

# Understanding NanoVi<sup>™</sup> Technology

Improves cellular activity by boosting repair of oxidative stress damage.

Better cellular repair is the key to:

- Speeding recovery and regeneration
- Optimizing energy production
- Strengthening the immune system
- Promoting healthy aging
- Helping fight many chronic diseases



# NanoVi<sup>™</sup> Technology

Improves cellular activity by assisting the second phase of oxidative response

1950s - recognized that damaging free radicals are generated when the cell's mitochondria convert oxygen and glucose to energy. 1970s - confirmed that free radicals are reactive oxygen species (ROS) and neutralizing ROS is the body's first line of cellular defense. 1980s - determined that the body's second line of defense is to repair oxidative damage, and this repair is triggered by certain ROS signals. 2010s - NanoVi<sup>™</sup> technology provides precisely the same ROS-specific signal that triggers cellular repair, without creating harmful ROS.

#### PHASE 1: AVOID OXIDATIVE STRESS DAMAGE **OXYGEN METABOLISM CREATES OXIDATIVE STRESS** When oxygen is metabolized in the cells, the mitochondria convert glucose and oxygen into energy. Reactive oxygen species (ROS) form as normal The cell's first line of defense is to neutralize free radicals. In the initial phase of oxidative response, antioxiby-products of cell metabolism. ROS are involved in two different processes: oxidative stress and oxidative response. They act as free radicals during dants help avert damage. However, hundreds of guadrillions of free radicals are produced per day. Unavoidoxidative stress and some also serve as second messengers during the second phase of oxidative response. able damage still occurs, harming the cell's proteins, DNA, and other vital components. Free Radical Protein Damage Antioxidant Antioxidants scavenge ROS and lessen damage. Antioxidants can be supplemented, but regardless of how many are ROS molecules damage cells, but eaten or injected, oxidative stress damage is unavoidable. some also act as second messengers to initiate cellular repair.

## PHASE 2: REPAIR OXIDATIVE STRESS DAMAGE

The second phase of the body's oxidative response is to repair damage previously caused by oxidative stress. In the role of a second messenger, certain ROS emit a specific near infrared signal. In the body, the signal is distributed via water molecules to trigger repair of oxidative stress damage throughout the system. The result is improved cellular activity.

NanoVi<sup>™</sup> is the only technology to precisely produce the ROS-specifc signal without generating any damaging ROS. University research confirmed that the NanoVi<sup>™</sup> signal is exactly the same as the biological signal emitted by certain ROS, so it is considered bio-identical.

The bio-identical signal is transferred from the NanoVi<sup>™</sup> device to the user by humidity in an airstream. This signal connects through the mucus membrane and cascades throughout the body.



Second Messenger Signal (Emitted by ROS)

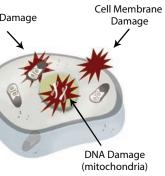
When ROS act as second messengers, they emit their energy, generating a specific biological signal that triggers repair mechanisms.

ing Improves cellular activity

NanoVi ™- assisted biological signaling

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#### **Oxidative Stress Damage Leads** to Reduced Cellular Activity

#### **Biological**

- reduces utilization of oxygen
- reduces cell energy production
- reduces utilization of nutrition
- reduces vitality

#### Health

- leads to chronic diseases
- causes mitochondrial diseases
- slows wound healing
- reduces the general state of health

#### Aging

- causes aging in general
- causes certain age-related disorders
- affects concentration & memory

#### Sports

- · limits focus and endurance
- slows recovery
- weakens the immune system



#### Biological

- increases utilization of oxygen
- improves cell energy production
- improves utilization of nutrition
- improves vitality

#### Health

- helps prevent diseases & disorders
- improves cell detoxification
- accelerates cell regeneration
- improves the general state of health

#### Aging

- slows the aging process
- promotes healthy aging
- enables better quality of life

#### Sport

- improves physical performance
- shortens recovery time
- strengthens the immune system



## Eng3's NanoVi<sup>™</sup> Technology

Oxygen metabolism is involved in cell metabolism and is essential for energy production (ATP). Unfortunately, oxygen metabolism always generates oxidative stress by producing free radicals. To minimize cellular damage caused by free radicals, the body relies on two phases of oxidative response. The first phase is to avoid damage and the second phase is to repair it. Eng3's technology is used to boost the second phase of oxidative response by enhancing cellular repair. Better health, vitality, and performance result from improved cellular activity.

## OXIDATIVE STRESS DAMAGE

Oxidative stress damage has a negative effect on cellular function and reduces overall cellular activity. Damage caused by oxidative stress is implicated in the aging process, as well as in chronic disorders and diseases such as cancer, diabetes, and cardiovascular disease.

Some of the more common effects of oxidative stress on quality of life include:

- slower regeneration after physical performance
- burn out, low energy, fatigue
- reduced concentration and mental performance
- decreased function of the autonomic nervous system

Some of the more common disorders associated with oxidative stress include:

Alzheimer's Disease

Autoimmune disease

Cardiovascular disease

- Attention Deficit Disorder/ADHD
- Arteriosclerosis
- Asthma
- Autism

Chronic Fatigue Syndrome

Cancer

- COPD
- Diabetes
  - Emphysema

Celiac Disease

Erectile Dysfunction

- Fibromyalgia
- Hypertension
- Hypothyroidism
- Inflammatory Bowel Disease
- Macular Degeneration
- Mitochondrial disease
- Multiple Sclerosis
- TWO PHASES OF OXIDATIVE RESPONSE

Oxidative response is the body's natural defense against damage caused by free radicals which are also called reactive oxygen species (ROS). The first phase of oxidative response attempts to avoid oxidative damage by neutralizing ROS. Antioxidants act as scavengers that bind to free radicals before they can be harmful. The second phase of oxidative response is to repair unavoidable damage. Repair is initiated through biological signaling from certain ROS. The ROS-specific signals are transferred over a network of connected water molecules in the body.

The outcomes of strong oxidative response include, but are not limited to:

- protection against free radical damage repair of damage caused by free radicals
- better cell metabolism
- improved oxygen utilization
- stronger cell energy production

- improved cellular activity

## NANOVI<sup>™</sup> TECHNOLOGY

Eng3's NanoVi<sup>™</sup> devices assist the second phase of oxidative response with a validated and proven process that generates the exact ROS-specific signal known to initiate repair.

Studies with NanoVi<sup>™</sup> confirm the positive impact on cellular activity. Placebo-controlled research shows improved inflammatory response and up-regulation of the immune system. Additional research shows reduced DNA damage and improved markers for oxidative stress damage. User experiences and a range of diagnostic devices confirm improvement in cellular activities associated with the NanoVi™ device.

Areas of application for Eng3's NanoVi<sup>™</sup> devices include:

- Performance optimizing physical and mental performance (regeneration and recovery)
- Wellness promoting vitality and avoiding age-related problems
- Health addressing disorders associated with oxidative stress

NanoVi<sup>™</sup> technology relies on a biophysical process and does not introduces chemicals or substances of any kind. Devices are easy to use at home or administer in a professional setting.

The statements in this brochure have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any specific disease.

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Neurological disorders

• Respiratory/Pulmonary disease

Parkinson's Disease

Rheumatoid Arthritis

Sleep Apnea

Stroke

Tinnitus