

## COMMENTARY 3 Open Access

# Steps to Reduce Oxidative Stress in the Body

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# **Description**

The process of oxidation occurs when our bodies metabolize (or process) the oxygen we breathe and our cells use it to produce energy. This process also produces free radical molecules that interact with molecules in our cells, resulting in damage (or stress) to nearby cells, mitochondria and DNA.

Free radicals are normal and to some extent necessary. In addition to causing some damage, they also stimulate repair. The problem only becomes when so many free radicals are produced that they overwhelm the repair processes. We call this oxidative stress. Oxidation occurs under many circumstances, including;

- When our cells use glucose to make energy.
- When the immune system fights bacteria and creates inflammation.
- When our body detoxifies pollutants, pesticides and cigarette smoke.

In fact, there are millions of processes going on in our body at any given moment that can lead to oxidation. It also increases when we are physically and/or emotionally stressed. Because the free radicals resulting from oxidation damage cells, proteins and our DNA (genes) and because oxidation itself is such a common process, the damage it can cause is significant. It is known to cause aging, grey hair, wrinkles, arthritis, reduced vision and even cancer. Here are five signs that your body is experiencing oxidative stress;

- Fatigue
- Memory loss and/or brain fog
- Muscle and/or joint pain
- Wrinkles and grey hair
- Reduced vision
- Headaches and sensitivity to noise

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Susceptibility to infections

### How to reduce oxidative stress?

There are two ways to reduce oxidative stress. Preventing exposure to unnecessary oxidation and increasing antioxidant content.

**Decreasing exposure to oxidation:** Oxidation increases when we are exposed to stress, toxins and infections. Sugar and chemicals also increase it, so the more you can minimize your exposure to these things, the better, choosing organic foods and avoiding toxins in your environment makes a big difference.

Allow time for daily stress remedies: It looks so simple, but it really pays off. That's why you need to build breaks into your day to give your body a chance to recover. Make sure you keep breaks in your schedule (or create them) and take them as opportunities to enjoy the outdoors, breathe, and refocus. Here are some ideas for daily stress management;

- Exercise
- Meditation
- · Chatting with a friend
- Enjoying nature
- Journaling
- Watching a fun show
- Walk

**Increasing anti-oxidants:** No matter what you do to avoid them, you will be exposed to some toxins and stress, so the next step is to increase the antioxidants you have in your system, either by helping your body make more or by consuming them in food.

One of the most powerful antioxidants is glutathione, which the body produces. It is made of three amino acids which are glycine, glutamate and cysteine and contains sulphur which makes it so effective. Foods that

help your body make more glutathione include,

- Asparagus
- Peaches
- Walnuts
- Spinach
- Tomatoes

You can also support your body to make more glutathione by eating foods that are high in sulphur;

- Garlic
- Onions
- Cruciferous vegetables like broccoli, kale, collards, and cabbage
- Avocados

**Eat foods that are high in anti-oxidants:** You can add to what your body produces by eating foods that are high in anti-oxidants every day. These tend to be the foods that are the most colourful for example;

- Beets
- Kale
- Berries
- Tomatoes

Other good sources of anti-oxidants include;

- Nuts and seeds
- · Green and black tea

Protecting yourself from oxidative stress is as simple as protecting your cells by providing what your body needs and avoiding what it doesn't need.