



THE BREAKFAST ENERGY BAR

WHOLE FOOD INGREDIENTS FOR A HEALTHY BOOST TO YOUR DAY

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DATES

Providing 18 grams of easy-to-digest carbohydrate energy, this fruit is an excellent whole food fuel option before, during, and after workouts. Furthermore, as the date matures, levels of anti-bacterial compounds called polyphenols have been shown to increase thereby kicking in some immune-benefit to boot.

ALMONDS

According to recent research, beyond providing a hefty 6g of protein and 4g of fiber per ounce, almonds, a tree nut, may help improve intestinal health when consumed daily over 6-weeks by increasing levels of healthy bacteria-bifidobacteria and lactobacilli-in the gut.

HONEY

Produced by honey bees using nectar from flowers, honey provides 17 grams of easy-to-digest carbohydrate energy per tablespoon along with a healthy cocktail of vitamins and minerals, making it a popular fuel choice for before, during, and after workouts.

EGG WHITE PROTEIN

Eggs have long been known as an excellent high-quality source of protein, providing all the essential amino acids that are used by the body as building blocks for the synthesis of new proteins, including muscle. Daily protein recommendations range from 0.8g to 2.0g/kg body weight daily with levels in the 1.2-2.0 g/kg range targeted towards athletes to support increased protein turnover.

MACADAMIA NUTS

Derived from the macadamia tree, macadamia are rich in monounsaturated fatty acid (MUFA). Research has demonstrated diets rich in MUFA to lower total and LDL (bad) cholesterol while increasing cardio-protective HDL cholesterol levels in the blood.

GRANOLA

Simply prepared with gluten-free oats and a sprinkling of honey and canola oil, granola provides a sweet addition to any meal or snack. Oats contain beta glucan, a complex chain of indigestible sugar molecules that, in science, has been shown to help significantly lower total and LDL (least desirable) cholesterol levels, thereby reducing overall cardiovascular risk.

COCOA

Derived from the beans of the Theobroma cacao tree, cocoa is particularly rich in dietary compounds called flavonoids of which have been shown to elicit cardioprotective effects through their antioxidant activity.

CINNAMON

A common spice used in cooking, cinnamon contains powerful plant-based polyphenols that function as antioxidants. A number of studies have shown regular consumption to help control blood sugar levels and improve insulin sensitivity.

GREEN TEA

Derived from the leaves of the Camellia sinensis plant, green tea contains plant compounds called catechin-polyphenols and caffeine that initiate an increase in thermogenesis (aka energy expenditure) and fat oxidation (breakdown of fat for energy) through its impact on the sympathetic nervous system.

FLAXSEEDS

Consisting of 1/3 oil and 2/3 fiber, flaxseed, whose scientific name *Linum usitatissimum* appropriately means "most useful" packs quite the nutritional punch. Its oil is a rich source of essential fatty acids, especially alpha linolenic acid (ALA) omega-3 fatty acid, and the fibrous byproduct of the seed is chock-full of vitamins and minerals as well as a group of chemical compounds called lignans, all attributes that have been shown to enhance cardiovascular health.

Society for General Microbiology. "Date syrup shows promise for fighting bacterial infections." ScienceDaily. ScienceDaily, 30 March 2015. www.sciencedaily.com/releases/2015/03/150330213949.htm.

Pandey KB, Rizvi SI. Plant polyphenols as dietary antioxidants in human health and disease. *Oxidative Medicine and Cellular Longevity*. 2009; 2(5):270-278.

Liu Z, Lin X, Huang G, Zhang W, Rao P, Ni L. Prebiotic effects of almonds and almond skins on intestinal microbiota in healthy adult humans. *Anaerobe*. 2014; 26: 1-8.

O'Neill CE, Fugère VL, 3rd, Nicklas TA. Tree Nut consumption is associated with better adiposity measures and cardiovascular and metabolic syndrome health risk factors in U.S. Adults: NHANES 2005-2010. *Nutrition Journal*. 2015; 14:64.

Ajibola A, Chaturvedi AP, Erlwanger KH. Nutritional values of natural honey and its contributions to human health and wealth. *Nutrition and Metabolism*. 2012; 9:61.

Phillips SM, Van Loan LJ. Dietary protein for athletes: from requirements to optimum adaptation. *Journal of Sports Science*. 2011; 29(Suppl):S29-S38.

American College of Sports Medicine. American Dietetic Association. Dietitians of Canada. Joint Position Statement: Nutrition and Athletic Performance. *Journal of the American College of Sports Medicine*. 2009; 41(3): 709-731.

Griell AE, Cao Y, Bagshaw DD, Cifelli AM, Holub B, Kris-Etherton PM. A macadamia nut-rich diet reduces total and LDL-cholesterol in mildly hypercholesterolemic men and women. *Journal of Nutrition*. 2008; 138(4):761-767.

Othman RA, Moghadam MH, Jones PJ. Cholesterol-lowering effects of oat β -glucan. *Nutrition Reviews*. 2011; 69(6): 299-309.

Hosper L, Kay C, Abdelhamed A, Kroon PAJ, Cohn JS, Reim EB, Cassidy A. Effects of chocolate, cocoa, and flavan-3-ols on cardiovascular health: a systematic review and meta-analysis of randomized trials. *American Journal of Clinical Nutrition*. 2012; 95(3):740-751.

Li JF, Tsubawaka K, Yamamoto H, Kasahara M, Tagami T, Liu TH, Moriyo K. Cinnamoidylates Contribute to Insulin Sensitivity by Activating PPAR α , PPAR γ , and ER α . *American Journal of Chinese Medicine*. 2015; 30:1-14.

Azmi F, Ghilayard R, Feizi A, Hariri M, Abbasi B. Effects of Cinnamon, Cardamom, Saffron, and Ginger Consumption on Markers of Glycemic Control, Lipid Profile, Oxidative Stress, and Inflammation in Type 2 Diabetes Patients. *The Review of Diabetic Studies*. 2014; 11(3-4):258-266.

Takazu D, Acar TN. A minireview of effects of green tea on energy expenditure. *Critical Reviews in Food, Science and Nutrition*. 2015; 19:0.

Thomson N. The putative effects of green tea on body fat: an evaluation of the evidence and a review of the potential mechanisms. *British Journal of Nutrition*. 2011; 106(9):1297-1309.