



# *Berry Fiber, Unappreciated Supernutrient*



Cultivated highbush blueberries (*Vaccinium corymbosum* L.)  
A rich source of dietary fiber.

[follow the [Wikipedia](#) links]

**Polysaccharides** and **pectins** are synthesized by a berry as energy stores and structural support for growth.

They are as common to plant species as chlorophyll is to new green leaves of Spring.

We focus on polysaccharides mainly as sources of **soluble fibers** that provide a **prebiotic** function in the normal fermentation process of human digestion.

Browse this link for a **quick review of the human digestive system**, *click!*

*Why would we call prebiotic fiber a **supernutrient**?*

Simply because this fiber source has been granted four FDA-approved health claims for reducing the risk against some types of cancer or cardiovascular disease. No other food component has as many.

If you're interested enough in how the FDA writes this guidance, [browse here](#) to find the 4 fiber-related claims.

*All 12 claims presented are guides for good nutrition  
that can lower risk against diseases --  
get to know them and use them for yourself!*

Let's learn more about this under-appreciated value that berries and other good sources of dietary fiber can provide for our health.

### Fiber Fermentation and Prebiotic Nutrient Value

The process of intestinal fermentation involves action by [natural bacteria, sometimes called flora, residing in our large intestine](#) (primarily the colon).

These bacteria require soluble fiber as fuel and as sources for fermentation to produce valuable chemicals and health benefits.

Since the fiber serves as food for the bacteria already in the intestine, this is called a "prebiotic" nutrient value, meaning that before the bacteria can serve their main purpose in digestion -- producing enzymes that digest food -- they must be fed with a substrate they prefer (i.e. fermentable fibers). The main intestinal flora are bifidobacteria and lactobacilli that are essential for our health.



Berry skins and pulp contain pectins, cellulose and polysaccharides --  
all sources of dietary fiber.

## Digestive System Health

Possibly unlike any other organ, the digestive system serves two major functions for the body.

It has the obvious role of breaking down foods to allow nutrient absorption mainly from the small intestine into the general circulation where nutrients can be delivered throughout the body.

Secondly, the lower part of the digestive system - **the colon -- is the largest immune organ in the body.**

Consequently, what we eat has influence on both these functions, turning attention toward dietary practices that can significantly affect overall health.

*What are the components of the digestive system?*

Beginning with the stomach where food is prepared for nutrient absorption, the digestive system includes the principal organs for food transit - the small and large intestines. Organs contributing factors that help with food breakdown and nutrient absorption or transport are the pancreas, gall bladder and liver.



Rubus berries, high in dietary fiber

*What foods and nutrients support good digestive system health?*

Most people who are in good digestive health have normal body weight and do not regularly experience meal-related heartburn, constipation, diarrhea, nausea or stomach pain. Eating a nutritious diet is needed to maintain a healthy digestive system and may prevent and treat certain digestive diseases.

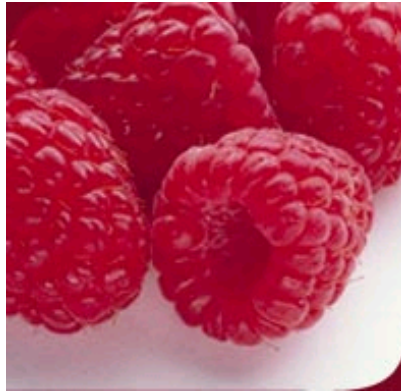
***A diet of whole foods is the simplest advice for maintaining good digestive health.***

Some foods are particularly beneficial for the digestive system, such as the **grains, whole wheat, oat bran and barley, which contain both insoluble and soluble (beta-glucan polysaccharides) forms of dietary fiber (see these discussed in the FDA health claims guidance at the link above).**

Beans, soy products, unprocessed nuts, berries and prunes are also considered great overall fiber sources.

It is important to: 1) limit intake of fats and highly processed, salted or over-cooked foods; 2) drink water, herbal tea or fresh or fortified fruit juice with each meal and snack; and 3) take the fiber additions to your diet slowly until your body adapts.

Regular exercise also is recommended by physicians.



Among common berries, none has a higher content of dietary fiber than red raspberries (about 12% by weight)

### *Soluble fibers and colon health*

Soluble fibers as from berry polysaccharides or oat **beta-glucans** are excellent substrates for colonic fermentation, a process yielding short-chain fatty acids (SFAs), such as butyric acid.

SFAs have valuable roles in human physiology, one of which is to provide a source of fuel for cells of the colon lining called colonocytes. Thus, by consuming fiber-rich plant foods, we not only gain the important nutrients provided by sources like berries and oats, but also we indirectly furnish a nutrient source specifically for the health of the colon.

As acids, creation of SFAs by fermentation raises acidity levels in the colon, a condition favoring mineral uptake across the colon wall and inhibiting mechanisms of colonic tumor development - an anti-cancer effect.

What are the most common digestive diseases?

A few of the most common diseases include

- peptic ulcer
- pancreatitis
- gallstones
- irritable bowel syndrome
- ulcerative colitis
- diverticulitis
- constipation

- colon cancer

Although the precise mechanisms of each of these diseases may vary, they are all in some way related to diet and may even be preventable by wise choice of foods promoting digestive health -- especially soluble prebiotic fiber.

***ARCHIVES*** ([click!](#))

*Pass this information on to a friend...*

Suggest a visit to the **[Berry Doctor Sign-in Page!](#)**

Dr. Paul  
The Berry Doctor

contact [The Berry Doctor](#)

Want to reprint an article? I have a wide variety of articles on berry nutrition and food antioxidants you can consider for your website or newsletter. I'm sure there's a perfect fit for you! [Please email me](#) and I'll be happy to give you some choices and the attribution line.

Privacy policy: I do not rent, sell, trade or share your email address with anyone, ever.

To change your email address: send a note with the new address to [The Berry Doctor!](#)

To unsubscribe: Click once on the "unsubscribe" link at the end of the email page you receive.

The fine print: This newsletter is Copyright© 2006-8 by The Berry Doctor

---