolution has taught the seed how to pack numerous powerful nutrients for the plant to spark and nourish a new life. The infant plant will eventually break from the seed and rely on the soil and a variety of microorganisms for nutrients to further develop.

The cranberry plant has evolved over time and built in mechanisms to protect its fruit to sustain the plant from predation. The fruit itself has a waxy covering, the skin is relatively thick, organic acids create a bitter taste, and the extremely small seed is covered with a thick protective hull. These attributes render some parts of the plant useless to humans and other mammals. With the new technologies, we are able to break down these components with specialty processing techniques and harness the exceptional nutritional value. New machines do what nature doesn't allow the body to: unleash the power of the cranberry.

In the big circle of life, mammals are often used by plants as "carriers," as they are not able to digest the seeds. Fruit bearing plants use mammals to carry the protected seeds to new locations to spring new life and spread the plant species.

How Cold Processing Technologies Retain High Levels of Nutrients

Normally when cranberry and other (raspberry, grape, flax, etc.) seeds are pressed to extract the oil, there is some friction within the molecules, which generates heat. Heat is not desirable in phytonutrient extraction as it destroys some of the valuable nutrients.

When the extraction is kept cold (in relative processing terms, below 100° F) the original phytonutrient profile of the seed is maintained and there is little to no nutritional value lost. The oils are then packed in nitrogen to reduce the exposure to air and oxidation.

While the cranberry fruit in its natural state contains low proportions of nutrients like EFAs, amino acids and antioxidants, they can now be extracted and concentrated to amounts suitable for human supplementation. When Bernard Lager of Wisconsin discovered commercial quantities of cranberry seed oil in 1992, he passionately worked to develop an

extraction method that would keep the integrity of these nutrients. After 12 years of development, Mr. Lager finally perfected an unprecedented and proprietary method of nutrient extraction.

Bernard's findings showed that these valuable life-sustaining nutrients could be separated, contained in a natural state (using no chemicals) and broken down so that the human digestive system could utilize these nutrients (made bio-available). He developed a cold processing method used to retain the original nutrient rich profile at unprecedented levels.

Because we process the FruitEssentials™ formulas with Bernard's revolutionary cold extraction technique, we maintain much of the original phytonutrient (plant nutritional) profile.

The process unlocks the sources of EFAs, vitamins, minerals, phytosterols, and amino acids in elevated levels when compared to traditional extraction practices. The method saves your body the work of breaking down the fruits and plants. Eating the fruits and plants in their fresh, organic state provides less than 5% of the vital nutrients supplied in the highly concentrated oil or powder done with this process.

The higher concentration of nutrients provided in these products would be equivalent to eating sizable amounts of the original foods...minus all the calories, carbs, and sugars you'd also have to ingest.

To better gauge the concentration of Prot-EFA's ingredients, let's scale the components to relative everyday objects. If a cranberry were the size of a beach ball, a seed would be the size of a golf ball, and the seed oil would be the size of a marble. It takes many marbles to fill a 4 oz. bottle, which would be about the size of a refrigerator. A full refrigerator would equal a gymnasium full of beach balls.

Omega-3 & 6 Essential Fatty Acids & Why Our Diets Lack Them

While most people know not all fats are bad, many are still confused as to what kinds are termed "good fats" and "bad fats." Essential fatty acids (EFAs) are commonly known as omega-3 and omega-6 and are categorized as polyunsaturated fats (this is how you'll see them listed on nutrition facts labels).

What makes them fall under the term essential is that, unlike other fats that we consume, our bodies cannot produce them. Therefore, we must rely on our diets as the source for these fats. Generally speaking, these fats are often termed "good fats."

Alpha-linolenic Acid (abbreviated ALA) is an omega-3 EFA and is important for many cellular functions.

Linoleic Acid (abbreviated LA) is an omega-6 EFA and is critical in your body for the proper production of hormones.

These vital nutrients have been traditionally found in fish and flax seed oils. New technologies in food processing are allowing commercial quantities of these and other phytonutrients to be extracted from fruit and other plant seeds. Cold processed fruit oils have high levels of a variety of these and other nutrients that are important for human consumption.

The omega-6 EFA is in more supply in the typical American diet than the omega-3 EFA. Science and the FDA are learning more about the benefits of increased omega-3 intake and we're beginning to read more and more about it in newspapers, magazines, journals, etc. Studies show that the ideal ratio of omega-3 to omega-6 should be 1:1, but our diets may have a ratio as high as 20:1 omega-6 to omega-3. This imbalance is linked to many of the illnesses Americans are experiencing.

Essential Fatty Acids:

- Help in preventing disease.
- Help produce and balance hormones.
- Are only available in our diets (not produced by our organs).

- Help increase the absorption of other vital nutrients like vitamins and minerals.
- Help promote nerve function.
- Are required for proper cell function in your body.
- Help promote healthy eyesight.

What Amino Acids & Complete Protein Really Do For Our Bodies

Most people know they need protein in their diets, but many associate it with body building or dieting such as seen with the Atkins craze. The importance of having the proper amounts of right types of protein in your diet extends far beyond these common beliefs. First of all, you must understand that amino acids are the building blocks of proteins.

Proteins provide the crucial building blocks in your body's tissues and organs. Dietary protein is broken down into just over 20 amino acids. Your body uses these amino acids as building blocks by reconstructing them into the thousands of specific proteins needed to support a host of bodily functions. Amino acids help regulate hormones, create enzymes, and assist in absorbing vitamins within the body. Your body, more specifically your liver, can produce many of the amino acids needed to survive.

Your body cannot, however, produce essential amino acids (EAAs). Just like the EFAs, adding the word essential means you need to get them from the food you eat. Many products in the Synerceuticals™ line contain numerous amino acids, including all of the essential amino acids.

There are 8 essential amino acids:

- Lysine
- Methionine
- Phenylalanine
- Threonine
- Tryptophan
- Isoleucine *
- Leucine *
- Valine *

* Branched Chain Amino Acids

These 8 EAAs are some of the 22 overall different amino acids. We'll

never ask you to take a test on this, but we have highlighted for you each of the 8 EAAs and what they do for your body:

Lysine helps maintain lean body mass. People on low meat or meat free diets may be deficient of this amino acid. It is used in the production of hormones, enzymes, and antibodies.

Methionine is responsible for energy production and is required for building muscle and breaking down fats in your body.

Phenylalanine helps in mood elevation and with neurotransmitter support.

Threonine helps your immune system produce antibodies. It also aids liver function and helps combat fatty liver.

Tryptophan is used to produce the neurotransmitter serotonin. It helps with weight loss and has been used for appetite reduction.

Isoleucine is one of the three branched chain amino acids (BCAAs). It helps regulate blood sugar levels and is needed to form hemoglobin.

Leucine is also a branched chain amino acid. It aids in the regulation of blood sugar and the growth and repair of muscle tissue.

Valine is the final BCAA. It is needed for the repair and growth of tissue.

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