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## What is calcium and phosphate?

Calcium is a mineral found in your teeth, bones and the blood. Most calcium is found within your bones. Calcium helps with bone strength and also helps the blood to clot.

Phosphate is another mineral found in your body. Phosphate is vital for growth, maintenance and repair of all body tissues. Along with calcium, phosphate also helps build strong and healthy bones.

## What foods are rich in calcium and phosphate?

Calcium rich foods include:

- Milk and milk products
- Dark green vegetables

Phosphate is found in most foods.

Foods high in phosphate include:

- Milk products (milk, cheese)
- Red meat
- Fish
- Poultry
- Eggs
- Nuts
- Legumes
- Chocolate

Most of these foods are also good sources of protein and vitamins so it is important that you do not cut out these foods altogether. A dietitian can help you to work out the right amount of these foods to meet your needs.

Processed and packaged foods often contain preservatives that are high in phosphate. These added phosphates are absorbed more readily by our bodies than natural phosphates in foods.

Choosing fresh foods and cooking with fresh ingredients, will help to limit the amount of phosphate that you eat.

It is very important to remember to take your phosphate binding medications, if prescribed them, with your meals to limit the amount of phosphate you do absorb from your diet.

## What do the kidneys have to do with calcium and phosphate balance?

The kidneys help maintain the balance of calcium and phosphate by:

- Removing excess phosphate from your blood
- Activating vitamin D to move calcium and phosphate into your body from your gut

When your kidneys do not work, phosphate levels often go up and calcium levels fall.

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Low calcium and high phosphate levels cause parathyroid hormone (PTH) release from the parathyroid glands to try and correct these problems.

Over time however, high levels of PTH, phosphate or calcium can adversely affect your bones and blood vessels.

## What can you do?

There are some important things that you can do to try and help maintain the balance of calcium and phosphate.

**Diet** – You can eat less high phosphate food.

A dietitian can help you look at foods that are lower in phosphate.

**Medications** – Phosphate binders such as calcium carbonate (e.g. Caltrate®), sevelamer (e.g. Renagel®) or lanthanum (e.g. Fosrenol®) work by binding to phosphate in your gut and prevent it being absorbed into the blood. If prescribed these medications, you need to take them **with** food.

**Regular blood tests** – It is important for you to have regular blood tests when asked by your doctor, since monitoring these results may allow the doctor to discuss ways to help you maintain a good level of calcium and phosphate.

## Contact

Dietetics

RMH Kidney Care Service

9342 7440

## Practitioner / Patient notes

RMH Kidney Care | KCS06.02.02 | Deputy Director Nephrology | Expiry January 2022



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