

The Many Benefits of Beta Glucans in Functional Foods

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Beta glucans are sugar molecules (polysaccharides), bound together as a sugar/protein complex. Baker's yeast, oat and barley bran, and maitake and lentinan mushrooms are naturally high in beta glucans.

Oat beta glucans help to:

- bind cholesterol and bile acids used to make cholesterol;
- reduce the elevation of blood sugar following a meal; and
- activate the immune system.

Most everyone is aware that oats, and especially oat bran-soluble fibers, help lower cholesterol. However, the polysaccharide most responsible for this lipid-lowering effect is oat beta glucan!¹

Oat bran, being high in soluble fiber, also slows down the digestion and absorption of sugar, thereby lowering the glycemic load of a food. Oat beta glucan may have an insulin-sensitizing effect as well. This is important, as insulin resistance is a major preliminary factor in obesity, diabetes and heart disease.²

Perhaps the most exciting but least well-known health benefit of beta glucans has to do with their salubrious effect on the immune system.³ Beta glucans stimulate white blood cells called macrophages (big eaters) into action. There are actually locks (signal receptors) displayed by immune cells into which the beta glucan keys (lectins) fit, activating the macrophages to do their job - "eat up" the cellular bad guys and their debris!

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Indeed, beta glucans both:

- stimulate the production of immune cells, and
- trigger a cascade of immune events, thereby boosting immune response and overall resistance.

Of note, there appears to be a synergistic relationship between beta glucans and vitamin C. In Japan, extracts containing various types of beta glucan, often combined with vitamin C, have reportedly been used successfully to assist in treating cancer patients for the last 20 years. Therefore, expect to see more of oat beta glucans on the labels of some of the more functional food products.

References

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