Facts on Phosphate for Children & Adolescents

Phosphate (or phosphorus) is a mineral which together with calcium, makes up the main structure of bones. One of the jobs of the kidneys is to keep the right balance between calcium and phosphate levels in the body. When your kidneys are not working properly the level of phosphate in the blood will build up. This can cause brittle bones, painful joints, muscle weakness and itchiness of the skin.

How is blood phosphate controlled?

1. Use of phosphate binders:
   - Titralac, Caltrate and Renagel work to bind the phosphate in food so that it is passed out in your bowel motions and not into your blood.
   - To work properly phosphate binders must be taken just before each meal or snack which contains food high in phosphate. Spread your binders over the day.
   - You do not need to take a binder with foods/fluids that do not contain phosphate like a piece of fruit, water, and cordial.
   - Your dietitian or doctor can offer further advice if needed.

2. Following a low phosphate diet
   - Follow the recommended amounts of meat and dairy foods
   - Offer an alternative to high phosphate foods.

Which foods contain phosphate?

Phosphate is found naturally in most foods. It is found in higher amounts in animal foods such as
   - milk
   - milk products
   - eggs
   - meats

It is important that these foods are included daily to ensure your child gets the right amount of good quality protein.
### High Phosphate Foods

**Dairy**

*Include limited amounts*

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<tr>
<th>Dairy Foods</th>
<th>Low Phosphate Alternatives</th>
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<tbody>
<tr>
<td>Milk, Soy milk and milk products such as cheese, ice cream, custard, yoghurts, dried milk powders and evaporated milk.</td>
<td>Babies: Prolong use of infant formula</td>
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Your recommendation:

Limit to ____________ serves / day

1 serve = ½ cup milk  
  ¼ cup yoghurt/custard  
  1 slice cheese  
  60g cream/cottage/ricotta cheese  
  2 scoops ice-cream

### Meat and Meat Alternatives

*Include only recommended amounts*

Meat, fish, chicken, eggs and legumes are all high in phosphate but are valuable sources of protein important for growth so should not be excluded.

Legumes include baked beans, kidney beans, lentils, chickpeas, broad beans, navy beans, lima beans.

Recommended serve: 1-2 serves per day

1 serve = 1 chop  
  1 chicken drumstick  
  1 meat pattie  
  1 egg  
  50g fresh/canned fish

Egg whites are phosphate free, so if you are making an egg dish (omelette, quiche, scrambled eggs) use extra whites instead of yolk.
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<td>Limit processed meats such as deli meats, pies, sausage rolls, pizza as these are high in phosphate and are poor sources of protein</td>
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### Breads and Cereals

**Use low phosphate alternatives where possible**

- Wholemeal & wholegrain breads, flour, cereals, pasta, rice. These are important to keep your bowels regular and avoid constipation.
- Soy flour, Self Raising flour
- Commercial cakes, cake mixes, scones, doughnuts
- Cakes, biscuits, breakfast cereals with dried fruits, nuts, chocolate, wholegrain

White/refined breads, cereals, rice, pasta, flour
Homemade plain cakes, biscuits, scones with low phosphate baking powder.
Low Phosphate baking powder:
  - 4Tbsp bicarbonate of soda
  - 8 Tbsp cream of tartar
  - 4 Tbsp cornflour flour
Use 1 tsp per cup of plain flour in recipes in recipes calling for self raising flour.

### Nuts and Spreads

**Avoid**

- Nuts, peanut butter, chocolate spread, seeds, fish pastes, pate, cheese spreads, cheese, Vegemite, Marmite, Promite.

Jam, honey, syrup, marmalade
Cream cheese, cottage cheese and ricotta

### Drinks

**Exclude**

- Cola based soft drinks such as Coke, Pepsi and Sarsparilla (usually the dark coloured ones)
- Chocolates and cocoa added to food, Milo, Ovaltine, drinking chocolate.
- Fizzy lollies such as Sherbets and Fruit Tingles

Squash, lemonade, lucazade, cordial
Chocolate topping, Nestle Quik
Boiled sweets, mints, jelly lollies
Food Additives

Some food additives also contain phosphate. If your phosphate levels are difficult to control avoid products containing the following numbers: 338, 339, 340, 341, 342, 343, 450, 451, 452, 541, 542, 1410, 1412, 1413, 1414.

Meal Plan

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Things I can do to improve my phosphate levels:
1. 
2. 
3. 

For further information contact your Dietitian/Nutritionist.