





Symptoms of Insulin Resistance

Belly Fat

Low Energy (especially after meals)

Hungry (even after a full meal)

Mid-afternoon Energy Slump

Difficulty Focusing

Cranky and Irritable if Meal Missed

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Nutritional Causes of Insulin Resistance

- ✓ Omega-3 fat DHA deficiency in the cell membrane
- ✓ Elevated omega-6 to omega-3 fatty acid ratio in cell membrane
- ✓ Trans fats in cell membrane
- ✓ Deficiencies of chromium, magnesium, zinc, B vitamins, boron, and lithium
- ✓ Eating high-glycemic meals, snacks, and sweet drinks
- ✓ Insufficient protein

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Overview of Insulin Resistance Nutrition

- ✓ Get nutrients in place
- ✓ Carb avoidance: Keep sugars below 110
- ✓ Allergen avoidance: Decrease inflammation
- ✓ Foods that aid in insulin sensitivity
- ✓ Herbs that assist in blood sugar management
- ✓ Nutrients that help keep blood sugars balanced
- ✓ Time meals for optimum insulin/growth hormone balance

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Introductory Food Guidelines

❑ A collection of PDF documents related to introductory diet and nutrition ideas. Add vs. take away at first.

- Shopping Guidelines
- Hydration
- Digestion Strategies
- Greens
- Beverages
- Omega-3 rich foods: Chia, Hemp, etc.



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Nutrients

Get familiar with the recommended supplements to **thwart sugar and carbohydrate cravings** as these supplements contribute to the repair of insulin receptors and the reduction of carbohydrate cravings

- Chromium
- Magnesium
- DHA



****B4 Be Gone Supplement Resource Guide PDF**



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Chromium Mechanism in Sugar Metabolism

Immediate supplementation with chromium and magnesium is necessary to break the vicious cycle of insulin resistance.

800 mcg per day – with meals for best result

- ✓ Chromium is stored in liver between meals and released in response to insulin secretion
- ✓ Chromium promotes the binding of insulin to the cells
- ✓ Elevated and prolonged insulin curves allow excessive excretion of chromium, "strip-mining" it from the system
- ✓ Hyperinsulinemia promotes chromium excretion, and chromium deficiency promotes hyperinsulinemia



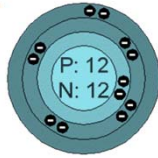
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Magnesium Mechanism in Sugar Metabolism

Immediate supplementation with chromium and magnesium is necessary to break the vicious cycle of insulin resistance.

Magnesium 400 – 800 mg per day

- ✓ Insulin acts as a "magnesium diuretic" and promotes excessive loss
- ✓ Magnesium is essential for the cellular response to insulin binding
- ✓ Hyperinsulinemia causes magnesium deficit, and magnesium loss promotes insulin resistance



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Replenish Nutrients As Needed

- ✓ **DHA:** 350-500 mg per day, omega-3 fat
- ✓ **Green leafy vegetables:** minerals, B-vitamins, antioxidants
- ✓ **Sea vegetables:** minerals and omega-3 fats
- ✓ **Chia seeds, flax seeds, hemp seeds:** omega-3 fats
- ✓ **Pumpkin seeds:** zinc
- ✓ **Brazil nuts:** selenium
- ✓ **Protein powder:** protein deficiency can be due to dietary inadequacy OR impaired digestion
- ✓ **Small quantity of lean organic, free-range animal protein or fish:** if you prefer versus protein powder or used in addition



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Optimize Levels of Nutrients

"Supplement Checklist for Improving Insulin Sensitivity" PDF

- ✓ **Vitamin C:** 1000 mg x 3 or to bowel tolerance (see "Vitamin C Calibration" instructions)
- ✓ **Vitamin D3:** For extra support, consider getting your Vitamin D tested -- ideal range is 75 to 100 Supplement with Vitamin D3 as needed: 1000 IU to 20,000 IU per day
- ✓ **Vitamin B complex:** For overall energy and hormone support
- ✓ **Magnesium:** Review "Magnesium Loading" document to ensure adequate magnesium intake



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Foods To Trash: Strictly For First 2 Weeks – and Ideally for 30 Days or Longer!

- ✓ High glycemic carbohydrates
- ✓ Processed fats, trans fats, oxidized fats, heated fats
- ✓ Top allergens and all known allergens
- ✓ Foods and combinations that raise insulin but not glucose
- ✓ Commercially grown food



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Break the Vicious Cycle of High-Glycemic Carbohydrate Addiction

- ✓ High-glycemic carbs promote excess insulin.
- ✓ Normal cells adapt to the high levels by “turning off” and thus require a very large amount of insulin to open up.
- ✓ High insulin leads to hypoglycemia.
- ✓ Hypoglycemia leads to cortisol and/or adrenaline spikes.
- ✓ Adrenaline and cortisol spikes promote craving for high-glycemic carbs.



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Eliminate High-Glycemic Carbs and Processed Fats


- ✓ No sugar or relatives. Alternatives: stevia, xylitol, erythritol (**Zero**), Lo Han, **Lakanto** – small amounts as tolerated
- ✓ No flour: crackers, pasta, bread
- ✓ No grains except possibly quinoa if glucose tested and it is normal
- ✓ No legumes unless glucose tested and normal curve
- ✓ No potatoes (sweet potatoes, yam, and squash may be included if glucose testing says okay)
- ✓ No bananas, mangoes, papaya, and other high sugar fruits
- ✓ No dried fruit or fruit juice
- ✓ No heated oils, trans fats
- ✓ Only low-glycemic fruits in small quantities (if tolerated based on glucose readings)



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Balance Omega-3 and Omega-6 Fats; Avoid Oxidized Fats


- ✓ Oxidized fats damage insulin receptors
- ✓ Ideally no oils at all; just whole food fats
- ✓ No margarine, mayonnaise
- ✓ No corn oil, soybean oil, or vegetable oil of any kind
- ✓ Only oils allowed in small to moderate amounts are olive, coconut (can be lightly heated - although not ideal), or cold-pressed flax oil
- ✓ Whole food fats that enhance omega-3 status: chia, coconut, flax, hemp, walnut (see Omega 3/6 chart)



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Glucose Balancing Beverages

- ✓ A.M. Gut Rejuvenator Drink
- ✓ Blended Green Drink (also called “Green Smoothies”)
- ✓ Green Drinks
- ✓ Chia Energy Drinks
- ✓ Flavored Water
- ✓ Protein Shakes



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Foods and Herbs to Manage Glucose Levels - Resources

- ✓ *Omega-3 and Omega-6 Content of Common Foods Chart:* PDF and Excel Spreadsheet Versions
- ✓ *Chia Seed Nutrition Chart*
- ✓ *Foods That Improve Insulin Sensitivity*
- ✓ *Effects of Food on Glucose and Insulin*
- ✓ *How the Glycemic Index of Foods are Measured*
- ✓ *Herbs Reported to Restore Insulin Sensitivity*
- ✓ *Supplement Checklist For Improving Insulin Sensitivity*
- ✓ *Magnesium Loading*
- ✓ *Vitamin C Calibration*
- ✓ *Food Sources of Potassium*
- ✓ *EWG Pesticide Guide: Dirty Dozen and Clean 15 Lists*



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Organic Food as Much as Possible

According to Dr. Gabriel Cousens, "There is a Cure for Diabetes."
Pesticides may damage insulin receptors.

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Foods That Improve Insulin Resistance

- ✓ Broccoli
- ✓ Avocado
- ✓ Alfalfa
- ✓ Blueberries
- ✓ Greens
- ✓ Brussels sprouts
- ✓ Citrus peel extract
- ✓ Turmeric
- ✓ Stevia
- ✓ Bitter melon
- ✓ Prickly pear or Nopal cactus – fresh or capsules
- ✓ Cinnamon
- ✓ Cardamom
- ✓ Ginger
- ✓ Algae and seaweed

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Foods That Improve Insulin Resistance: Mechanisms

- ✓ **Jerusalem artichoke:** Inulin
- ✓ **Cabbage:** B. oleracea – antioxidants
- ✓ **Cucumber:** Substance needed by the beta cells of the pancreas to produce insulin
- ✓ **Garlic and onion:** Sulfur
- ✓ **Carob:** Pinitol

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Herbs That Restore Insulin Sensitivity

- ✓ **Fenugreek:** Lowers insulin and triglycerides and increases HDL
- ✓ **Cinnamon:** Enhances insulin receptor sensitivity
- ✓ **Maitake Mushroom:** Improves sensitivity and lowers sugar, insulin, and triglycerides
- ✓ **Bitter Melon:** Lowers both insulin and triglycerides
- ✓ **Basil:** Improves insulin sensitivity
- ✓ **Nopal Cactus:** Mechanism not fully understood -- thought to improve insulin sensitivity and slow absorption of glucose through the intestinal wall
- ✓ **Ginger:** Increases insulin sensitivity and decreases inflammation



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Other Herbs: Gymnema Sylvestre

- ✓ Touted as a good herb for reducing blood sugar
- ✓ Slows absorption of glucose
- ✓ Increases insulin
- ✓ Boosts pancreatic beta cells
- ✓ Probably best for Type 1 Diabetes and end stage Type 2 Diabetes
- ✓ May not be good for people with insulin resistance



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Other Herbs: Ginseng


- ✓ Decreases blood sugar
- ✓ No effect on serum lipids
- ✓ Theorized that the reduction in glucose is by slowing intestinal absorption
- ✓ Might also raise insulin
- ✓ Awesome for adrenals so can indirectly improve insulin resistance
- ✓ Be careful in advanced insulin resistance



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Foods to Eat for 30 Days

- ✓ Vegetables – raw or cooked: unlimited
- ✓ Blueberries, green apple, and grapefruit only if they can be eaten, with glucose maintained ≤ 110
- ✓ Raw nuts, preferably soaked and rinsed
- ✓ Coconut
- ✓ Raw seeds
- ✓ Daily omega-3: chia, flax, hemp
- ✓ Cold water fish and wild game or organic free-range meat if not vegetarian and not allergic




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Foods to Test Then Eat Cautiously for 30 Days

- ✓ Low sugar, high-water content fruits... test them! No more than 1 serving per day if tolerated
- ✓ Legumes: some people tolerate, others do not – test!
- ✓ Starchy seeds like quinoa and buckwheat... best to avoid at least for the first two weeks.

****Test using 5 or 6 hour glucose tolerance test: glucose never exceeds 110 and never dips below starting value.**



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Meal Planning: Breakfast Options

- ✓ Gut Rejuvenator in AM upon awakening
- ✓ Green protein drink within an hour
- ✓ Chia porridge with coconut
- ✓ Chia drink
- ✓ Green smoothie (with or without fruit -- test)
- Breakfast entrée from B4 Be Gone

Greens, chia, and coconut are important

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Meal Planning: Lunch and Dinner Options

- ✓ Blended soup or vegetable rich soup (raw or cooked) one or both meals. Include a healthy fat.
- ✓ Salad with dressing – containing whole foods fats, preferably, low oil.
- ✓ Vegetable dish (raw, cooked, or both).
- ✓ Protein source -- one or both of the following:
 - Raw vegan veggie/nut/seed pat , dehydrated carb replacement. Can also use nuts or seeds in salad or as a dressing.
 - Lean, organic, free-range meat, deep ocean fish, or wild game (up to 3 ounces).


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Meal Planning: Dessert Options

- ✓ Desire for sweets after a meal will take a while to reverse.
- ✓ Low-glycemic desserts in *B4 Be Gone Recipe Collection* aid the transition.
- ✓ Make a batch and keep in freezer or refrigerator for curbing cravings.
- ✓ Preferably high omega and sweetened with low-glycemic sweeteners

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Snack Attack Strategy

- ✓ **Step 1:** Tune into the sensation.
- ✓ **Step 2:** Differentiate hunger from thirst.
- ✓ **Step 3:** Satisfy hunger with blood sugar-friendly foods.



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Snack Attack Approved Foods

- ✓ *Green water
 - ✓ *Green juice – no fruit except lemon or lime
 - ✓ *Water with 1 tablespoon green powder, flavored to taste awesome
 - ✓ *Water with 1 tablespoon green powder and 1 serving protein powder
 - ✓ *Chia Energy Drink with or without greens and/or protein powder
 - ✓ Vegetable sticks by themselves or with a raw food dip (dairy-free, gluten-free, whole food)
 - ✓ An ounce of raw nuts or seeds
 - ✓ Raw crackers or bread made from vegetables, nuts, and seeds
- *16 - 32 ounces is a good serving size for beverages.



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Meal Timing

- ✓ **No snacking:** prolonged insulin curves or more frequent insulin spikes plus decreased leptin promote obesity.
- ✓ **No getting famished,** weak, or jittery.
- ✓ **No eating at night:** it increases insulin and decreases growth hormone and leptin.
- ✓ **No high carbohydrate breakfast:** it causes a premature spike in leptin and food cravings.
- ✓ **Eat protein within an hour of waking:** it promotes growth hormone and regulates insulin.
- ✓ **Gradually increase** meal spacing.



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Tracking is Critical

- ✓ Food diary, including amounts and preparation (i.e., raw, steamed, roasted)
- ✓ Glucose before and after meals
- ✓ Pulse before and after meals
- ✓ Degree of hunger
- ✓ Stress level and emotional state
- ✓ Digestion, including bowel movements
- ✓ Discomforts
- ✓ Anything else



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