



# Free Radical Fighters

## What Are They?

Free radicals are atoms, molecules, or ions missing electrons. When antioxidants are unavailable, free radicals can damage cells in an effort to “balance” electrons through oxidation.

Ever left an apple on the counter and by the time you came back it had brown spots all over it? That is oxidation. Now imagine this happening internally to our fragile cells and cell membranes.

Free radicals can be very damaging and harmful to our cells, simply put, they steal the electrons of healthy cells causing cell damage, or oxidation. Free radicals are unstable, electrically charged molecules, that can react with other molecules and damage them.

## Did You Know?

Free radicals aren't totally bad! Free radicals are constantly being formed during normal metabolic processes in the body. It is important to note that free radicals are actually essential for our survival however, excessive amounts of free radicals, combined with too few antioxidants, can lead to cellular damage in our body.

**Balance is Beautiful!** Having the right amount of free radicals and the right amount of antioxidants is important for our health! When the free radicals (pro-oxidants) outnumber the anti-oxidants, this can lead to *oxidative stress* in the body.

Excessive Intake of isolated antioxidants can have toxic effects and promote rather than prevent oxidative damage, so it best to pair antioxidants together.

## What Can Lead to Free Radical Formation and Oxidative Stress?

- Air pollution
- Cigarette smoke
- Alcohol intake
- High blood sugar levels
- High sugar and refined carbohydrate diets
- Intense prolonged exercise
- Antioxidant deficiency
- Toxins from drinking water, household cleaning products, make-up etc



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## What Are Some Free Radical Fighters?

Antioxidants are some of the best free radical fighters! Anti-oxidants help ward off “oxidation”.

Antioxidants donate electrons to free radicals, which neutralizes them and prevents them from causing harm to other cells.

If a molecule loses an electron and turns into a free radical, the antioxidant molecule steps in and “gives” the free radical an electron, essentially neutralizing it.

You can find antioxidants in supplements such as Vitamins C & E, Grape seed extract, Alpha lipoic acid, green tea extract, CoQ10, Pycnogenol, Quercetin, Selenium and Resveratrol.

You can also get small amounts of antioxidants from fruits and berries (blueberries, strawberries, raspberries) green tea, dark chocolate and organic coffee.

**Fun Fact:** Coffee is actually the single biggest source of antioxidants in the Western diet.

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