Chromium Plus

Clinical Applications

- Supports Healthy Blood Sugar Levels*
- Promotes Insulin Sensitivity*
- Provides Important Minerals and Antioxidants for Optimal Metabolism*

Chromium Plus *is a synergistic blend of nutrients formulated to support blood sugar regulation and insulin sensitivity.* Each one-capsule serving provides a clinically relevant 300 mcg of chromium nicotinate along with vanadium, taurine, zinc, and other nutrients that play a role in glucoregulation. The blend is delivered in a base of cinnamon powder, as cinnamon is recognized for its beneficial influence on blood sugar levels.* All minerals in this product are provided as amino acid chelates which are better absorbed and retained in the body than non-chelated mineral salts.*

All Absolute Health Formulas Meet or Exceed cGMP Quality Standards

Discussion

The foundational ingredient in this product is chromium nicotinate. Chromium is well-regarded for aiding in glucoregulation, primarily by way of enhancing insulin sensitivity.[1,2] The effects of chromium on fasting blood glucose and hemoglobin A1c are so dramatic that this mineral has been called “an inexpensive, convenient adjunct for the treatment of diabetes.”[3] Changes in diet and lifestyle are essential for improving blood glucose and insulin dynamics particularly in those with type 2 diabetes or metabolic syndrome, but chromium supplementation has been shown to be beneficial for reducing HbA1c, glucose, insulin, and cholesterol among type 2 diabetics even in the absence of these changes.[4]*

Spotlight on Chromium The foundational ingredient in this product is chromium nicotinate. Chromium is well-regarded for aiding in glucoregulation, primarily by way of enhancing insulin sensitivity.[1,2] The effects of chromium on fasting blood glucose and hemoglobin A1c are so dramatic that this mineral has been called “an inexpensive, convenient adjunct for the treatment of diabetes.”[3] Changes in diet and lifestyle are essential for improving blood glucose and insulin dynamics particularly in those with type 2 diabetes or metabolic syndrome, but chromium supplementation has been shown to be beneficial for reducing HbA1c, glucose, insulin, and cholesterol among type 2 diabetics even in the absence of these changes.[4]*

Glucocorticoid drugs are known to induce hyperglycemia and have even led to “steroid-induced diabetes.” Chromium supplementation has been shown to reverse this effect, with affected patients showing reductions in fasting blood glucose from 250 mg/dl to less than 150 mg/dl.[5] Patients receiving chromium supplements (600 mcg/d) were able to reduce their hypoglycemic drugs by 50%.[5]

The estimated safe and adequate daily dietary intake for chromium for adults is 50-200 mcg.[6] However, modern diets typically provide less than 60% of the bare minimum,[7] and this does not account for very high-carbohydrate diets potentially increasing the need for chromium as evidenced by a diet high in simple sugars increasing chromium excretion by nearly 300%.[8]

Vanadium The trace mineral vanadium has beneficial effects on blood glucose control.[9] No overt vanadium deficiency syndrome has been identified in humans, but based on its biochemical properties researchers believe vanadium is likely an essential trace nutrient.[10] Vanadium supplementation has been shown to improve glucoregulation and insulin resistance in human and animal models of both type 1 and type 2 diabetes.[11] The main mechanism of action of vanadium seems to be that it enhances and potentiates the action of insulin.[11-15] It improves insulin sensitivity in liver and muscle cells while inhibiting some of the enzymes involved in gluconeogenesis, such as phosphoenolpyruvate carboxykinase (PEPCK) and glucose-6-phosphatase (shown in animal models and in vitro).[16,17] Vanadium also activates several key elements that regulate insulin signaling, such as tyrosine phosphorylation of the insulin receptor, and phosphatidylinositol 3-kinase (PI3K). In a related mechanism, vanadium inhibits protein tyrosine phosphatases, which are thought to downregulate insulin signaling.[18]

Zinc Zinc supports healthy blood sugar regulation. One study showed that lower consumption of dietary zinc and low serum zinc levels were associated with an increased prevalence of type 2 diabetes, coronary artery disease, and several of their associated risk factors including hypertension, hypertriglyceridemia and other factors suggestive of insulin resistance.[20] Zinc supplementation may assist the pancreas in manufacturing insulin, support proper function of cell membrane insulin receptors, and play a role in insulin signaling transduction.[21,22] Zinc is also important for a healthy pregnancy: zinc supplementation in women with gestational diabetes resulted in greater improvement to the metabolic profile compared to placebo (lower fasting glucose, insulin and HOMA-IR, and a smaller increase in triglycerides).[23]

Manganese Normal insulin production and secretion is manganese-dependent, and animals raised on manganese-deficient diets have poor glycemic control and impaired carbohydrate metabolism.[29,30] Chronic hyperglycemia and diabetes are associated with high levels of oxidative damage and mitochondrial dysfunction.[31-34] Manganese superoxide dismutase (MnSOD) is a crucial antioxidant enzyme, particularly in mitochondria. (MnSOD has been called “guardian of the powerhouse” owing to its critical mitochondrial free radical scavenging role.35) An adequate supply of manganese is essential for the synthesis of MnSOD, which may help reduce oxidative damage to these critical organelles.

Taurine Taurine is best known for its roles in liver detoxification and producing bile. Beyond these, taurine has natural diuretic properties and may be helpful for conditions involving tissue swelling or fluid accumulation, such as hypertension, congestive heart failure or coronary heart disease. Considering cardiovascular disease is the leading cause of death among type 2 diabetics, taurine supplementation may be helpful in these situations. Taurine may also support cardiovascular health by reducing carotid intima-media thickness (CIMT), an effect demonstrated in a double-blind controlled trial in which 12 weeks of taurine supplementation resulted in significant reductions in CIMT compared to placebo in subjects with pre-hypertension. Taurine has also favorably affected blood pressure in subjects with borderline hypertension and prehypertension.

***These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**

Absolute Health
7350 SW 60th Ave., Suite 2
Ocala, FL 34476
www.AbsoluteHealthOcala.com

Chromium Plus

Supplement Facts

Serving Size 1 capsule

Amount Per Serving		% Daily Value
Vitamin D (as Cholecalciferol)	2.5 mcg (100 IU)	13%
Zinc (as Zinc Bisglycinate Chelate)	10 mg	91%
Manganese (as TRAACS® Manganese Bisglycinate Chelate)	1 mg	43%
Chromium (as TRAACS® Chromium Nicotinate Glycinate Chelate)	300 mcg	857%
Taurine	500 mg	*
Vanadium (as TRAACS® Vanadium Nicotinate Glycinate Chelate)	100 mcg	*

*Daily Value not established.

Other Ingredients: Cellulose (capsule), cinnamon powder, vegetable stearate.

References

Directions

Take 1 capsule per day with a meal, or as recommended by your health care professional.

Caution

If you are pregnant or nursing, consult your physician before taking this product.

Does Not Contain

Wheat, gluten, soy, corn, dairy products, fish, shellfish, peanuts, tree nuts, egg, artificial colors, artificial sweeteners, or preservatives.