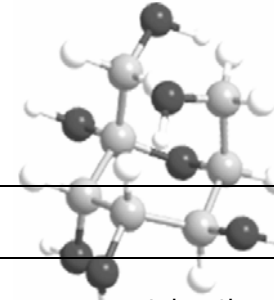


## D-MANNOHEPTULOSE – sugar it is in medicine and alternative health



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**You can do well for your body simply by eating foods containing D-MANNOHEPTULOSE and their supplements.**

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Current research suggests preventive and health beneficial effects of a rare seven-carbon sugar called D-Mannoheptulose commonly found in avocado (*Persea americana*).<sup>1,2,3</sup>

The unusual ability of this naturally occurring sugar has been researched since more than sixty years, whereby the focus has been lately on the inhibition of insulin secretion (hypoglycemia), obesity and anti-cancer activity of Mannoheptulose.<sup>4,5,6,7</sup>

It was shown that D-Mannoheptulose possesses the physiological ability to cause inhibition of insulin secretion in humans, thereby likely inducing "instant diabetes" (low insulin, hence higher blood sugar). It is improbable that blood sugar levels in normal persons would be affected by average consumption; however, diabetics should consume avocado, or to be precise D-Mannoheptulose, cautiously.<sup>4,6,7</sup>

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### What does this mean?

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If you are suffering from hypoglycemia (low blood sugar levels), which is caused by high insulin levels, D-Mannoheptulose qualifies as an excellent food supplement, like avocados as a food source.

(Note\*: There are other factors in hypoglycemia such as impaired glucose absorption (insulin resistance), pancreas insufficiency, hyperinsulinism, nutrition ional influences and more...)

Since the excess production of insulin is also involved in obesity, there is great interest in D-Mannoheptulose as a dietary supplement.

Other researchers investigate anti-cancer effects of D-Mannoheptulose through specific inhibition of an enzyme called glucokinase responsible for glycolysis reducing glucose uptake by tumor cell enzymes, hence influencing tumor growth.<sup>6,7</sup>

In this context some interesting read by Patrick Quillin, PHD, RD, CNS entitled "[Cancers sweet tooth](#)" (click to read fulltext).

"Limiting sugar consumption may not be the only line of defense. In fact, an interesting botanical extract from the avocado plant (*Persea americana*) is showing promise as a new cancer adjunct. When a purified avocado extract called D-Mannoheptulose was added to a number of tumor cell lines tested in vitro by researchers in the Department of Biochemistry at Oxford University in Britain, they found it inhibited tumor cell glucose uptake by 25 to 75 percent, and it inhibited the enzyme glucokinase responsible for glycolysis.<sup>6</sup> It also inhibited the growth rate of the cultured tumor cell lines. The same researchers gave lab animals a 1.7 mg/g body weight dose of D-Mannoheptulose for five days; it reduced tumors by 65 to 79 percent.<sup>14</sup> Based on these studies, there is good reason to believe that this avocado extract (D-Mannoheptulose) could help cancer patients by limiting glucose uptake of tumor cells."

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### Synthesize Mannoheptulose or extraction from Avocado?

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The reason for preferred synthesis is obvious – the extraction of D-Mannoheptulose from avocado is inefficient and one would need large amounts of avocado (*Persea americana*) all year round.<sup>2,8-15</sup> The purity of an extract is rather lower compared to synthesis. Our synthetic D-Mannoheptulose is crystalline and guaranteed of highest purity. There is no evidence whatsoever, that extracted D-Mannoheptulose shows better or higher activity than manufactured one.

These data are based on informations provided from research facilities purchasing our Mannoheptulose for testing (tissue culture and animal). So far the literature solely mentions avocado as a source, as it has been the main source for D-Mannoheptulose in the past. **GLYCOTEAM is changing this.**<sup>14</sup>

Please note D-Mannoheptulose for human consumption has to be manufactured under GMP standards. Please inquire if you require GMP manufactured D-Mannoheptulose.

In 1939 a synthetic pathway was published to produce this unusual seven-carbon sugar (D-Mannoheptulose), however most likely PERSEITOL (a molecule very similar) was obtained as the main product.<sup>3</sup>

This statement is based on the fact that the lack of analytical methods such as nuclear magnetic resonance (NMR) at that time did not permit a clear cut identification of the product. GLYCOTEAM developed a straight forward synthetic pathway and is currently the only manufacturer of D-Mannoheptulose.<sup>14</sup>

We are supporting non-commercial research facilities with special rates in order to exploit its activity.

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