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Your Guide To Optimal Wellness 2018



The Benefits of Nitric Oxide Dump Exercise to Your Health

Story at-a-glance

- ▶ The Nitric Oxide Dump is one of the most recommended workouts that can aid with improving overall health. It allows your body to increase nitric oxide (NO) production, since your levels of it decrease with age.
- ▶ High-intensity interval training (HIIT) exercises like the Nitric Oxide Dump may seem intense, especially for those who are elderly, but most people can actually perform these exercises at any age and still reap major benefits
- ▶ Before trying the Nitric Oxide Dump, however, talk to your doctor first to check if your body is ready to handle such high-intensity exercises

Exercise is a great way to increase nitric oxide, the key to healthy blood flow, in your body. Dr. Mercola's Nitric Oxide Dump is a simple, effective way to do this. See Dr. Mercola demonstrate it below.



HOW

TO PERFORM THE NITRIC OXIDE DUMP

The Nitric Oxide Dump is a powerful high intensity workout that involves:

4 movements
per workout

10 repetitions
per movement

4 Cycles of
the Repetition



It takes around three to four minutes to accomplish, and is done three times a day, every day. A two-hour allowance in between sessions is recommended.

Tip: Start by performing 10 repetitions of each movement. You can work your way up to 20 repetitions as your fitness level increases.

WHAT TO DO DURING A NITRIC OXIDE DUMP

Warm up first by performing stretches (10 reps) to open up the shoulders and prevent injury, then perform the Nitric Oxide Dump below and finish with 20-30 reps of Ankle Grabbers.





High-intensity interval training (HIIT) exercises like the Nitric Oxide Dump are one of the most recommended workouts that can aid with improving overall health. Specifically, the Nitric Oxide Dump allows your body to increase nitric oxide (NO) production, since your levels of it decrease with age. NO is a type of gas that's deposited and stored in the lining of the blood vessels throughout the body and is released when needed.

The Nitric Oxide Dump's benefits come from its potential effects on your mitochondria, the energy storehouse of the cell and the energy source of your skeletal muscles. These mitochondrial changes can have a positive impact on your skeletal muscle, fat tissue and even your liver, brain and kidneys. The mitochondria has an energy delivery process, wherein a series of electron transport chains is responsible for passing electrons from the reduced form of food you eat and combining it with oxygen from the air you breathe.

This process ultimately forms water, driving protons across the mitochondrial membrane, which recharges ATP (adenosine triphosphate), or the carrier of energy throughout the body, from ADP (adenosine diphosphate). The mitochondria uses the energy provided for all metabolic functions, and makes up 1 to 2 percent (on average) of the skeletal muscle by volume. This amount is typically enough to provide energy for daily movements, and enables the Nitric Oxide Dump to help deliver benefits like:¹

- **Improving age-related decline in muscle mitochondria:** The Nitric Oxide Dump may assist with counteracting mitochondrial decline. Exercise forces the mitochondria to work harder and create more mitochondria in response to the higher energy requirement demanded by exercise. While a known side effect of increased mitochondrial production is the creation of reactive oxygen species (ROS), take note that these free radicals act as signaling molecules.

The Nitric Oxide Dump can be beneficial in improving cardio-metabolic health parameters among aging adults, as a 2017 Cell Metabolism study emphasized.² This is vital because although aging is inevitable, your biological age can be different from your chronological age. With exercise spurring positive mitochondrial changes, there's a possibility that biological aging can be improved.

- **Triggering mitochondrial biogenesis:** Exercise can promote mitochondrial changes that can lead to whole-body benefits, and can be a “remedy” for declines in mitochondrial biogenesis and mitochondrial protein quality, typically seen alongside aging. Exercise can also promote mitochondrial biogenesis in the brain, potentially leading to reduction or reversal of age-associated decline in cognitive function and assistance in repairing brain damage after a stroke.^{3,4}

Lastly, because of exercise's effects on mitochondrial health, it can be helpful in preventing cancer through stimulation of the compounds AMPK and SIRT2. Both compounds secondarily inhibit mTOR involved in aging and cancer and help stimulate cancer-deadly mitochondrial biogenesis and mitophagy.⁵

- **Helping promote fat and weight loss:** HIIT exercises use multiple large muscles and require very little rest between sets, allowing the body to yield aerobic and metabolic benefits. Meanwhile, high-intensity circuit training (HICT) exercises lead to greater fat loss compared to aerobic or resistance training. HICT can also increase your body's catecholamine levels (which can increase resting energy expenditure) and human growth hormone (HGH) levels in the blood.
- **Improving VO2 max:** VO2 max is the maximum amount of oxygen your body can handle while exercising, and can be utilized as a measure of cardiovascular endurance.
- **Reducing insulin resistance:** Research has proven that HIIT and HICT may help decrease insulin resistance, a known precursor to [Type 2 diabetes](#).

A Few Reminders Before Doing This Exercise

HIIT exercises like the Nitric Oxide Dump may seem intense, especially for those who are elderly, but most people can actually perform these exercises at any age and still reap major benefits.

Before trying the Nitric Oxide Dump, however, talk to your doctor first to check if your body is ready to handle such high-intensity exercises. You can also consult a physical therapist who can advise you on how to perform the exercises effectively without any injury.