



**NITRIC OXIDE
BOOSTER**

Unlock Nitric Oxide Potential

The Effects of S7® on Nitric Oxide and Oxidative Stress



FUTURE  *CEUTICALS*

CONSUMERS BELIEVE IN THE POWER OF PLANTS

The plant-based revolution of the past decade continues to captivate consumers. Nearly half of people worldwide report following a flexitarian, pescatarian, vegetarian, or vegan diet.¹ As more people became mindful of their eating habits during the pandemic, many turned to plant-based foods — especially fruit and vegetables — and healthier lifestyles to support their immunity and overall wellness.

Data gathered by FMCG Gurus found that: “Consumers are switching to vegan, vegetarian, and flexitarian diets, believing that plant-based products are natural, healthier, and better-for-the-environment. Moreover, these diets can also be adopted as a form of self-expression to demonstrate attitudes and outlook on life.”¹

Plant-based claims elevate food and beverages with a healthy halo, and appeal to consumers’ hearts. Plant-based products help consumers address concerns like healthy aging, immunity support, and longevity. They also provide eco-friendly and compassionate alternatives to synthetic or animal-based products.

Although a complete shift towards an entirely plant-based diet may not be accessible for many, flexitarian and omnivore consumers are still keen to incorporate more products that contain fruit and vegetable ingredients to bolster their health and reduce their environmental impact. As a result, botanicals and superfruits are becoming increasingly popular in functional foods and beverage.

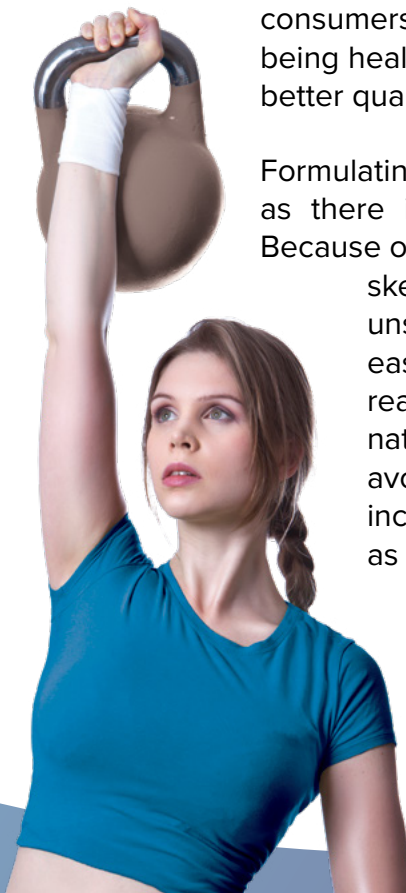
A NATURAL FIT FOR TODAY’S CONSUMERS

Consumers across the globe are on a mission to improve their overall health and wellbeing. The COVID-19 pandemic prompted people to reexamine the food and beverages they consume and scrutinize labels more closely. One of the most influential factors impacting consumer choice is naturalness. Data reveals consumers throughout the world demand natural formulation, simplicity, and transparency when purchasing products.

According to research conducted by FMCG Gurus, “Along with price, taste, and sugar content, natural formulation is one of the most influential claims

that govern consumer purchasing habits across the food and drink market. This is because consumers associate natural products with being healthier, safer, more trustworthy, and better quality.”²

Formulating for ‘naturalness’ is a challenge, as there is no clear universal definition. Because of this, consumers are increasingly skeptical of brands that make unsupported natural claims and can easily see through mirky labels. To reach consumers with legitimate natural claims, formulators should avoid artificial ingredients, and incorporate as many real ingredients as possible.





HEALTHY AGING BACKED BY SCIENCE

Today's consumers take a proactive approach to living well in every stage of life. They recognize that dietary patterns and regular activity are essential parts of healthy aging. To age with intention, many are looking to products that offer new solutions to maximizing wellbeing, including products that reduce inflammation and continued bodily stress. However, consumers can be skeptical of claims made in the health and wellness market not supported by clinical research.

“Efficacy is everything – consumers want to know about the research and science behind products

and will also want to see branded ingredients,”³ according to predictions by FMCG Gurus.

Many times, consumers take learning more about health-boosting ingredients into their own hands. 56% of global consumers regularly research different ingredients that can improve their health, and 64% research different ways to improve their health.³ Therefore, clinically researched claims bolster consumer confidence in products that can help them achieve a long-term approach to health.

¹FMGC Gurus, Plant-based Attitudes & Behaviors: How they differ across consumer segments, 2021.

²FMGC Gurus, The Future of Naturalness 2020 Global Report, October 2020.

³FMGC Gurus, What's next for positive nutrition? Exploring consumer attitudes towards ingredients, 2021.

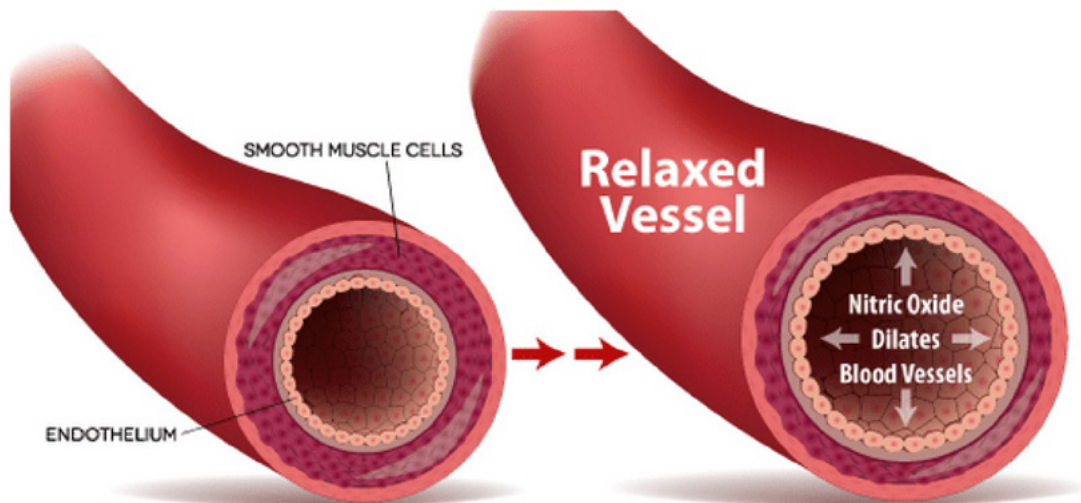
THE IMPORTANCE OF NITRIC OXIDE

Nitric oxide (NO) is a vasodilator that naturally occurs in almost every cell of the body—it signals the muscles within the inner lining of the blood vessels to relax and widen, increasing blood flow. As blood circulation increases, the muscles receive oxygen with ease, and our body becomes more efficient. The increase in blood flow also delivers nutrients that carry away toxins.

To increase levels of NO in the body, some recommend intake of nitrates and dietary nitrates. NO-enhancing products have been around since the mid-1990s, but the niche market was geared towards bodybuilders. Today, NO products appeal to a mainstream audience—anyone trying to boost daily performance and manage healthy aging. The most common nitrate

ingredients include beet, L-arginine, greens, and sodium nitrate. These products often use nitrate test strips to prove efficacy; however, this does not accurately test actual internal NO levels, only nitrate/nitrite levels. There is also concern regarding the dangerous effects caused by a consistently high intake of exogenous nitrate supplements. There are current toxicity limits in place due to the potential dangers of overdosing.

Clinical research demonstrates a powerful solution that increases NO production in the body without exogenous nitrates. Although exogenous nitrates may have some value, they do not exhibit the remarkable increase in NO our bodies can produce internally with S7®.



Vasodilation supports increased blood flow which means oxygen and other key nutrients are delivered to the muscles more easily.





S7®: THE PLANT-BASED BREAK-THROUGH

S7 is an exciting ingredient in the sports nutrition and active lifestyle categories developed and clinically researched by FutureCeuticals. S7 is unique because it is not an ingested nitrate product, but, instead, a plant-based complex. This proprietary formula delivers seven phytonutrient-rich botanicals — green coffee bean extract, green tea extract, turmeric extract, tart cherry, blueberry, broccoli, and kale. It is standardized to 60% polyphenols, 30% catechins, and 3% curcumin to ensure consistency, quality, and efficacy.

This plant-based complex has been shown to trigger our body's own NO production system

and significantly reduce oxidative stress in a peer-reviewed published study. Human participants that consumed S7 demonstrated increased bioavailable NO concentration, reduced ROS, and improved cellular efficiency compared to baseline.

Designed with active consumers in mind, S7 is a non-stimulant, plant-based ingredient ideal for almost any sports nutrition application, especially on-trend portable options like ready-to-drink and ready-to-mix beverages. S7 is a low, active dose of 50mg, light in color, and soluble—which makes it compatible with many delivery systems.



Green Coffee Bean



Green Tea



Turmeric



Tart Cherry



Blueberry



Broccoli



Kale

CLINICALLY RESEARCHED S7 CLAIMS

- 230% acute boost in nitric oxide
- Supports the increase of circulating nitric oxide levels, known to promote healthy endothelial function and blood flow
- Protects against cellular damage
- Supports cellular efficiency and cellular function
- Reduces oxidative stress



THE CLINICAL RESEARCH

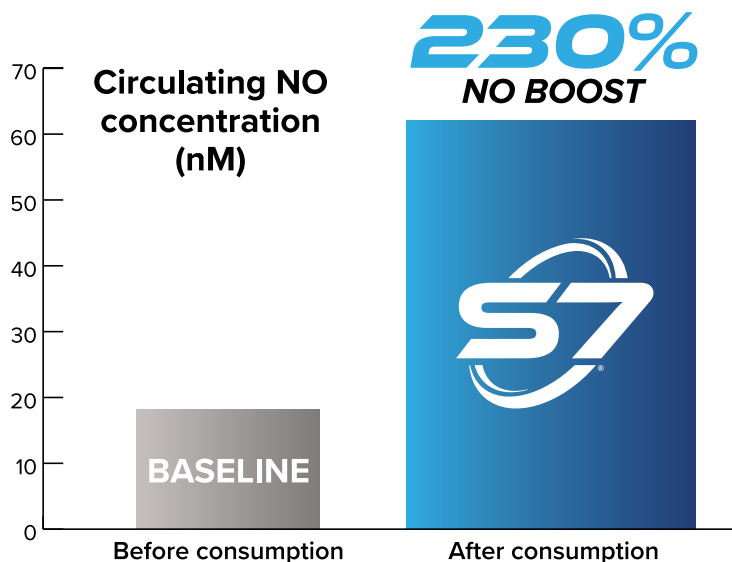
S7 is truly unique because it has been shown to deliver clinically supported, quantifiable NO increases and oxidative stress reductions directly in human participants. This is a major differentiator as the primary NO market tests nitric oxide potential via nitrate and nitrite levels.

There are few NO boosters that cite clinically studied NO increases, and that research is either invitro (outside of the body) or in rodents. In the acute study testing the response of S7 in the body, the following results were found.

Published Study: Acute Nitric Oxide Boost

Using the gold standard in clinical research, FutureCeuticals performed a double-blind, crossover, placebo-controlled peer-reviewed single-dose study. The purpose was to document the effects of S7 related to how this proprietary, plant-based ingredient influenced circulating bioavailable NO concentration and oxidative stress within 24-55-year-old healthy human participants.

The published study, *Oxidative stress or redox signaling – new insights into the effects of a proprietary multifunctional botanical dietary supplement*,⁴ analyzed circulating nitric oxide concentration in the blood of human participations before and after consumption.



Following a low dose of 50mg, it was concluded that a statistically significant 230% increase in bioavailable NO was observed compared to baseline.

⁴Nemzer BV, Centner C, Zdzieblik D, Fink B, Hunter JM, König D. Oxidative stress or redox signalling - new insights into the effects of a proprietary multifunctional botanical dietary supplement. *Free Radic Res.* 2018;52(3):362-372. doi:10.1080/10715762.2017.1390228





CONCLUSION

Clinical research demonstrates that S7 increases levels of bioavailable NO, potentially through the normalization or reduction of oxidative stress (ROS). ROS and NO are inversely related. When ROS increases within the body, it leads to diminished availability of NO and endothelial

dysfunction. S7 has a dual-action approach, targeting the reduction of oxidative stress while also triggering our body to produce more NO—which makes it easy to provide functional plant-based benefits to your finished product formulation.

ACCOLADES

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2019 Winner

Best New Ingredient
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The Food Matters Live Awards celebrate the latest innovation across the food, drink, and nutrition sectors.

2019 NIE SPORTS NUTRITION

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The NIE Awards highlight the most cutting-edge and advanced natural branded nutritional ingredients backed by science.

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