



# B

## VITAMIN B<sub>3</sub>

### B Vitamins: Establishing Healthy Growth

#### VITAMIN B<sub>3</sub> BASICS

Also known as: Niacin

Important for: Growth, nervous system

Animal Sources: Liver, kidneys, heart, fish, meat

Grain/Fruit/Vegetable Sources: Yeast, cereals, avocados, figs, dates, prunes, nuts, legumes

#### OVERVIEW

Vitamin B<sub>3</sub> is a water soluble vitamin that is part of the vitamin B complex group. Vitamin B<sub>3</sub> plays an important role in all metabolic processes in the body and is required for growth. It can be acquired from diet, as well as produced in small amounts from the amino acid, tryptophan.

#### DISCOVERY AND HISTORY

In 1937, biochemist Conrad Elvehjem identified nicotinic acid in fresh meat and yeast. This compound, now known as niacin, is vitamin B<sub>3</sub>. This discovery led to a cure for pellagra, a disease related to vitamin B<sub>3</sub> deficiency and characterized by “the four D’s”: dermatitis (skin inflammation), diarrhea, dementia (confusion) and eventually, death.

#### VITAMIN B<sub>3</sub> DEFICIENCY

Dietary surveys indicate that 15 to 25 percent of older adults do not consume enough vitamin B<sub>3</sub> in their diets to meet the recommended intake values. Severe vitamin B<sub>3</sub> deficiency leads to pellagra; this is rare in developed countries except for in chronic alcoholics. In developing countries, particularly where maize and barley are the major staples, vitamin B<sub>3</sub> deficiency persists. India, China and parts of Africa are places where populations still suffer from vitamin B<sub>3</sub> deficiency. Symptoms include:

- Pellagra
- Skin lesions
- Diarrhea
- Confusion
- Digestive inefficiency
- Insomnia
- Fatigue
- Loss of appetite
- Indigestion
- Canker sores
- Vomiting
- Depression

#### POPULATIONS AT RISK OF VITAMIN B<sub>3</sub> DEFICIENCY

- Populations who only eat maize or barley as the major staples
- Alcoholics