

A balanced diet is the best way to get the recommended amount of vitamins and minerals. However when you have kidney disease sometimes it is difficult to get enough. This might be because:

- you have dietary restrictions
- your appetite is poor and you find it difficult to eat
- treatments and appointments mess up meal times
- side effects of drugs
- you might lose vitamins during dialysis.

Some vitamins must be limited or avoided because levels build up in the body as the kidneys stop working. Below is an overview of the vitamins your body cannot do without and the dietary recommendations for patients with chronic kidney disease.

### **Fat soluble vitamins- special care needed - most likely avoid**

Vitamin Role CKD Recommendations

#### Vitamin A

Promotes growth of cells and tissues and protects against infection. Helps you to see in the dark!

Levels are usually up and not recommended, may cause toxic levels.

#### Vitamin D

Helps the body absorb calcium and phosphorus for bones and teeth; regulates parathyroid hormone (PTH)

In CKD the kidney loses ability to make vitamin D active. Supplementation with active vitamin D depends on

#### Vitamin E

Anti-oxidant; helps protect against illnesses like heart disease and cancer

Supplement not needed and may interfere with clotting times

#### Vitamin K

Helps make blood clotting proteins, important for healthy bone formation

Supplements not needed unless long term poor intake combined with antibiotic therapy. May cause clotting

Water soluble vitamins - take advice from your doctor - these may be required      **Vitamin K** CKD F

#### Vitamin B1 (thiamin)

Helps the body's cells produce energy from carbohydrates, helps nervous system work properly

1.5 mg/day supplement

#### Vitamin B2 (riboflavin)

Helps cells produce energy, supports normal vision and healthy skin

1.8 mg/day supplement for CKD on a low protein diet;

1.1-1.3 mg/day supplement for those on dialysis, especially with poor appetite

### Niacin

Helps the body use sugars and fatty acids; helps body cells produce energy; helps enzymes function in

14 to 20 mg/day supplement recommended for CKD patients

### Vitamin B6

Helps the body make protein, for cells; also helps make red blood cells; changes tryptophan (an amino

Your doctor will advise the level for you to take.

### Folate

Helps make DNA for new body cells; works with vitamin B12 to make red blood cells

1.0 mg/day supplement recommended for CKD (dialysis and non-dialysis).

Include vitamin B12 or check blood levels; folate supplements can mask a vitamin B12 deficiency

## Vitamin B12

Helps make new body cells; maintains nerve cells; works with folate to make red blood cells

2-3 ug/day supplement recommended for CKD (dialysis and non-dialysis); deficiency can cause permanent

Always include B12 supplement with folate

## Vitamin C

Helps the body absorb iron; helps manufacture collagen, form and repair red blood cells, bones and other

60-100 mg/day supplement recommended for CKD patients (dialysis and non-dialysis).

Excess intake may cause oxalate deposits in bone and soft tissues

## Biotin

Helps body cells produce energy; helps metabolize protein, fat and carbohydrates in food

30-100 ug/day supplement recommended for CKD patients (dialysis and non-dialysis); dietary intake m

## Pantothenic Acid

Helps body cells produce energy; helps metabolize protein, fat and carbohydrates

5 mg/day supplement recommended for CKD patients (dialysis and non-dialysis)

### **Which vitamins do I need if I have chronic kidney disease?**

You may need to take additional water soluble vitamins - B1, B2, B6, B12, folic acid, niacin, pantothenic acid, biotin and a small dose of vitamin C.

### **Which vitamins do I need to avoid if I have CKD?**

Fat soluble vitamins (A, D, E and K) are more likely to build up in your body and should be avoided unless prescribed. Vitamin A is especially a concern, as toxic levels may occur with daily supplements.

Blood tests are carried out to decide if you need vitamin D supplements. Vitamin C supplements are recommended in a 60 to 100 mg dose.

**Speak to your doctor and dietician if you have any concerns or questions.**