**Chromium**
Helps insulin attach to cell's receptors increasing glucose uptake; Deficiency can cause insulin resistance; Supplementation trials show dose-dependent benefits for type II diabetics.

**Lipoic Acid**
Entergrance glucose uptake in skeletal muscle tissue; Improves glucose tolerance in type 2 diabetics; Very effective treatment for diabetic neuropathy.

**Coenzyme Q10**
Protects kidney from diabetes related damage; Improves glycemic control in type 2 diabetics.

**Biotin**
Stimulates glucose-induced insulin secretion in pancreatic B-cells; High dose biotin can improve glycemic control in diabetics.

**Magnesium**
Deficiency reduces insulin sensitivity; Low magnesium exacerbates foot ulcers in diabetics.

**Zinc**
Needed in the synthesis, storage and secretion of insulin; Protects pancreatic B-cells from damage; Affects the expression of genes linked to diabetes.

**Vitamin B3**
Preserves B-cell function in type 1 diabetics; Part of GTF (glucose tolerance factor) which facilitates insulin binding.

**Vitamin D**
Lowers risk of type 1 and 2 diabetes; Suppresses inflammation of pancreatic B-cells; Vitamin D receptor gene linked to diabetes.

**Vitamin E**
Confers protection against diabetes by protecting pancreatic B-cells from oxidative stress induced damage; May prevent progression of type I diabetes.

**Vitamin C**
Lowers glycosylated hemoglobin (HbA1c) and fasting and post-meal glucose levels and in type 2 diabetics.

**Inositol**
Evidence suggests that inositol may be effective in treating diabetic neuropathy.

**Carnitine**
Reduces and even prevents pain from diabetic neuropathy; Improves insulin sensitivity by increasing glucose uptake and storage.

**Glutamine**
Stimulates a hormone called GLP-1 (glucagon-like peptide 1) that regulates insulin secretion after meals; Improves insulin signaling and sensitivity.

**Glutathione & Cysteine**
Glutathione-containing enzymes protect B-cells which are particularly sensitive to oxidative stress; Type 2 diabetics have abnormal antioxidant status; Supplementation with the glutathione precursor cysteine restores antioxidant status.

**Vitamin B12**
Deficiency common in diabetics because metformin depletes B12.

**Vitamin B1**
Preserves B-cell function in type 1 diabetics; Part of GTF (glucose tolerance factor) which facilitates insulin binding.

**Vitamin B2**
Lowers risk of type 1 and 2 diabetes; Suppresses inflammation of pancreatic B-cells; Vitamin D receptor gene linked to diabetes.

**Vitamin B5**
Confers protection against diabetes by protecting pancreatic B-cells from oxidative stress induced damage; May prevent progression of type I diabetes.

**Vitamin B6**
Lowers glycosylated hemoglobin (HbA1c) and fasting and post-meal glucose levels and in type 2 diabetics.

**Inositol**
Evidence suggests that inositol may be effective in treating diabetic neuropathy.

**Carnitine**
Reduces and even prevents pain from diabetic neuropathy; Improves insulin sensitivity by increasing glucose uptake and storage.

**Glutamine**
Stimulates a hormone called GLP-1 (glucagon-like peptide 1) that regulates insulin secretion after meals; Improves insulin signaling and sensitivity.

**Glutathione & Cysteine**
Glutathione-containing enzymes protect B-cells which are particularly sensitive to oxidative stress; Type 2 diabetics have abnormal antioxidant status; Supplementation with the glutathione precursor cysteine restores antioxidant status.

**Vitamin B12**
because metformin depletes B12.
Patients with impaired glucose metabolism and insulin concentrations in lean, obese, and type 2 diabetic subjects.

Hemoglobin in type 2 diabetes mellitus: a randomized, double-blind study.


Additional references at http://www.spectracell.com/online-library-mnt-diabetes-abstract/