

**FAT - SOLUBLE VITAMINS:
VITAMIN K**

Patient Resource

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Other names for vitamin K

Vitamin K		
Form	Name	Source
K ₁	phylloquinone	Green plants
K ₂	menaquinones	Gut (intestinal) bacteria
K ₃	menadione	Synthetically produced

NOTE:

Vitamin K is best absorbed when eaten with healthy fats.

Visit

<https://www.anniweeks.com/product-page/healthy-fat-foods-reference-card>

for a Healthy Fat Foods reference card



Significant Sources of Vitamin K

Spices, Herbs, & Seasonings

- basil
- coriander leaf
- mint
- parsley

Vegetables

- asparagus
- broccoli
- brussel sprouts
- cauliflower
- chard
- cucumber
- green onions (scallions)
- cabbage
- lettuce
- watercress

Oils

- vegetable oils
- soybean oil
- canola (rapeseed) oil

Beans & Legumes

- lentils
- mung beans
- soybeans

Other

- green tea leaves
- oats
- seaweed
- wheat bran

Highest Amounts

- cooked spinach
- collard greens
- kale
- turnip, beet, and mustard greens

Animal Sources



- beef, chicken, and pork liver
- egg yolk

Functions of Vitamin K

- blood clotting
- bone metabolism and health
- strong and healthy vessels

How stable is vitamin K?

Vitamin K in fats & oils is destroyed by being exposed to fluorescent light and sunlight (ultraviolet rays). It is resistant to heat, oxygen, and moisture.



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Dietary Reference Intakes

The DRIs for vitamin K are based on Adequate Intake (AI). When assessing intake with your healthcare team, it is important to be mindful of all the sources you are taking, including supplements.

Upper Limit (UL)

There is not a documented toxicity level (Upper Limit or UL) for vitamin K, however it is toxic in large amounts (see symptoms of toxicity on the following page).

Adequate Intake Amounts of Vitamin K (in mcg/day)	
Infants*	
0-6 months	2
7-12 months	2.5
Children	
1-3 years	30
4-8 years	55
9-13 years	60
14-18 years	75
Adults	
Male	120
Female	90
Pregnancy & Lactation	
Under 18 years	75
19-50 years	90
*Infant recommendations assume prophylactic vitamin K (shot) given at birth	

Helpful Terms to Know

- **Adequate Intake (AI):** recommended daily intake of a nutrient; established by the Institutes of Medicine (IOM) to meet or to exceed the needed amount to maintain adequate nutrition for most people in a particular stage of life or gender group; established when not enough evidence is available to determine the RDA
- **Recommended Dietary Allowance (RDA):** covers the needs of 97-98% of individuals in a group; the average amount of a nutrient a healthy person should consume daily. Vary by gender, age, and whether a woman is pregnant or breastfeeding. Developed by the Food and Nutrition Board at the IOM of the National Academies.
- **mcg** = microgram



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Deficiency

In adults, deficiency is rare.

However, in infants, a deficiency at birth is common (vitamin K is routinely administered in a shot within an hour of the infant being born).

Symptoms of deficiency

General

- Hemorrhage (excessive bleeding)
- Bleeding
- Bruising
- Inadequate bone metabolism/mineralization
- Pain
- Prolonged blood clotting

Infants

- Pale skin or lips
- Irritability
- Seizures
- Excessive sleeping
- Jaundice (yellowing of eyes after the first ~3 weeks of life)
- Bloody, black, or sticky stool
- Vomiting blood or excessive vomiting

Toxicity

Symptoms of Toxicity

General

Note: These symptoms are based on rare cases of anaphylaxis, shock, and immune/allergy response prompted by incorrect doses of vitamin K or administration of synthetic forms. Dietary intake is the preferred route of ingestion, and reporting any supplement consumption to your doctor is always encouraged.

- Flushing
- Dizziness
- Sweat
- Rash
- Decreased blood pressure
- Increased clotting factors

Infants

- Hemolytic anemia
- Hyperbilirubinemia (build up of bilirubin in the blood)

Remember:

“All infants, including newborn infants, should receive vitamin K” (see www.anniweeks.com for full reference list of quoted sources)



“Remember, [vitamin K deficient bleeding] is easily preventable with just a single vitamin K shot at birth.”

*National Center on Birth Defects and Developmental Disabilities,
Centers for Disease Control and Prevention*



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Supplementation

Uses

Vitamin K is used in the treatment of hypoprothrombinemia (low prothrombin levels) as well as to increase blood clotting.

Available Forms

Vitamin K in supplement form is generally available as phylloquinone, MK-4, or MK-7. Common examples include Mephyton and Konakion.



Potential Drug-Nutrient Interactions

Those taking anticoagulants (such as Warfarin) need to monitor their vitamin K intake and ensure that it is consistent. Drugs like Warfarin work against vitamin K and can decrease clotting time if vitamin K intake is not kept at a consistent level day to day.

Fat-malabsorptive disorders

For those with disorders affecting fat-absorption, and thereby fat-soluble vitamin absorption, water-soluble forms of vitamin K are manufactured. Talk to your dietitian about these alternative options if this applies to you.

