

# Lapiena<sup>®</sup>

# NMN +

Premium Nad+ Booster

Nicotinamide Adenine Dinucleotide

Nicotinamide Mononucleotide

Niacinamide

Adenosine

PDRN

Panthenol

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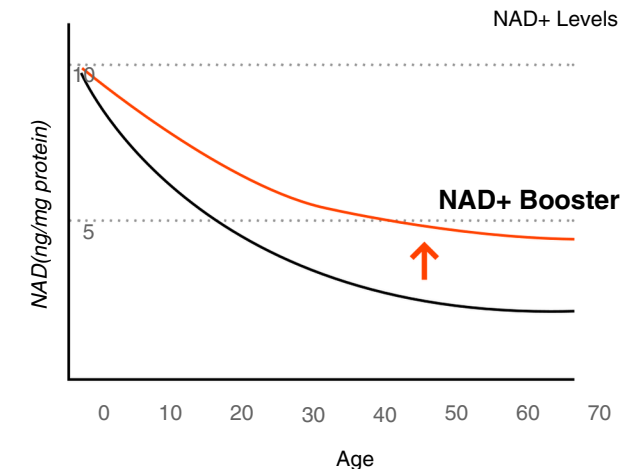
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# The Science Behind NMN

NMN (Nicotinamide Mononucleotide) is a **precursor** to NAD<sup>+</sup>, a key molecule involved in:

- Cellular energy (ATP) generation
- DNA repair
- Activation of sirtuins (SIRT1–SIRT7), essential for anti-aging
- Oxidative stress regulation

As we age, NAD<sup>+</sup> levels decline, leading to fatigue, cellular damage, and aging. Supplementing NMN restores NAD<sup>+</sup> and enhances cellular longevity.



## About NMN

NMN (Nicotinamide Mononucleotide) is a substance naturally produced in the bodies of humans and living organisms, and is instrumental in producing the vital energy our cells need for all human activity. Moreover, it is believed to slow down the effects of aging.

### Reference

Shade C. The Science Behind NMN – A Stable, Reliable NAD<sup>+</sup> Activator and Anti-Aging Molecule. Integr Med (Encinitas). 2020 Feb;19(1):12-14. PMID: 32549859; PMCID: PMC7238909.

# NMN vs NAD+ What's the Difference?

	NMN	NAD+
	Nicotinamide Mononucleotide	
Full Name		Nicotinamide Adenine Dinucleotide
Definition	Precursor to NAD+	Essential coenzyme for cellular energy metabolism
Location in Cells	Converted to NAD+ within cells (mainly in the cytoplasm)	Found in mitochondria, nucleus, and cytoplasm
Function	Converts into NAD+ and exerts effects	Promotes skin cell repair, collagen synthesis, and resistance to aging
Stability & Absorption	Converted to NAD+ after absorption; stable	Poor absorption and stability when taken directly
Application Goal	Boost NAD+ production for indirect effects	Directly protects and repair aging skin cells

# What Does NAD+ Do in Our Body?

## NAD+

NAD<sup>+</sup> is the source of the body's internal metabolism, being used whenever energy is produced. However, NAD<sup>+</sup> production begins to decrease in the body as we age. Moreover, research has found that when consumed directly, NAD<sup>+</sup> tends not to reach the cells, so consuming NMN, a NAD<sup>+</sup> precursor, is a more efficient means of delivering it to the body. Attention is being drawn to NAD<sup>+</sup> for its potential use in anti-aging using the two methods below.

### 1 Synthesis of energy (ATP)

ATP refers to a source of energy that all living things use to survive. All eukaryotic cells and most archaeobacteria and bacteria use NAD<sup>+</sup> to synthesize ATP. NAD<sup>+</sup> is essential to the synthesis of ATP in the mitochondria; without it, living organisms die.

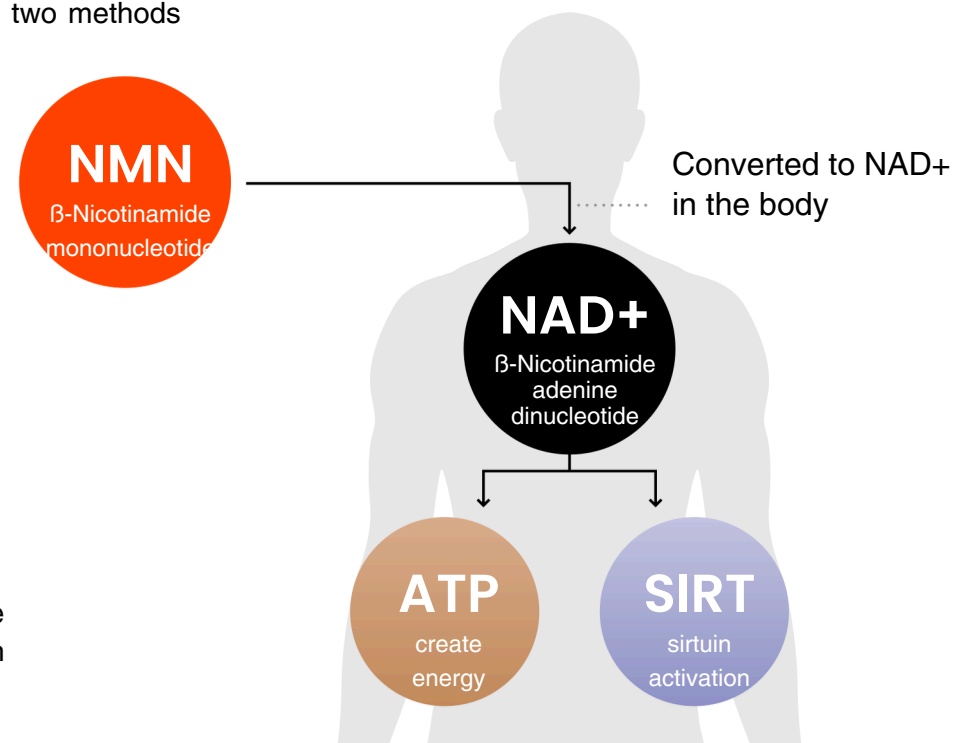
### Sirtuin (SIRT) activation

protein that plays a special role in controlling aging and lifespan. Humans possess a class of seven proteins called sirtuins that help control aging of the organs, but these sirtuins are normally dormant. NAD<sup>+</sup> functions as a switch that acts on all seven of these sirtuins. In other words, as NAD<sup>+</sup> declines through aging, the “switch” controlling sirtuins stops functioning, which is believed to contribute to decreased organ and tissue function.

### Reference

Imai, Si.,Guarente, L. It takes two to tango: NAD<sup>+</sup> and sirtuins in aging/longevity control. npj Aging Mech Dis 2, 16017 (2016). <https://doi.org/10.1038/npjamd.2016.17>

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# How Lapiena NMN+ Powers Your Skin

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## 1 Energy Production

NMN converts to NAD<sup>+</sup> inside cells NAD<sup>+</sup> boosts mitochondrial ATP output



## 2 Anti-Aging Gene Activation

NAD<sup>+</sup> activates SIRT1

→ Reduces inflammation,



## 3 Skin Regeneration

Sodium DNA + Amino Acids + Multivitamins stimulate collagen production, improve elasticity, reduce wrinkles



## 4 Moisture Retention & Barrier Support

Hyaluronic Acid complex retains hydration and strengthens skin matrix (ECM)

**Reference** Kiss T, Giles CB, Tarantini S, et al. Nicotinamide mononucleotide (NMN) supplementation promotes anti-aging miRNA expression profile in the aorta of aged mice. *Geroscience*. 2019;41(4):419–439. doi:10.1007/s11357-019-00095-x Song Q, Zhou X, Xu K, Liu S, Zhu X, Yang J. The safety and antiaging effects of nicotinamide mononucleotide in human clinical trials: an update. *Adv Nutr*. 2023;14(6):1416–1435. doi:10.1016/j.advnut.2023.08.008



# What makes Lapiena NMN+ special?

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## 1 Niacinamide (Vitamin B3)

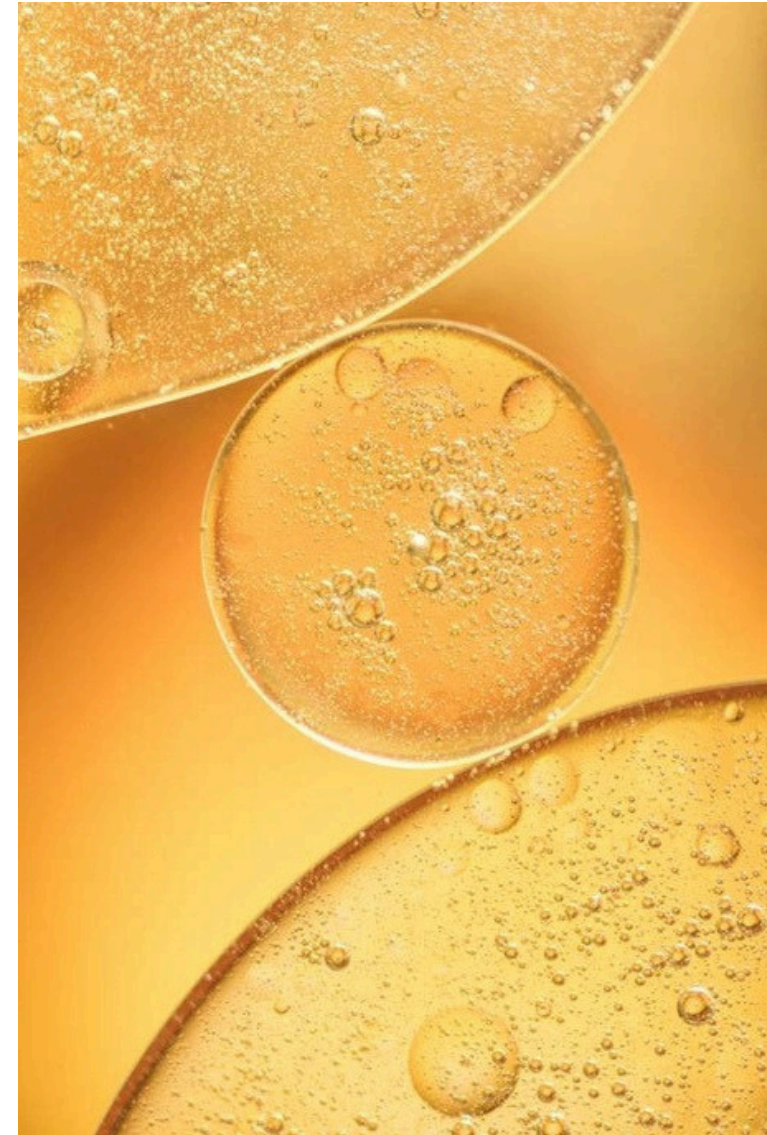
Niacinamide is a water-soluble form of vitamin B3 that plays an essential role in skin health. It also serves as a **precursor in the NAD+ production pathway**, meaning it helps generate the energy your skin cells need to repair and renew themselves.

### Skin Benefits

- Brightens dull skin by reducing melanin transfer
- Helps reduce redness, acne, and inflammation
- Minimizes the appearance of pores and improves skin elasticity
- Strengthens the skin barrier by boosting ceramide levels
- Regulates oil production, making it ideal for oily or acne-prone skin

### Synergy with NMN+

When combined with NMN, niacinamide enhances NAD+ levels even further, giving skin cells more energy to repair damage and defend against aging.



# What makes Lapiena NMN+ special?

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## 2 Adenosine

Adenosine is a natural molecule found in all living cells and a key component of ATP – the molecule that provides energy to your cells. It plays a critical role in **cellular repair** and **regeneration**.

### Skin Benefits

- Stimulates collagen and elastin production, improving skin firmness
- Smooths fine lines and wrinkles, especially around delicate areas like the eyes
- Enhances skin texture and elasticity
- Encourages healthy cell turnover, making skin look fresher and more youthful

### Synergy with NMN

When combined with NMN, adenosine benefits from increased cellular energy and SIRT1 activation, enhancing its effects on collagen production and wrinkle reduction.

# What makes Lapiena NMN+ special?

## 3 PDRN

PDRN is a biologically active DNA fragment, usually extracted from **salmon DNA**, and clinically purified for safe cosmetic use. It's a well-researched used in **regenerative ingredient** medical aesthetics.

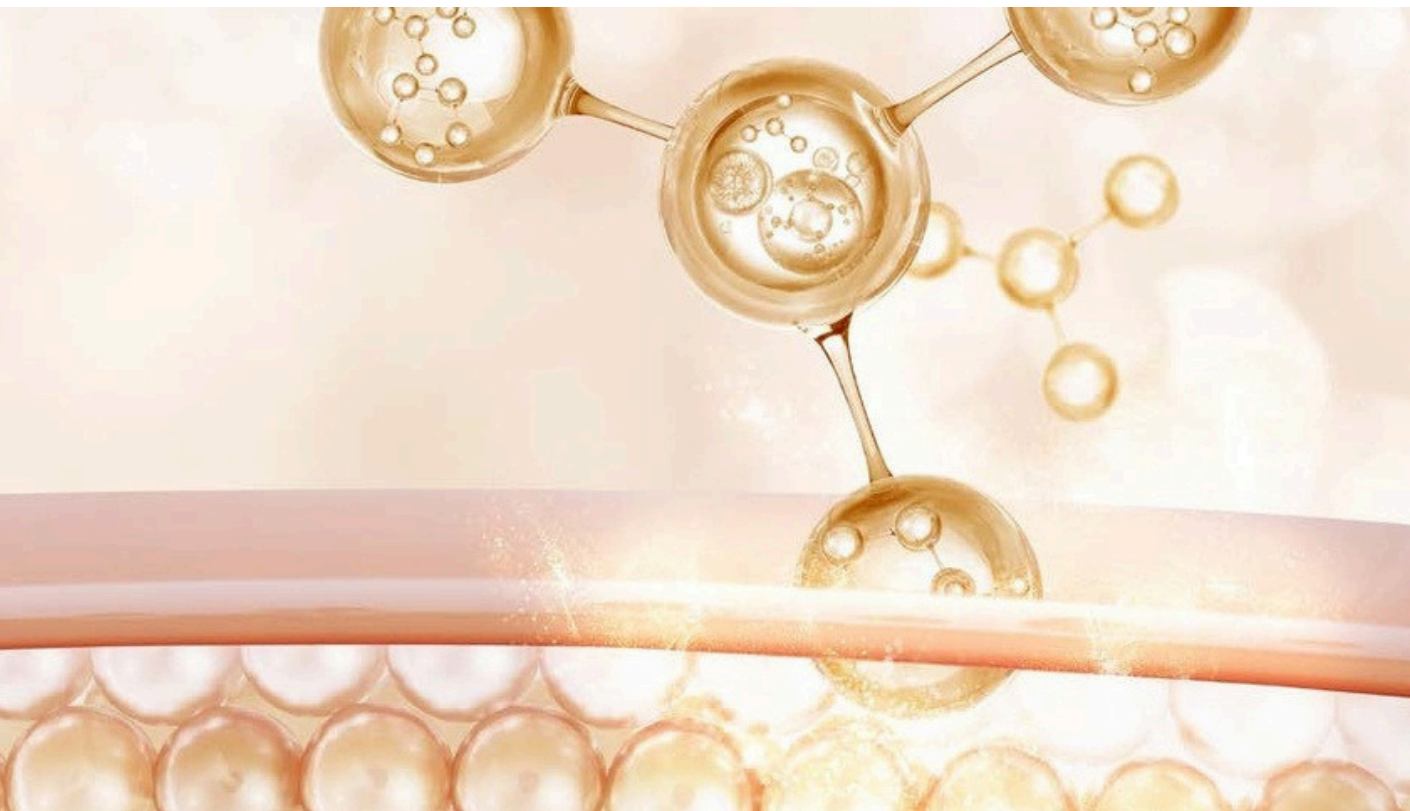
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### Skin Benefits

- Stimulates fibroblasts, the skin cells responsible for making collagen and elastin
- Accelerates healing, making it ideal for post-laser or damaged skin
- Reduces scarring, inflammation, and redness
- Improves skin thickness, firmness, and elasticity over time

### Synergy with NMN+

When combined with NMN, PDRN's regenerative effects are amplified as NMN supports DNA repair and cellular metabolism, accelerating tissue healing and skin renewal.





# What makes Lapiena NMN+ special?

## 4 Panthenol

Panthenol is the provitamin form of vitamin B5. Once absorbed, it transforms into **pantothenic acid**, which is crucial for maintaining a healthy, hydrated skin barrier.

### Skin Benefits

- Deeply hydrates the skin and locks in moisture
- Strengthens the skin barrier by supporting lipid production
- Calms irritated or inflamed skin, making it ideal for sensitive types
- Helps the skin recover faster after aesthetic treatments or environmental damage

### Synergy with NMN+

While NMN reactivates cells from within, Panthenol soothes and repairs the surface barrier — a dual recovery system.

# Benefits Overview

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**Anti-aging**  
Delays cellular aging  
at the root level



**Deep hydration**  
Hyaluronic complex restores  
dermal moisture



**Whitening & brightening**  
Niacinamide & vitamin C  
derivatives reduce pigmentation



**Enhanced regeneration**  
Sodium DNA + PDRN  
promote tissue healing



**Skin barrier recovery**  
Vitamin B5 (Panthenol),  
lecithin strengthen skin structure

# Behind the Stability: What Keeps NMN Effective

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## Why Disodium Phosphate & Sodium Phosphate Matter?

These two ingredients form **aphosphate buffer system**, which plays a critical role in stabilizing NMN injection formulations.

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## Key Functions

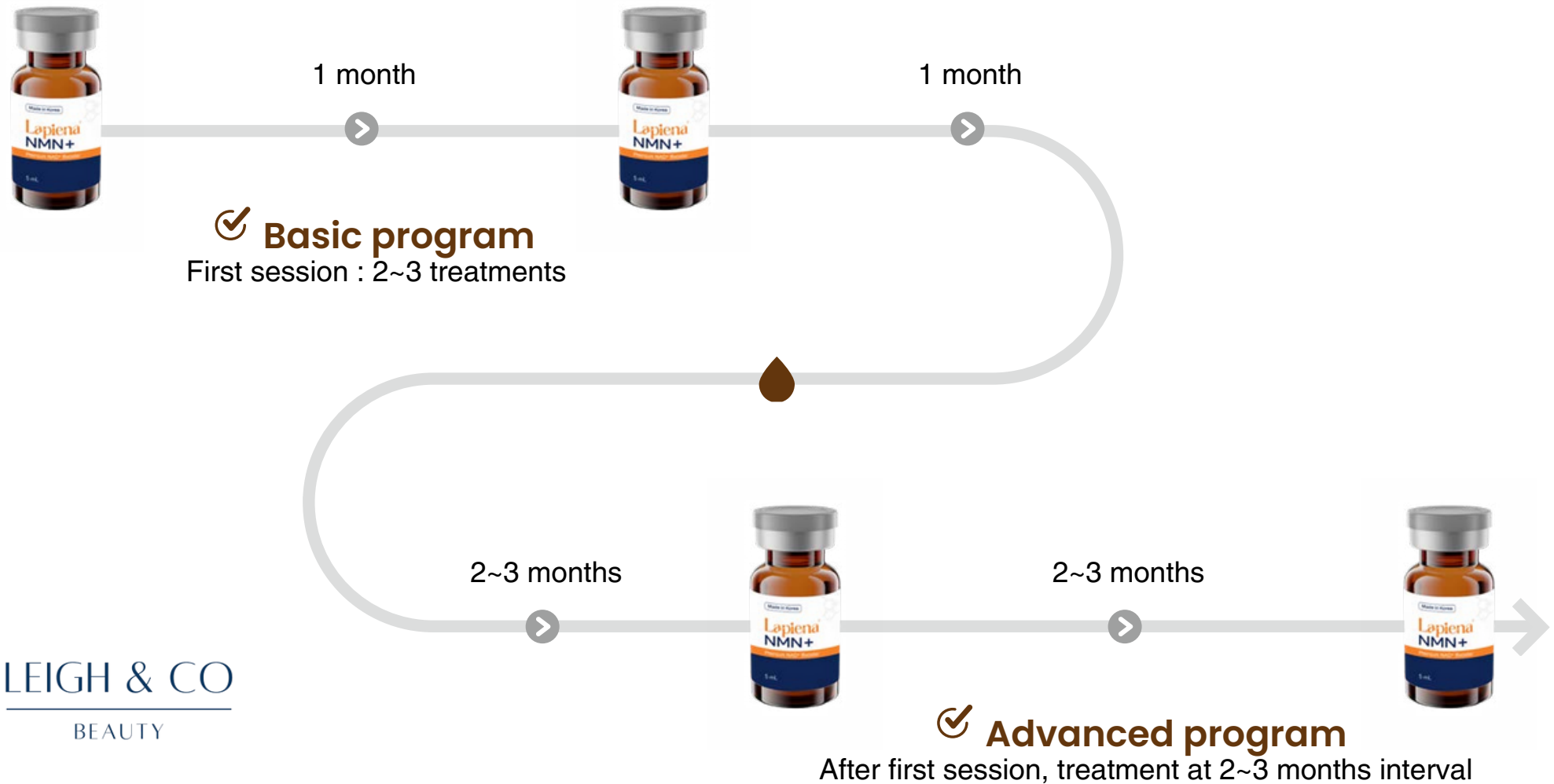
1. Maintains injection pH between **7.0–7.4**, the ideal physiological range
2. **Prevents degradation** of sensitive ingredients like NMN, NAD+, and hyaluronic acid
3. **Minimizes potential skin irritation** during topical cosmetic application

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## Importance in NMN Formulations For Cosmetic Use

1. **pH Sensitivity:** NMN and NAD+ are highly unstable under acidic or alkaline conditions
2. **Ideal Range:** pH 6.8–7.4 is optimal for maintaining cosmetic product stability and skin compatibility
3. **Biocompatibility:** Ensures compatibility and stability when combined with other bioactive ingredients like hyaluronic acid

# Treatment Journey



# Treatment

- MTS
- RF
- HIFU
- Fractional laser
- Derma-roller



## Combination

- EXOSOME
- PN/PDRN
- Hydro HA

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# Safe Application Guide

For topical cosmetic use only. Not intended for injection or invasive

- procedures.

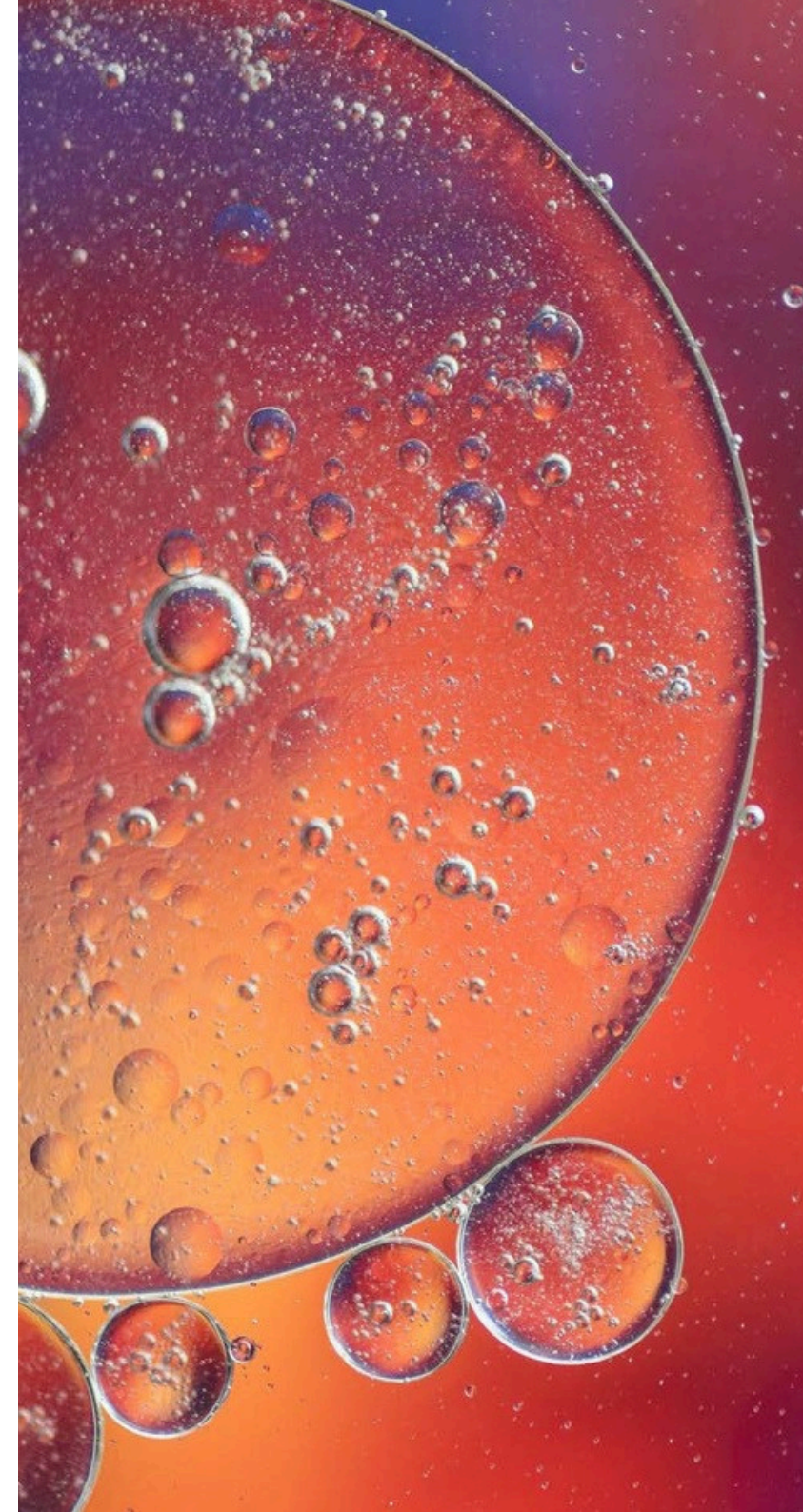
Store in cool, dry place under 30°C

- For single use only
- Avoid application around the eyes area
- Shake before use
- Avoid touching or stimulating the area after treatment
- Check for vitamin sensitivity or NAD+ allergy
- Not recommended for pregnant/lactating individuals without medical advice
- Avoid alcohol, smoking and sauna for at least 24hours after application
- Consult a specialist if any unexpected side effects occur
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# Product Details at a Glance

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Volume	5mL / vial
Package	1box (10 vials)
Usage	1 vial per treatment (full face)
Form	Liquid solution
Storage	Below 30°C, away from sunlight



Revitalize from the cellular level.  
NMN+ for timeless skin.

Leigh & Co Beauty

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