

Nitric Oxide - radio episode Feb 9 2022 - Highway to Health - Dave Hawkins Interview with Peter Brodhead

Nitric Oxide:

Nobel Prize awarded in 1998 - 140,000 research articles - the most researched molecule in history.

What is it ?: It is a cell signaling molecule created in the lining of the blood vessels. Its naturally produced by the - **endothelial cells** - the cells that line all the blood vessels. These cells in the body release nitric oxide and this (neurotransmitter) tells the blood vessels to relax and you get an opening of the blood vessels for a better blood flow. It's how cells communicate with one another

It's this simple action that **increases blood flow** to every tissue and cell of the body. Brain, Heart, Muscles, Kidneys, Liver, Genitals, Peripheral circulation. It naturally decreases after the age of 40

Cardiovascular health: Statistics 600,000 die each year of CVD - 50% are women - 60% of youth are at risk for heart disease.
75% of diabetics die of a heart attack or stroke

What does it do: Nitric Oxide

Decreasing and reversing atherosclerosis by decreasing intimal thickening,
restores normal endothelial functioning in high cholesterol,
It decreases cholesterol and triglycerides,
It increases walking in peripheral vascular disease,
It decreases high blood pressure.
It Increases growth hormone,
It supports erectile function and blood flow for enhancing sexual functioning in both men and women
It helps exercise tolerance,
It helps renal function,
Is involved with the movement of the intestines
It enhances glucose uptake by muscle cells,
It helps with Insulin production and release - you can become insulin resistant without it
It improves diabetes and reverses damage caused by glycosylation
Improves asthma,
It helps cell mediated immunity,
It reduces blood clots and strokes,
It helps prevent restenosis after angioplasty and bypass,
It improves heart failure,
It improves Alzheimers and improves memory and cognitive functions

2 pathways the body makes Nitric Oxide by

1. Nitric Oxide Synthase pathway - the body takes Arginine and converts it to Nitric Oxide. L-Arginine and L-Citruline. This pathway fails in people who become Nitric Oxide deficient.

2. Research done 15 years ago found that a **plant based diet** was discovered as a pathway and that **inorganic nitrate found in green leafy vegetables such as arugula, spinach, chard, kale and beets.** When you consume these the body has the ability to convert Nitrate to Nitrite to Nitric Oxide.

If we restore the function of the enzyme in the body - this pathway will be activated

#1 We need the proper bacteria in the mouth - Mouthwash and toothpastes that contain fluoride can kill the probiotic bacteria in the mouth and it is these probiotics help with the creation of nitric oxide. Use of mouthwashes have been found to increase the incidence of hypertension.

#2 We need stomach acid to produce nitric oxide - The use of Proton Pump inhibitors - Nexium "The purple pill" ie. Pevecid, Prilosec. These drugs shut down hydrochloric acid production in the stomach and inhibit the ability to produce nitric oxide. People who have been on these acid blocking drugs for 3 years have damaged their nitric oxide pathway.

Exercise stimulates the enzyme from Arginine.
Laughing helps with the production of it.

It all comes down to 5 basic lifestyle interventions

1. Eat lots of green leafy vegetables and beets - chew your food very well especially dark green vegetables, beets and high nitrate foods so the bacteria in your mouth can release the nitrite from the nitrates. This pathway is 100% dependent on your oral bacteria. Then adequate stomach acid will release the nitric oxide to the body. *Apple Cider Vinegar helps with the production of stomach acids.*
2. Exercise - 20 to 30 min a day.
3. Stop Mouthwash and Fluoride toothpaste - Fluoride is an antiseptic and kills bacteria it is also a neurotoxin. If you stop using mouthwash and fluoride toothpaste your good bacteria in your mouth will be replenished in 4 days.
4. Stop acid blocking drugs - *I made a handout on how to do this.*
5. Laugh more
6. Get more anti-oxidants in the diet by eating an anti-inflammatory diet such as the Mediterranean diet and supplement them - CoQ10 for example can indirectly help Nitric Oxide work longer.

Get bloodwork done: hsCRP

bloodwork for cardiovascular disease inflammation marker.

BH4 is the pathway

Nitric Oxide testing strips are available

BIO-NOX M3 - *show coming up on Highway to Health about this.*

A number of clinical studies have shown that eating vegetables high in nitrates 90min before exercise

Bibliography:

Genius Life Podcast - Max Lugavere - episode 130 - Nitric Oxide Pathway

Dr. Nathan Bryan Phd. World expert - 20 years of study at the Univ of Texas and Baylor Univ. LSU

www.drnatansbryan.com twitter feed: **drbryan**

There is a 6 minute video on it that explains the Nitric Oxide pathway