

# Supplements for Diabetes

Compiled by Heidi Peterson, ND

The following nutrients and foods are meant to be a guide for natural ways to lower blood sugar for those with diabetes. They are not prescribed to you.

Before adding any supplements to your daily routine, talk with your health care provider.

| Supplement                                       | Dose  | Diabetes Indication   | Notes/Other uses   |
|--|---|---|--|
| <b>Fiber</b><br>(combined soluble and insoluble) | 30-50 grams   | *Reduces blood sugar levels<br>*Decreases appetite<br>*Slows digestion<br>*Lowers insulin<br>*Lowers lipids   | *Chia, psyllium, flax, oat bran best for appetite control<br>*Promotes detox<br>*For a great recipe, see the "Life Changing Loaf of Bread" |
| <b>Apple Cider Vinegar</b>                       | 2T 1-3 x day  | *Lowers glucose levels<br>*Activates genes that initiate the enzymes' ability to break down fat<br>*Helps you feel full   | *Promotes higher levels of good bacteria in their guts, such as Lactobacillus and Bifidobacteria   |
| <b>Cinnamon Cassia</b>                           | 1- 6 gm/day   | *Reducing fasting plasma glucose concentration<br>*Reduces A1C<br>*Reduces postprandial hyperglycemia<br>*Reduce lipids<br>*Slows emptying of stomach<br>*Reduces formation of Advanced Glycosylated Endproducts (AGEs) | *Decreases inflammation by reducing production of inflammatory cytokines.  |
| Green Tea  | 200 mg/day extract or more<br>6-9 cups of tea           | *Catechins suppress pancreatic beta-cell damage from cytokine<br>*Reduces serum glucose and reduces hepatic glucose production  | *Anti-carcinogenic<br>*Reduces oxidative damage<br>*Protects liver   |
| <b>Fish Oil</b>                                  | 1-9 grams per day<br>Eat oily fish, especially sardines | *Reduces cholesterol and triglycerides<br>*Aids in insulin sensitivity<br>*Protect against neuropathy   | *Antidepressant<br>*Dry Skin<br>*Reduces inflammation  |

\***Bolded supplements are highly recommended.**



|   |   |  |   |
|---|---|--|---|
| Vitamin K2  | 100-200 mcg/day   | *Increased insulin sensitivity   | *Protects against osteoporosis  |
| R-ALA   | 600 mg if R-ALA<br>1200 mg if ALA                                   | *Treats neuropathy<br>*Acts as insulin mimetic<br>*Prevents glycosylation of proteins  | *Liver protection   |
| B12   | 1000 mcg per day<br>(Some B12 is injected)                          | *Neuropathy  | *Optimal lab levels over 600pg/mL<br>*Metformin can cause deficiency  |
| <b>Berberine</b><br>(From mahonia, Oregon grape root) | 300-500 mg<br>2-4 x day   | * Increases insulin sensitivity<br>*Equaled performance of Metformin with A1C, fasting and post-meal insulin in some studies<br>*Increases the expression of insulin receptors | *Surpassed Metformin for lowering total cholesterol and TG in some studies<br>*Can cause bowel Irritation<br>*Can be expensive<br>*Treat overgrowth of Candida and other bacteria in GI tract |
| <b>Curcumin</b><br>(Active ingredient in turmeric)    | 200 -600 mg<br>3 x day  | *Reduces Alzheimer's in diabetic patients<br>*Reduces glucose, A1C, insulin resistance   | *Lowers inflammation<br>*Reduces hepatomegaly, and hepatic inflammation   |
| Bioflavonoids, vitamin C complex                      | 2-3 caps<br>1-2 x day<br>100-400 mg/day<br>Vit C<br>Max 2000 mg/day | *Inhibits aldose reductase<br>*Decrease in leakiness of blood vessels as seen with retinopathy<br>*Promotes insulin secretion  | *Can raise blood sugar when intake is too high  |
| <b>Zinc</b>   | 30 mg per day   | *Involved in insulin synthesis, secretion, utilization   | *High blood sugar can cause loss of zinc in urine: 25-100 mg/day  |
| Vanadyl Sulfate                                       | 4 mcg-10 gm   | *Insulin mimetic   |   |
| Vitamin D3  | 1000-2000 IU or based on labs                                       | *Neuropathy<br>*Affects proper glycemic metabolism   | *Common deficiency<br>*Optimal levels are 60-80ng/mL  |
| <b>Chromium</b>                                       | 200-1200 mcg/day  | *Binds to insulin receptor to activate insulin   |   |

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|   |                                    |   |   |
|---|------------------------------------|---|---|
| <b>NAC</b><br>(N-Acetyl<br>choline)     | Dose:<br>600-1800mg/day            | *Reduces insulin resistance<br>*Stops oxidative damage<br>caused by high blood sugar<br>*Protects pancreas, liver,<br>eyes, kidneys, nerves, from<br>diabetic damage<br>*Helps reverse diabetic<br>neuropathy | Supports Detox  |
| Taurine                                 | 1000-1500<br>mg/day                | *Prevent oxidative damage<br>caused by high glucose<br>levels<br>*Protects kidneys from<br>apoptosis due to<br>hyperglycemia  | *Works well with NAC                                  |
| Inositol                                | 2-4 gram 2x day                    | *Increases insulin sensitivity  | *PCOS, Infertility, Anxiety<br>*A Vitamin B component |
| <b>Benfotiamine</b>                     | 150 mg 3 x day                     | *Inhibits the formation of<br>advanced glycation end<br>products (AGEs) which<br>cause:<br>- Diabetic neuropathy<br>- Retinopathy Peripheral<br>vascular disease<br>- Nephropathy                             | Fat-soluble form of vitamin<br>B1                     |
| Acetyl-L-<br>carnitine                  | 500-2000<br>mg/day                 | *Aids in fat metabolism<br>*Lowered LDLs and raised<br>HDLs in Type 2 DM<br>*Improves pain, nerve<br>regeneration and vibratory<br>perception in diabetic<br>neuropathy                                       |   |
| Fenugreek                               | 10-100 gm dose<br>in divided doses | *Improved glucose<br>tolerance<br>*Reduced blood sugar<br>levels  | *Defatted portion of the<br>whole seeds               |
| <b>Gymnema<br/>Sylvestre<br/>leaves</b> | 400-2400 mg                        | *Regenerates beta cells in<br>pancreas producing insulin<br>*Increased insulin secretion<br>*Enhances insulin sensitivity<br>*Reduces glucose levels  | *Impairs ability to taste<br>sweets                   |

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Provided by Julia Hanfling, RD, CDE for the Hawthorne Diabetes Group. [www.3peachesnutrition.com](http://www.3peachesnutrition.com)



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|---|---------------------------|---|---|
| Bilberry/<br>Blueberry<br>(Vaccinium)       | 160 mg extract<br>or more | *Reduces risk of diabetic<br>retinopathy  | *Low glycemic food                            |
| American<br>Ginseng<br>extract              |                           | *Reduces blood sugar<br>*Reduces body weight<br>*Improves mood<br>*Improves A1C         | *Addresses fatigue                            |
| Momordica<br>charantia<br>(bitter<br>melon) |                           | *Improves glucose tolerance<br>*Decreases A1C levels<br>*Seems to be insulin<br>mimetic | *Powder is not as effective<br>as fresh fruit |

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