



NSIPM & Sano Wellness Center

Nitric Oxide Balance

Nitric oxide (NO) is one of the most important **signaling molecules** in our body. Nitric oxide is an important **messenger molecule** involved in many physiological and pathological processes within the mammalian body with both beneficial and detrimental properties. It is a small, relatively unstable, potentially toxic, free radical that has become one of the most studied and fascinating molecules in biological chemistry and medicine. Nitric oxide is a common air pollutant, a constituent of cigarette smoke, and a toxic as, which appears in the exhaust of motor vehicles, causes acid rain, and destroys the ozone layer.

The **realization** of such a molecule being produced within our bodies and **acting as an endogenous signaling molecule** has revolutionized conceptual reasoning in science and medicine over the past 30 years. Nitric oxide has become a fundamental player in the fields of neuroscience, physiology, and immunology. **It is involved in virtually every organ system within our body** but is **known primarily for** maintaining normal blood pressure and blood flow to tissues. In the cardiovascular system it can expand narrow blood vessels, eliminate dangerous clots and reduce artery-clogging plaque formation. It also has important properties in the immune system where it plays an important role in the defense against micro-organism helping us fight off infections and aiding in protection against cancer cells. In addition, nitric oxide is an integral part of the nervous system where it helps our brain cells communicate properly and also helps modulate neuroendocrine control.

Nitric oxide deficiency is widespread, particularly in people over the age of 40.

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