What is Vitamin B3?

Vitamin B3 is one of the eight B vitamins and is also known as niacin (nicotinic acid). It has two other forms, niacinamide (nicotinamide) and inositol hexanicotinate (IHN), which have different effects from niacin. For example niacinamide does not cause skin flushing but may cause excessive sweating and IHN has a slower absorption. Niacin functions in the body as an active component in the coenzymes NAD (nicotinamide adenine dinucleotide) and NADP (nicotinamide adenine dinucleotide phosphate).

Why is Vitamin B3 important and what does it do in the body?

Vitamin B3, like many of the B vitamins, plays an important role in many body reactions. It supports over 50 chemical reactions in the body and plays an important role in energy production as well as the metabolism of fat, cholesterol and carbohydrate. It also has a role in the production of sex and adrenal hormones and supports brain function, reducing the use of tryptophan. Niacin is also involved in the regulation of blood sugar, anti-oxidation mechanisms and detoxification reactions. It is commonly used in the form of nicotinic acid for individuals with high cholesterol.

What amount of Vitamin B3 do you need each day?

The body converts the amino acid tryptophan to create niacin (using also B6 and iron), and consequently deficiencies in B3 are not common. Daily recommendations for niacin in the diet of healthy individuals are listed below. Generally, high doses of niacin are used to control specific diseases such as elevated cholesterol, pellagra (a B3 deficiency disease with symptoms such as diarrhea and mental disturbance), dermatitis and dementia. It also helps with recent onset Insulin Dependent Diabetes, rheumatoid and osteoarthritis. High doses must be prescribed by a qualified professional and it is recommended that regular screening for liver stress and cholesterol status are completed. If doses above 50mg per day are required, facial flushing may be a result and inositol hexaniacinate is recommended to reduce this effect.

The DRI (Daily Recommended Intake) /RDA (Recommended Daily Allowance) of dietary vitamin B3 are listed on the next page:

Please Note: By definition, the DRI/RDA recommendations apply only to 98% of healthy individuals and are not sufficient for those with higher nutrient requirements based upon their biochemical individuality, genetics, health status, medications, deficiencies, lifestyle, and toxic exposures.
Daily recommendations for Vitamin B3 are listed below.

**Pediatric**

- Infants birth - 6 months: 2 mg (adequate intake)
- Infants 7 months - 1 year: 4 mg (adequate intake)
- Children 1 - 3 years: 6 mg (RDA)
- Children 4 - 8 years: 8 mg (RDA)
- Children 9 - 13 years: 12 mg (RDA)
- Boys 14 - 18 years: 16 mg (RDA)
- Girls 14 - 18 years: 14 mg (RDA)

**Adult**

- Men 19 years and older: 16 mg (RDA)
- Women 19 years and older: 14 mg (RDA)
- Pregnant women: 18 mg (RDA)
- Breastfeeding women: 17 mg (RDA)

People who do not eat a balanced diet every day may benefit from taking a multivitamin and mineral complex.

**RECOMMENDED DAILY ALLOWANCE** 18mg/Day  
**OPTIMAL DAILY ALLOWANCE** 85mg/day
What are possible Vitamin B3 (Niacin) deficiency conditions and symptoms?

- Claudication (cramping in the calf muscle when walking)
- Depression
- Dermatitis
- Diarrhea
- Eczema
- Edema (Water Retention)
- Fatigue
- High cholesterol
- Hyperpigmentation
- Insomnia
- Loss of Appetite
- Memory Loss
- Osteoarthritis
- Raynauds disease (cold hands and feet)
- Red neck
- Rheumatoid arthritis
- Schizophrenia
- Skin eruptions
- Sore tongue/mouth
- Stress and Anxiety

What are possible Vitamin B3 excess symptoms?

Niacin should not be used without professional guidance. Caution should be exercised in individuals with previous or current liver disease or elevated liver enzymes, gout or peptic ulcers. If high dose niacin, inositol hexaniacinate or niacinamide therapy is used, periodic checking of liver function and cholesterol is required 20-30 minutes after taking niacin there may be facial flushing. This may be reduced using sustained or timed-release/slow-release niacin products. Such products may be more toxic to the liver and cause liver damage. Other side effects include gastric irritation, nausea. Niacin can impair glucose tolerance.

What steals Vitamin B3 from the body?

- Certain drugs
- Bile acid sequestrants.
- Broad spectrum antibiotics: Amoxicillin/Clavulanic Acid (Augmentin), Vancomycin

What tests can be used to assess Vitamin B3 or niacin levels?

- N-Methyl nicotinamide, lactate and pyruvate in urine
- Erythrocyte (red blood cell) levels of NAD and Polyadenosine diphosphate (ADP) ribosylation
- Urinary ketoacid elevations
- Fecal fat
What foods contain the highest amounts of Vitamin B3?

TOP 10 VITAMIN B3 (NIACIN) RICH FOODS ARE:

1. **Yeast extract**
   - 97mg/100g
2. **Yellow fin tuna**
   - 22.1mg/100g
3. **Anchovies**
   - 19.9mg/100g
4. **Liver**
   - 16.7mg/100g
5. **Peanuts**
   - 14.9mg/100g
6. **Turkey breast**
   - 14.3mg/100g
7. **Chicken**
   - 12.5mg/100g
8. **Pork (lean cooked chop)**
   - 10.9mg/100g
9. **Beef (Cooked lean rib)**
   - 9.0mg/100g
10. **Sunflower seeds**
    - 8.3mg/100g

What are the best Vitamin B3 products?

Inositol hexaniacinate.

REFERENCES

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All the statements, including product labels, supporting literature and/or product manufacturers websites have not been evaluated by FDA. These products are not intended to diagnose, treat, cure or prevent any disease.
What are the very best Vitamin B3 products to buy?

**PRL Max B-ND**
Dietary Supplement
Max B-ND™ is a nutritional industry first - with never before available probiotic-cultured B vitamins. It contains a high-energy, end-chain, B vitamin complex derived from live sources for ...

**ProThera Thera-B**
B-complex with activated folate and B12.
Thera-B™ provides a full-complement of essential B-complex vitamins and related nutrients in high potency amounts. Inclusion of Metafolin®** L-5-methyltetrahydrofolate (L-5-MTHF, a bioactive ...

**Klaire VitaSpectrum**
This comprehensive multiple vitamin/mineral supplement contains 28 highly bioavailable ...

**ProThera MultiThera 3**
Iron- and copper-free multiple formula.
Both iron and copper have been eliminated from this version of MultiThera® to address the needs of patients who may have elevated tissue identical in all other respects to MultiThera® 1 ...

**Pure Caps Womens Pure Pack**
Women’s Supplement to Support Bone and Heart Health. Now With Metafolin® L-5-MTHF. Sizes Available 30 packets. Each packet contains 6 different supplements, including ...

**Pure Caps Mens Pure Pack**
Regardless of your walk of life, all men need to ensure that they get enough of an array of important nutrients. However, who wants to spend their time picking out supplements for a daily …