

# NITRIC OXIDE

## NITRIC OXIDE SALIVA TEST STRIPS

Instruction  
Manual

Diagnox

## SUMMARY

Nitric Oxide (NO) is an essential signaling molecule produced naturally by our bodies. It plays a crucial role in maintaining optimal blood circulation, promoting cardiovascular health, defending against vascular aging, regulating blood pressure, enhancing immune function, and supporting brain health and overall well-being<sup>1</sup>. As we age, our capacity to generate nitric oxide diminishes due to factors like oxidative stress, inactivity, and poor dietary choices, leading to the deterioration of our veins and arteries.

Regular monitoring of your nitric oxide levels can help assess whether your body is producing sufficient amounts to maintain these critical functions. If levels are found to be low, it may suggest a need for dietary adjustments, increased physical activity, or consideration of supplements to boost nitric oxide production, thereby protecting against cardiovascular diseases and supporting immune and general health<sup>2</sup>.

## TEST PRINCIPLE

The test is based on the Greiss test and measures the concentration of a salivary nitrite, a key biomarker, needed for the production and availability of nitric oxide. Scientific data indicates that salivary nitrite levels directly correlate with salivary nitric oxide levels.

Upon saturation with salivary fluid, the reagent pad undergoes a color change from light to deep pink. The color intensity of the reagent

pad directly correlates with the concentration of nitric oxide present in the sample. This rapid test delivers results within 60 seconds.

## INTENDED USE

The Nitric Oxide test by Diagnox® is a non-invasive test to check salivary nitric oxide levels for general health and wellness awareness.

## WHEN SHOULD YOU TAKE THIS TEST?

The most effective times to measure nitric oxide levels in saliva are influenced by daily routines and specific testing objectives. To achieve reliable and meaningful results, consider the following guidelines:

- 1. Morning Testing:** Ideally, test your nitric oxide levels first thing in the morning, before brushing teeth or consuming any food or beverages. This timing prevents saliva dilution and provides a baseline measurement of your body's nitric oxide after a night of rest and fasting.
- 2. Before and After Meals:** Assessing nitric oxide levels before and after meals can help you understand the impact of specific foods and dietary nitrates on nitric oxide production. Foods such as leafy greens and beets are known to enhance nitric oxide synthesis.
- 3. Pre- and Post-Exercise:** Measure nitric oxide levels before and after exercise to gain insights into how physical activity

influences nitric oxide production. Exercise is known to boost nitric oxide synthesis, and monitoring these changes can provide valuable insights.

For consistent and comparative results, it is crucial to test at the same times each day. This regularity allows for accurate trend tracking and effective comparison over time. Additionally, ensure proper hydration and adequate rest prior to testing, as factors like dehydration and fatigue can influence nitric oxide levels.

## WHEN SHOULD YOU AVOID TAKING THIS TEST?

For accurate results, avoid taking this test under the following conditions:

- **After Oral Care:** Do not test immediately after brushing your teeth or using mouthwash, as these can interfere with the salivary microbiome and compromise test accuracy.
- **During Antibiotic Use:** Refrain from taking the test if you are currently on antibiotics, which may alter natural nitric oxide levels in the body.

Adhering to these guidelines helps ensure that the test yields reliable measurements.



**SCAN THIS BARCODE  
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BOOST YOUR NITRIC  
OXIDE LEVELS**

# DIRECTIONS FOR USE

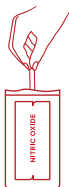
## PREPARATION:

1

Carefully tear open the sealed bag and remove the strip. Avoid touching the test area.

Collect a fresh saliva sample in a clean, dry container.

Alternatively, gather saliva on a clean fingertip.



## TESTING:

2

Completely saturate the test pad by immersing it in the collected saliva. Do not place the test strip directly in your mouth.

Gently blot the side of the strip on a paper towel to remove excess saliva. Then, lay the strip horizontally, test pad facing up, on a paper towel and wait for 1 minute.



## READING RESULTS:

3

Compare the test pad's color to the color key provided on the pouch to determine the closest match. Ensure you read the results under good lighting.

Ignore results or color changes after 2 minutes.



## WHAT DO THE RESULTS IMPLY?

### DEPLETED (0.1 mg/dL)

#### ***Very low nitric oxide levels.***

This may result from a diet low in leafy greens or the use of mouthwash or antibiotics. Low levels can affect energy, blood flow, and overall function. Consider adding nitrate-rich foods or supplements.

### LOW (0.5 mg/dL)

#### ***Below recommended nitric oxide levels.***

Your body is making some nitric oxide, but not enough for full benefits. This is a good time to improve your diet or consider a nitric oxide booster.

### ADEQUATE (1.5 mg/dL)

#### ***You're in the target zone for physical well-being.***

This means your body is generating enough nitric oxide to support circulation, energy, and general wellness. Maintain your current diet and lifestyle. If you're an athlete, you may want to move toward the optimal zone for peak performance.

### OPTIMAL (3.0 mg/dL)

#### ***Ideal nitric oxide levels for optimal physical performance.***

Supports heart health, blood flow, and stamina. This is an ideal zone for athletes, especially during exercise or competition. Maintain this level with a nitrate-rich diet and consistent lifestyle habits.

### HIGH / SPIKE (10.0 mg/dL)

#### ***Short-term nitric oxide peak.***

Usually occurs 1–2 hours after eating nitrate-rich foods or taking supplements. This is a safe, temporary rise in NO levels that typically returns to baseline within a few hours.

## LIMITATIONS OF USE

- The product is not intended for the diagnosis, cure, mitigation, prevention, or treatment of a disease or condition. The product is not a substitute, nor should it discourage seeking professional medical advice, clinical diagnosis, or treatment.
- The intended use of this product is strictly limited to promoting general health and wellness awareness. Scientific research shows that regular exercise and a diet rich in leafy greens and vegetables can naturally boost nitric oxide levels.
- This test is semi-quantitative and measures salivary nitrite levels. Scientific data shows that salivary nitrite levels directly correlate with nitric oxide concentration in saliva.
- Usage errors or improperly timed readings can lead to inaccurate results.
- Certain medications, particularly antibiotics and antiseptic oral rinses, can interfere with test accuracy.
- Nitric oxide levels in saliva and bloodstream can vary. Bioavailability of nitric oxide depends on multiple factors. The use of this test to determine bioavailable nitric oxide is not recommended.
- Nitric oxide levels are not the sole indicator of health and wellness. The cardiovascular and other health benefits associated with nitric oxide mentioned in this manual can be influenced by multiple factors. Consult a healthcare professional if you have health concerns to determine if this test is appropriate for you.

## WARNING AND PRECAUTIONS

Please read all the information in this package insert before performing the test.

- For saliva testing only.
- Do not put the test pad into your mouth.
- Do not use for blood or urine testing.
- Dispose of the used strip according to local regulations after testing.
- Keep out of the reach of children.
- For external use only. Not to be taken internally.
- Do NOT use this product to diagnose or manage any disease or condition.
- This test is not intended to replace diagnostic tests or visits to your healthcare provider.

## CARE TO KNOW

Nitric oxide (NO) is essential for maintaining optimum health, playing a key role in regulating a myriad of essential bodily functions, including blood flow, blood pressure, sexual health, physical performance, and immune response.

### THE MULTIFACETED ROLE OF NITRIC OXIDE

**Blood Pressure Regulation:** Nitric oxide plays a vital role in cardiovascular health by relaxing and dilating blood vessels, which improves blood flow and reduces blood pressure, thereby lowering the risk of cardiovascular diseases.

**Physical and Athletic Performance:** By enhancing blood flow and oxygen delivery to muscles, nitric oxide improves exercise performance and endurance. It supports muscle growth and recovery by ensuring efficient nutrient and oxygen supply to tissues.

**Immune Defense:** As a signaling molecule, nitric oxide is crucial in the immune system's fight against infections and diseases. It aids immune cells in responding to pathogens and helps curb the spread of harmful agents.

**Nervous System Function:** In the central nervous system, nitric oxide is essential for neurotransmission and synaptic plasticity, influencing learning, memory, and other cognitive functions.

**Cellular Energy Production:** Nitric oxide regulates mitochondrial function, which is pivotal for cellular energy production and overall metabolism.

**Sexual Health:** Essential for sexual function, nitric



oxide facilitates the relaxation of smooth muscles in the penis, which enhances blood flow and enables erections.

**Inflammation Regulation:** Nitric oxide serves as an anti-inflammatory agent, inhibiting pro-inflammatory cytokines and mitigating oxidative stress, which helps manage inflammation.

**Stomach Function:** It regulates the release of gastric juices and plays a protective role against ulcer formation in the stomach.

## SIGNS OF CHRONIC NO DEFICIENCY

Chronic deficiency of nitric oxide can lead to various physical symptoms, each related to different bodily functions:

**Cardiovascular Issues:** Nitric oxide is vital for maintaining healthy blood vessels by relaxing their smooth muscles and regulating blood flow. Chronic low levels of NO can lead to hypertension (high blood pressure), atherosclerosis (hardening of the arteries), and increased risk of cardiovascular diseases<sup>1, 2</sup>.

**Respiratory Conditions:** In the lungs and airways, NO helps regulate breathing function. Insufficient NO levels can contribute to asthma, chronic obstructive pulmonary disease (COPD), and other respiratory issues<sup>1</sup>.

**Immune Dysfunction:** NO assists in regulating the immune response, aiding in fighting off infections and controlling inflammation. A chronic deficiency may weaken the immune system, heightening the risk of infections and other immune-related disorders<sup>2</sup>.

**Cognitive Impairment:** NO supports blood flow and oxygen delivery to the brain, crucial for memory and learning. Low levels of NO can lead to cognitive impairments and increase the risk of neurodegenerative diseases, such as Alzheimer's disease<sup>2</sup>.

**Erectile Dysfunction:** NO regulates blood flow to the penis, and its deficiency can contribute to erectile dysfunction<sup>3</sup>.

**Reduced Physical Endurance:** NO is necessary for delivering oxygen and nutrients to muscles during intense physical activities. Low NO levels can impair muscle building, stamina, strength, and recovery, affecting overall athletic performance<sup>4</sup>.

To monitor and manage your nitric oxide levels effectively, consider using the Diagnox Nitric Oxide test regularly (daily or weekly), depending on your health objectives. This test can be particularly useful if you are trying to restore your nitric oxide levels through supplements or dietary changes, providing a valuable tool for tracking your progress.

## HOW TO BOOST NO LEVELS IN THE BODY

Here are some effective methods to increase NO production:

**Dietary Intake:** Eating foods rich in nitrates and nitrites can significantly enhance NO levels. These nutrients are converted into nitric oxide in the body. Excellent sources include:

- Beets and beetroot juice
- Leafy greens like spinach, arugula, and kale
- Radishes
- Celery and Lettuce

**Exercise:** Engaging in physical activity stimulates nitric oxide production by increasing blood flow and activating the arteries' lining to release more NO. Cardiovascular exercises are particularly effective.

**Supplements:** Consider supplements containing antioxidants, beetroot extract, and amino acids like L-arginine and L-citrulline, which support NO production<sup>4</sup>.

**Reduce Smoking and Limit Alcohol:** Cutting down on smoking and moderating alcohol consumption can significantly boost NO levels.

By adopting these strategies, you can improve both the production and bioavailability of nitric oxide, contributing to better overall health.

## STORAGE & HANDLING

- Store in a dry place at 2–30°C (36–86°F). Do not freeze. Keep out of direct sunlight.
- Long-term exposure to air/humidity may cause inaccurate readings.
- Do not touch the test pad of the strip.
- Discard any discolored strips that may have deteriorated.
- Do not use after the expiration date printed on the label of the box.

## REFERENCES

<sup>1</sup>Lundberg, J. O., & Weitzberg, E. (2022). Nitric oxide signaling in health and disease. *Cell*, 185 (16), 2853–2878.

<sup>2</sup>Stephan, B. C. M., Harrison, S. L., Keage, H. A. D., Babateen, A., Robinson, L., & Siervo, M. (2017). Cardiovascular disease, the nitric oxide pathway and risk of cognitive impairment and dementia. *Current Cardiology Reports*, 19 (9), 87.

<sup>3</sup>Burnett, A. L. (2006). The role of nitric oxide in erectile dysfunction: implications for medical therapy. *Journal of Clinical Hypertension (Greenwich)*, 8 (12 Suppl 4), 53–62.

<sup>4</sup>Gonzalez, A. M., Townsend, J. R., Pinzone, A. G., & Hoffman, J. R. (2023). Supplementation with nitric oxide precursors for strength performance: A review of the current literature. *Nutrients*, 15 (3), 660.



We believe that promoting and sharing knowledge is a form of care. With this mission, we make it easy for people to take charge of their own health.

Listen to your body and get to know yourself to own yourself.

Being the protagonist of your well-being is having information at the palm of your hand. With that in mind, we provide innovative health tests that provide accurate results along with simple-to-understand information and all the support needed for you to connect the dots and be aware of your health. After all, good decisions come from good information.

It is knowledge from the inside out that guides us to look after ourselves and others around us, raising awareness for better health for all.

**Diagnox**

Care to Know. Know to Care.

## QUESTIONS?

For questions, please contact us at:

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