

RENAL DIETS

– *what's the solution?*

Dieticians from the British Dietetic Association Renal Nutrition Group give their views

Changing the eating habits of a lifetime is far from easy, especially when food plays such an important part in our social and family lives. Most renal patients can eat anything and everything, but just have to control the quantities of certain foods.

When thinking about renal-specific diets, it's worth bearing in mind:

- Everyone needs a well-balanced diet that meets their requirements for energy, protein, vitamins, trace elements and minerals.
- Try not to work from a list of FOODS TO AVOID as this tends to give a very restrictive impression of renal diets.
- You may have had previous dietary advice, particularly if you're diabetic, have high blood pressure, raised cholesterol or are overweight. Much of the renal specific advice may appear to contradict so called healthy eating.
- Be reassured that if you've always eaten bananas or other high potassium foods this will not have contributed to your kidney damage.

It's strange but renal patients tend to have to learn to control foods beginning with 'P'! Below, my colleagues look at these in turn.

Debbie Sutton, Renal Research Dietitian,
Portsmouth Hospital NHS Trust

WHAT I TELL MY PATIENTS ABOUT POTASSIUM

Potassium is a mineral which is vital to all cells in our body, in particular our heart and our nerves. The kidneys control the potassium level and excrete the excess. As the function of the kidney gets worse, the level of potassium in the blood may rise as the kidneys can no longer excrete it. High levels of potassium which are known as 'hyperkalaemia' can be dangerous causing abnormal heart rhythms and cardiac arrest.

Monitoring Potassium in your blood

As the function of your kidneys deteriorates, your blood results will be monitored closely at the nephrology clinic and your nutritional intake will be assessed by a renal dietitian. If your potassium starts to rise you will be advised to restrict your intake of high potassium containing foods. Dangerously high potassium needs immediate medical treatment which includes reassessment of your drugs, as we know some drugs can also cause high potassium levels.

Diet and Potassium

Certain fruit and vegetables contain high levels of potassium, but as these are part of a healthy diet it is important that patients are aware of how cooking affects levels. As potassium leaches out of vegetables into the cooking water, it's important that vegetables are boiled not steamed, microwaved, baked, roasted or pressure cooked. Raw vegetables can only be eaten in small quantities especially tomatoes.

Fruit should be limited to two to four portions per day depending on your blood results. Some large fruit may need to be avoided completely or just very small quantities of it allowed like banana and mango. Tinned fruit can be eaten but it is advisable to throw away the juice in the tin and only eat the drained fruit. The drying process concentrates the amount of potassium in a food, so dried fruit such as sultanas, prunes and figs should be restricted.





Dietitians will also assess patients' nutritional intake for snacks and drinks. Chocolate, liquorice, crisps, nuts, coffee and milk will all add to the total amount of potassium in an average diet and so smaller amounts of these foods in your daily intake may have to be advised.

There are also a few salt substitutes on the market that should be avoided as about half the sodium salt has been replaced with a potassium salt.

Foods low in potassium

There are many foods which are low in potassium but are essential to a healthy diet. We encourage eating bread, meats, certain fish, rice and pasta. Fats, oils, sweet products, plainer cakes and biscuits will be included in varying amounts depending on other medical conditions.

Key Points

- *Potassium levels must be monitored.*
- *Talk to your dietitian about how to individualise your daily diet.*

Frances McCorrison, Renal Dietitian

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THE IMPORTANCE OF PHOSPHATE

Phosphate is an important nutrient that comes from the food we eat. Phosphate is used in the body (along with calcium) to give strength to bones and teeth. When kidney function gets worse, excess phosphate can no longer be removed from the blood. If blood phosphate stays high it can be damaging and renal bone disease can result in bone fractures later in life. High phosphate is also associated with calcium build up in the blood vessels which can lead to cardiovascular disease.

In the short term you are unlikely to notice any symptoms of raised phosphate, although some people do experience itching. The benefits of controlling phosphate will be felt in the long term with stronger bones and a healthier heart.

Phosphate in your diet

Phosphate is present in a wide variety of foods. Although low phosphate advice will be different for everybody there are some general rules of thumb everybody can follow.

- Cheese is rich in phosphate, particularly hard cheeses (e.g. cheddar, edam, gouda and parmesan) and processed cheese such as cheese spread. Good alternatives are cottage cheese, cream cheese or feta that contain a half to a quarter as much phosphate.
- Liver, pâté, highly processed (tinned) meats and wild fowl should be largely avoided. All other meat is fine in moderation.
- Stick to white fish as oily fish and shellfish are much higher in phosphate. Anchovies, herring, kippers, sardines, crab, mussels and prawns are particularly rich in phosphate.
- Peanut butter and nuts (brazil nuts, almonds, pine nuts and peanuts) are high in phosphate. Chestnuts and coconut are not high in phosphate and can be used as alternatives.
- Wholegrain breakfast cereals including all-bran, bran flakes, puffed wheat, shreds, shredded wheat, sultana bran and ready brek are high in phosphate. All other breakfast cereals including porridge are low in phosphate.

Phosphate binders

If your phosphate is too high (as judged by your doctor) you will be started on phosphate binders. This medication binds with the phosphate from your food before the body has a chance to digest it and it is then removed in the stool.

In order for your phosphate binders to work they must be eaten with meals and snacks - *if this medication is taken without food*



it has no role. Your dietitian can advise you on how to distribute your phosphate binders across meals during the day.

Key points:

- phosphate is used in the body to give strength to bones and teeth
- in order for phosphate binders to work they must be eaten with meals and snacks

Dr Mhairi Sigrist, Renal Research Dietitian

WHAT I TELL MY PATIENTS ABOUT PROTEIN

Protein helps with growth, fights infections, heals wounds and provides a source of energy to the body.

Most people with end stage renal failure reach a point where their kidneys can no longer effectively remove toxins from the body. As a result of this, patients may spontaneously reduce food intake and the amount of protein foods eaten may be reduced. This also lessens the calories eaten and may lead to weight loss. Patients may then suffer from 'uraemia' and are considered 'ureamic'.

Eating less protein may help alleviate some of the symptoms of uraemia, but regular monitoring and supervision by a dietitian is needed to ensure that the symptoms of uraemia are controlled whilst body weight and good nutrition are maintained.

Every patient's dietary needs are different and this is the same for an individual's need for protein. Protein needs are dependent on your body weight and the type of treatment you are having.

- Haemodialysis patients should eat between 1.0 – 1.2g of protein per kilogram of your ideal body weight.
- Peritoneal dialysis patients need to follow a diet higher in protein (1.2 – 1.5g protein/kg of base weight) than those on haemodialysis, as protein is lost through the peritoneal membrane with every dialysis exchange.

What are the sources of protein?

High quality sources of protein include lean meat, poultry, fish and eggs. Lower quality protein includes grains, pulses and vegetables, which are not as well used by the body but are still an important part of the diet.

Meeting protein needs through diet

Dialysis patients sometimes complain of loss of appetite, particularly on the days that they receive treatment and this may lead to an inadequate intake of protein. A poor protein intake may be revealed by a change in appearance, weight or blood results.

If you are not meeting the recommended protein intake from food alone, dietitians will find alternative solutions. Protein powders are one option, as are oral supplements. There are supplements designed specifically for the dialysis patient containing only the necessary nutrients.

What can I eat?

Avoid processed meats if you can, as they are often higher in sodium or salt than fresh meats. Choose lean cuts of fresh beef, pork, lamb and poultry. The phosphorous content can be high in certain types of fish, so try eating cod, haddock, salmon or trout.

For vegetarians, sticking to a renal diet can be difficult, but protein can be obtained from soya protein and dairy products. Though the renal diet can seem very restrictive at times, there is still much to be enjoyed in the way of protein!

Key Points

- High quality sources of protein include lean meat, poultry, fish and eggs.
- Whilst a renal diet may seem restrictive at times, there is much to be enjoyed in the way of protein.

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