

# Vitamin A

Vitamin A is a group of unsaturated nutritional organic compounds that includes retinol, retinal, retinoic acid, and several provitamin A carotenoids (most notably beta-carotene)

## Gene

### BCO1

The protein encoded by this gene is a key enzyme in beta-carotene metabolism to vitamin A. It catalyzes the oxidative cleavage of  $\beta$ -carotene into two retinal molecules. Diseases associated with BCO1 include Hypercarotenemia and Vitamin A Deficiency. Researches revealed that higher circulating  $\beta$ -carotene levels in GG homozygotes depend on carotenoid intake while TT variants showed a reduced ability to convert beta carotene.

## Your Genotype

### GT

## Your Response

Medium

## Benefits

It is essential for normal growth, skeletal development, reproduction, lactation and the maintenance of the nervous system.

It helps build and maintain good vision, strong bones, healthy teeth, skin, hair and gums.

Vitamin A in the form of beta-carotene is an antioxidant, which helps protect your cells from damage caused by free radicals.

Beta-carotene may also help protect you from developing some cancers.

A major benefit of Vitamin A is that it helps treat deficiency syndromes such as: Treats poor night vision, help in to remove extreme dryness of the eyes, help to repair dry and rough skin, fight with infectious diseases, help in immune system

## Interpretation

Your genetic result indicates moderate risk for Vitamin A. This genotype in BCO1 is associated with normal conversion of  $\alpha$ - and  $\beta$ -carotenes to vitamin A.

| Food Source  | Amount           | Nutrition Value |
|--------------|------------------|-----------------|
| Carrot       | 1 cup raw sliced | 21,384 IU       |
| Sweet potato | 1 whole          | 18,443 IU       |
| Spinach      | 1 cup raw        | 2,813 IU        |
| Apricot      | 1 fruit          | 674 IU          |
| Butter       | 1 Tbsp           | 355 IU          |
| Eggs         | 1 Extra large    | 302 IU          |