Kidney Kids NZ

Chronic Kidney Disease (CKD)

Facts for whānau

Advice in this pamphlet is only intended as a guideline.

Please check with your GP or specialist if you have any questions relating to your child's condition.

What is chronic kidney disease (CKD)?

CKD covers the whole range of changes in kidney function, from very mild impairment to kidney failure that requires dialysis, or a kidney transplant. Kidney failure (KF) is also known as end-stage renal disease (ESRD) or end-stage renal failure (ESRF).

CKD can be an invisible disease. It might be found during tests for other medical issues, after a severe illness, or a severe acute kidney injury. Some clues that this is happening to your tamariki may include:

- **Problems putting on weight or growing tall**
- **Delayed puberty**
- **Tiredness, nausea, pale appearance, loss of appetite**
- **Decrease or change in urine (bubbles, dark urine)**
- **Puffiness in the face or legs**

Can kidney failure (KF) be prevented?

The path from CKD to KF in tamariki can vary depending on the reason for the kidney disease, the age of the child and other factors such as heart or liver problems. In kidney disease, the filtering units gradually stop working. The remaining filtering units work harder until they, in turn, stop working.

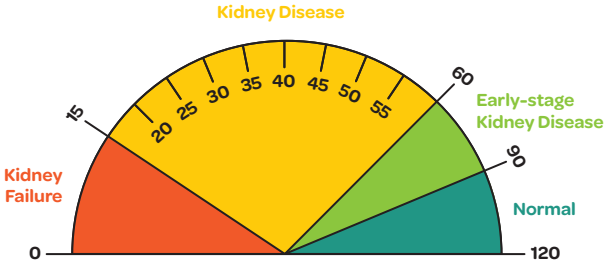
Even though KF is often not preventable, diet and medications can help kidney tissue work better by reducing the body's demands and slowing further damage.

Can you tell how advanced the kidney disease is?

Unfortunately, you can't look at a person and guess how severe their CKD is. Stages of CKD are based on a person's on glomerular filtration rate (GFR), which is a measure of kidney function.

Health professionals can estimate how well the kidneys are working based on your child's height and current ***creatinine*** level (from a blood test). This is an estimated GFR (eGFR). Sometimes GFR needs to be measured with a special scan done in certain hospitals.

Kidney disease stages based on the glomerular filtration rate (GFR)



There are five stages of kidney disease. This is determined by the level of kidney function shown by an eGFR. Find out your child's kidney disease stage using the table below.

Stage	Description	eGFR	Kidney Function
1	Possible kidney damage (eg. protein in the urine) with ***normal*** kidney function	90 or above	90–100%
2	Kidney damage with ***mild loss*** of kidney function	60–89	60–89%
3a	***Mild to moderate*** loss of kidney function	45–59	45–59%
3b	***Moderate to severe*** loss of kidney function	30–44	30–44%
4	***Severe*** loss of kidney function	15–29	15–29%
5	Kidney ***failure***	Less than 15	Less than 15%

How to help tamariki delay kidney failure (KF)

Blood pressure control

High blood pressure puts a strain on the kidneys and heart. It's often treated with blood pressure medications (***antihypertensives***).

Blood pressure that is too low also affects blood flow through the kidneys. Doctors will sometimes put children with normal blood pressure on one particular type of blood pressure medication called ***ACE inhibitors***. This helps protect kidney function long term.

Support for anaemia

The kidneys produce a hormone called ***erythropoietin***, which stimulates the bone marrow to make red blood cells. Red blood cells contain haemoglobin which carries oxygen around the body. So children with chronic kidney disease may develop anaemia, as their bodies can't make enough red blood cells any more.

Low haemoglobin = anaemia. People who have anaemia have low energy levels, feel tired and sleep a lot. It also puts a strain on the heart. This can be treated with a manmade version of the ***erythropoietin*** hormone. Iron supplements also help the body make red blood cells.

Calcium and phosphate supplements

As kidney function becomes worse, the body's calcium and phosphate levels may become unbalanced. Normal amounts of ***calcium*** and ***phosphate*** are important to help bones grow strong and prevent heart disease. ***Vitamin D supplements*** may be needed to help absorb calcium and keep calcium in the bones.

If your child's kidneys have trouble removing too much phosphate from their bodies, they may need to take a ***phosphate binder*** tablet with meals to stop them from absorbing the phosphate they eat.

Healthy lifestyle

All children with CKD should ***keep active*** and maintain a ***healthy weight***. Children with mild impairment should follow a ***healthy diet***, while those with kidney diseases may have specific dietary needs – not all children will need the same diet.

Children with kidney diseases that are unique, or have kidney failure, benefit from having a specialised diet plan from a ***renal nutritionist***.

- ***Everyone*** should eat lots of fresh fruit and vegetables, while getting 30 minutes of exercise daily and choosing water over juice or fizzy drinks helps keep kidneys happy.

- ***Some people with kidney problems*** might need to reduce foods high in potassium and phosphate because their kidneys can't clear minerals properly. For example, bananas, potatoes and avocado are high in potassium, whereas yoghurt, oatmeal and fizzy drinks are high in phosphate.

- ***Everyone with kidney failure*** needs to track fluids in and out, and make sure their intake matches their urine output.

Kidney Kids has plenty of information about conditions that can affect children's kidneys. If you can't find the information you are looking for, please contact us.

Kidney Kids NZ

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Our vision is for all Kidney Kids and their whānau to lead their best lives and to feel supported, understood and connected in a caring community.

Get in touch

If you would like more information about our organisation, or if you, your whānau or friends have a child with a kidney condition and you would like to register with us, please get in touch.

Find us

0800 215 437 – Monday to Friday 8.30am to 5pm
or email **support@kidneykids.org.nz**

kidneykids.org.nz

Pamphlet prepared for Kidney Kids of New Zealand Inc. by the Nephrology team at Starship Hospital