

Oxidative stress can affect **ANYONE!**

Experience and consensus amongst researchers has emphasised that some conditions can cause high levels of OS. These include:

- Pregnancy
- HRT
- Oral contraceptive assumption
- Endurance performance
- Immediately after physical activity in untrained subjects
- Pharmacotherapy (e.g., antibiotics, antitumor agents, analgesics)
- Inflammation processes
- Smoking
- Unbalanced diet and/or unhealthy life styles
- Environmental pollutants
- Stress
- Exposure to ionising radiation (UVA/UVB)
- Bacterial, Viral or Fungal Infections

OS detection allows the development of intervention strategies which can contribute to a delay in the progression of a disease, and may improve the outcome and therefore enhance quality of life.

By measuring the levels of free radicals and the antioxidant capacity of our body, then intervening with lifestyle changes and therapies is the best way of preventing damage associated with premature oxidative stress.

The measurement of oxidative stress is essential to discovering the onset of diseases and monitoring the efficacy of treatments and therapies.



Is **YOUR BODY** in a state of oxidative stress?

Ask your health professional

about measuring your oxidative state with the Free Oxygen Radical Test (FORT) and Free Oxygen Radical Defence (FORD) – quick and simple blood tests that can be performed in the clinic with results available in under 10 minutes.

Attack by free radicals causes



cell membrane damage

Free oxygen radicals and antioxidant capacity

The signs of oxidative reactions are present in our everyday life – apples turn brown, butter turns rancid, iron rusts.

But what exactly is oxidative stress in humans and more importantly what implications does it have on human health? Why does oxidative stress occur?

We can use a simple example to illustrate the oxidative stress phenomenon. Picture a war being waged inside your body, and only good nutrition and a healthy lifestyle can bring in the reinforcements. The bad guys are called free radicals – highly reactive and unstable chemicals that damage tissue and DNA.

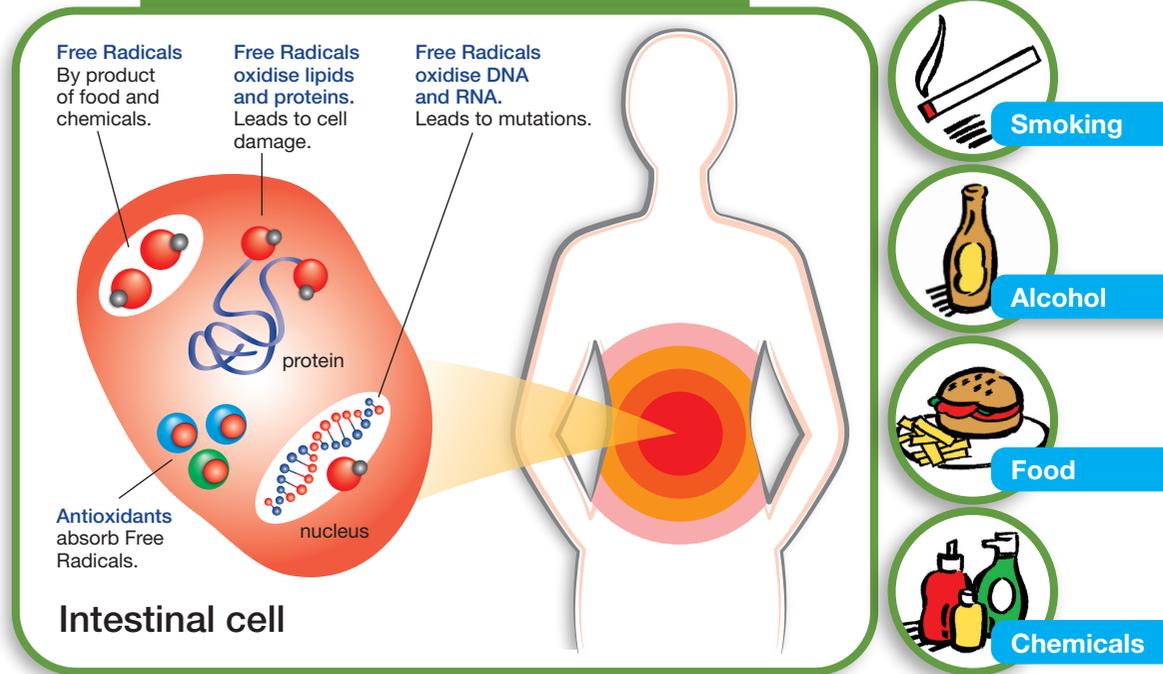
The good guys, referred to as antioxidants, are substances that either prevent or halt internal damage.

Free radicals attack other molecules in a process known as oxidative stress. In a perfect situation, the body's normal cellular repair functions would be able to repair the damage created by oxidative stress. However, if you have an elevated level of free radicals and insufficient antioxidants to balance them, cellular damage will result.

Antioxidants are molecules that neutralise and balance free radicals. Long term effects of high oxidative stress will occur if your antioxidant status is low and free radicals levels are high and you allow this to go undetected. Oxidative stress can affect your health and performance from mild complaints and premature ageing to more serious illness.

Oxidative Stress (OS) is an imbalance between free radicals production and the existing antioxidant capacity (AC) of our body. Oxidative stress is not a disease but a condition which can lead to or accelerate the progress of diseases. It can be the result of exposure to toxins or pathogens, a low antioxidant defence system or lifestyle factors.

Free Radicals in the Human Body



Examples of the effects of OS include premature skin ageing due to a build-up of free radicals in the skin, the development of cellulite due to circulatory failure in the presence of excess free radicals, and the fatigue experienced after strenuous physical activity.

Unlike a disease, OS does not exhibit any symptoms but can emerge as a health risk, particularly if prolonged and associated with other well known risk factors such as hypertension, high lipid profiles, hyperglycaemia, obesity and smoking.