

WEIGHT MANAGEMENT

Zinc Deficiency of zinc reduces leptin, a beneficial hormone that regulates appetite, which is reversed by zinc repletion.^{10,37}

Asparagine This amino acid increases insulin sensitivity which helps the body store energy in muscle instead of storing it as body fat.^{1,2}

Biotin Boosts metabolism by improving glycemic control (stabilizes blood sugar) and lowering insulin, a hormone that promotes fat formation.^{3,4,5}

Carnitine Carries fatty acids into the cell so they can be burned for fuel; Helps reduce visceral adiposity (belly fat).^{6,7}

Calcium Inhibits the formation of fat cells; Also helps oxidize (burn) fat cells.^{8,9,10}

Lipoic Acid Improves glucose uptake into cells, which helps a person burn carbohydrates more efficiently.^{11,12,13}

Chromium Makes the body more sensitive to insulin, helping to reduce body fat and increase lean muscle.^{14,15,16,27,28,4}

Vitamin B5 Taking B5 lowers body weight by activating lipoprotein lipase, an enzyme that burns fat cells. One study linked B5 supplementation to less hunger when dieting.^{17,18}

Magnesium Low magnesium in cells impairs a person's ability to use glucose for fuel, instead storing it as fat; Correcting a magnesium deficiency stimulates metabolism by increasing insulin sensitivity. Magnesium may also inhibit fat absorption.^{19,20,21}

Glutamine Reduces fat mass by improving glucose uptake into muscle.^{22,23}

Cysteine Supplementation with this antioxidant reduced body fat in obese patients.²⁴

Inositol Supplementation may increase adiponectin levels.²⁵

Vitamin B3 (Niacin) Treatment with B3 increases adiponectin, a weight-loss hormone secreted by fat cells; Niacin-bound chromium supplements helped reduced body weight in clinical trials.^{26,27,28}

Vitamin A Enhances expression of genes that reduce a person's tendency to store food as fat; Reduces the size of fat cells.^{10,29,30}

Vitamin E Inhibits pre-fat cells from changing into mature fat cells, thus reducing body fat.^{10,31,32}

Vitamin D Deficiency strongly linked to poor metabolism of carbohydrates; Genes that are regulated by vitamin D may alter the way fat cells form in some people.^{8,33,34}

Vitamin K Poor vitamin K status linked to excess fat tissue; Vitamin K helps metabolize sugars.^{35,36}

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