SUSTAINED RELEASE

# ENDUR-AMIDE®

## NIACINAMIDE

*Promotes health aging & cellular energy*

endurance products COMPANY

Since 1978

## WHAT IS IT?

ENDUR-AMIDE® Niacinamide is a sustained-release dietary supplement featuring niacinamide, the preferred form of niacin for healthy cell division, skin health and healthy aging benefit. The vegetable-based, wax-matrix tablet is formulated for slow, steady release of niacinamide over 5 to 7 hours.

## HOW DOES IT WORK?

Niacinamide is a precursor for the body's production of nicotinamide adenine dinucleotide (NAD+), an essential pyridine nucleotide present in all living cells. NAD+ acts as an important cofactor and substrate for a multitude of biological processes including energy production, DNA repair, gene expression, calcium-dependent secondary messenger signaling and immunoregulatory roles.

Niacinamide may help prevent skin cancer or reduce progression of subclinical lesions. While the mechanism of action is unclear, researchers suggest a role in DNA repair and/or immune protection.[1]

## WHO CAN BENEFIT?

For adults interested in nutritional support for mitochondrial and cellular health, DNA repair and antioxidant protection.

## PRODUCT AVAILABILITY

Bottle Size(s):
90, 200 tablets (500mg)
200 tablets (750mg)

## PRACTITIONER DISTRIBUTION

- WholeScript™ (www.wholescript.com)


### Supplement Facts

Serving Size 1 Tablet

| Amount Per Tablet | | % Daily Value |
|---|---|---|
| Niacin (as niacinamide) | 500 mg | 3125% |

### Supplement Facts

Serving Size 1 Tablet

| Amount Per Tablet | | % Daily Value |
|---|---|---|
| Niacin (as niacinamide) | 750 mg | 4688% |

**Other Ingredients:** Vegetable wax (rice bran and/or carnauba), stearic acid (vegetable), magnesium stearate (vegetable), and silica.

**Directions:** Take one (1) to three (3) tablets daily with food or drink, or as directed by your healthcare professional. Do not exceed recommended dose without consulting a physician.

1. Surjana D et al. *J Invest Dermatol.* 2012;132(5):1497-500.

## RESEARCH HIGHLIGHTS

### As an NAD+ precursor, niacinamide helps offset the age-related decline in NAD+ production in cells and tissues

Emerging pre-clinical research indicates that NAD+ metabolism represents a promising therapeutic target for the treatment of metabolic and age-related disorders such as obesity, diabetes, cardiovascular and neurodegenerative diseases. Evidence suggests that raising NAD+ levels using niacinamide or other NAD+ precursors could slow down and reduce symptoms of metabolic stress and possibly treat age-related diseases.[2]

Researchers attribute the age-related depletion of NAD+ in aging cells to: (1) a need for a higher level of NAD+ to meet the metabolic demands of aging and age-related diseases; (2) the inability of cells to adequately synthesize enough NAD+ to meet metabolic demands; or, (3) a combination of both.[3]

### Niacinamide reduces actinic keratoses in adults with sun damage

Two Phase II clinical trials[4] have been completed investigating whether oral niacinamide, at two different dosages, reduces actinic keratoses (AK) in adults with sun damage. AK is reported to be a strong predictor of nonmelanoma skin cancer.
Healthy, immune-competent adults with 4 or more palpable AK lesions were recruited from dermatology clinics in Sydney, Australia, and randomly assigned to take niacinamide (500 mg) or a placebo twice daily (Study 1) or once daily (Study 2) for 4 months.

Participants completed skin exams before randomization, were encouraged to use daily sunscreen, and remained blinded throughout the study. At baseline, 2 and 4 months, palpable AK lesions were identified, counted and documented.

Study 1 sample size (n=36) was based on clinical judgment as it was the first pilot trial of oral niacinamide. Compared to placebo, niacinamide resulted in a 35% relative reduction in AK count at 4 months (95% CI: 18-48%; *P*=.0006) with similar results at 2 months.

Study 2 sample size (n=41) was selected to ensure 80% power for an effect size of 0.4 (significance level of 0.05; two-sided). Niacinamide resulted in a 29% relative reduction in AK count at 4 months (95% CI: 11-44%; *P*=.005) with smaller but significant differences observed at 2 months.

These findings suggest niacinamide (500 mg, once or twice daily, for 4 months) is effective in reducing AK count and shows promise for skin cancer prevention in adults with sun damage.

### Niacinamide reduces nonmelanoma skin cancers in high-risk patients

One randomized, double-blind, placebo-controlled study[5] designed to assess the effect of niacinamide supplementation on the incidence of nonmelanoma skin cancers in high-risk patients indicates beneficial effects. For this study, researchers randomly assigned 386 men and women, age 30 to 91 years (mean age 66 years), with a recent history of nonmelanoma skin cancers to receive either niacinamide (500 mg, twice daily) or placebo for 12 months. The 1,000 mg/day dosage was chosen based on results of previous Phase 2 studies showing its efficacy in reducing actinic keratosis (AK) counts.

Dermatologists evaluated participants at 3-month intervals for 18 months. Compared to placebo, niacinamide treatment significantly (*P*<.05) reduced the rate of new nonmelanoma skin cancers by 23% at 12 months. Niacinamide also significantly (*P*<.05) reduced the AK count vs. placebo: 11% lower at 3 months, 14% lower at 6 months, 20% lower at 9 months, and 13% lower at 12 months. Treatment was well tolerated. These findings suggest that niacinamide is a safe and well tolerated option to help reduce the risk of nonmelanona skin cancers in high-risk patients.

2. Braidy N, et al. *Exp Gerontol*. 2020;132:110831.
3. McReynolds MR, et al. *Exp Gerontol.* 2020;134:110888.
4. Surjana D et al. *J Invest Dermatol.* 2012;132(5):1497-500.
5. Chen AC et al. *N Engl J Med.* 2015;373(17):1618-26.