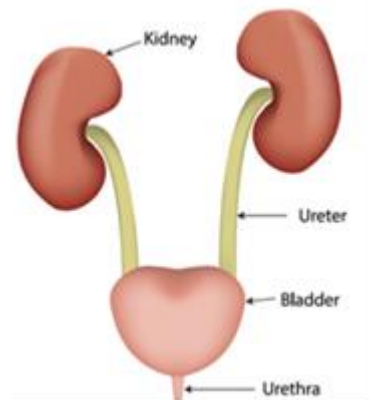


# Keeping Kidneys Healthy in Children

**This leaflet provides information about looking after your child's kidneys. If you have any further questions or concerns, please speak to the staff member in charge of your care.**

## What are kidneys?

Kidneys are two bean-shaped organs that sit in the back of your abdomen, either side of the spine, just below the rib cage. They act as special filters for your body - removing waste products and excess water. This produces urine which leaves the body through the urinary tract. The urinary tract is made up of three parts: the ureters (carrying urine from the kidneys to the bladder), the bladder (which stores the urine) and the urethra (carrying urine from the bladder out of the body).



## What do kidneys do?

Your kidneys are very complex and do a lot of work. Each day they filter around 180 litres of blood. Nearly all this liquid is reabsorbed back into the bloodstream with the components you need, but 1-1.5 litres is sent out as urine. This filtering removes waste products and toxins, controls the amount of water in the blood and ensures you have the right balance of chemicals including salts and acid. It is a vital process to ensure your body functions efficiently.

The kidneys also produce different hormones (chemical signals in the blood stream) which control your blood pressure, stimulate red blood cell production from your bone marrow and activate vitamin D to keep your bones, teeth and muscles healthy.

### **Why do I need to look after my kidneys?**

Each of your kidneys is made up of about a million filtering units called nephrons. At birth, you have the full number of nephrons you will ever have. As you grow and your kidneys grow, the nephrons increase in size but you cannot produce new ones. This means that any damaged nephrons cannot be replaced and your filtering capacity is reduced. As we age, we naturally lose kidney function as nephrons are gradually damaged. This is an unfortunate but normal process of ageing. As a result, everyone should look after their kidneys and reduce this rate of decline as much as possible. If you have been told by your doctor that you are at increased risk of, or already have had, a kidney issue, it is especially important to preserve your kidney function.

### **What treatments are available?**

There are many medications and treatments to manage renal failure and its complications. However, there are unfortunately no specific medications to regenerate nephrons. Instead, the treatment is proactive prevention of damage with healthy lifestyle interventions and prompt treatment of any risk factors (e.g. high blood pressure) that lead to kidney damage.

### **What can happen if I do not look after my kidneys?**

If you have risk factors or have had kidney damage already, it is very important to proactively ensure you prevent further kidney function loss and reduce the gradual decline with age as

much as possible. If not, there is the potential of chronic kidney disease and eventually renal failure and the need for dialysis or transplant.

### **Is there anything I can do to help myself?**

There are many proactive lifestyle interventions that can help keep your kidneys healthy. These are based around flushing the kidneys, making sure there is a good volume of urine produced and passing it regularly without obstruction, as well as avoidance of risk factors for kidney disease. Here are some practical steps you can take:

#### **1. KEEP HYDRATED**

Ensure adequate water intake. Different people require different amounts on different days dependant on many factors such as activity levels and the weather. The best way to judge your hydration state is with a urine colour chart ([www.nhsinform.scot/campaigns/hydration](http://www.nhsinform.scot/campaigns/hydration)) Urine should be clear with as little colour as possible. If not, you are dehydrated and need to drink more water.

#### **2. PASS URINE EVERY 3 HOURS DURING THE DAY**

Some children develop the habit of holding on to their urine, which can lead to back pressure on the kidneys and increased risk of developing a urine infection. Set a timetable and encourage your child to pass urine regularly during the day both at home and school. Ensure they are fully emptying their bladder before going to bed by double voiding (passing urine and then trying again after 10 seconds).

#### **3. PREVENTING CONSTIPATION**

Avoid constipation and encourage regular bowel habits by drinking plenty of fluid, eating a diet high in fibre and getting

plenty of exercise. The aim is that your child should be passing a soft stool, without straining, regularly. The build up of stool in the large bowel can block urine flow and make urinary tract infections more likely.

#### **4. HEALTHY WEIGHT**

Excess weight means the kidneys have a larger body to filter, giving them extra work. It is also associated with higher blood pressure and diabetes which are risk factors for chronic kidney disease.

#### **5. HEALTHY DIET AND AVOIDING EXCESSIVE SALT**

Kidneys filtering maintains the right balance of chemicals in the blood. Therefore, extra salt and unhealthy food give the kidneys extra work to do. A healthy diet is also important for maintaining a healthy weight, normal blood pressure and preventing constipation which are all important for the kidneys.

#### **6. REGULAR PHYSICAL EXERCISE**

Regular exercise helps maintain normal weight and blood pressure which are important for your kidneys.

#### **7. AVOIDING HIGH BLOOD PRESSURE**

High blood pressure is a risk factor for kidney disease as it puts strain on the kidneys. It is important to maintain a normal blood pressure and treat high blood pressure early to protect the kidneys.

#### **8. NO SMOKING**

Smoking damages your blood vessels leading to poor blood flow to the kidneys, high blood pressure and kidney damage over time. The more someone smokes, the more likely they are to develop kidney damage. Smokers are also more likely to

need dialysis or a kidney transplant.

## **9. AVOIDING MEDICATIONS THAT CAN BE DAMAGING TO THE KIDNEYS**

There are medicines which are metabolised (broken down) by the kidneys thus adding extra strain. The most common one is Ibuprofen. Alternatives should be used such as paracetamol where possible. Some medicines can even be toxic to the kidneys. When starting any medications it is best to let your doctor or pharmacist know if you have had any previous kidney problems.

## **10. PROMPT TREATMENT OF URINARY TRACT INFECTIONS**

Delayed treatment (>48 hours) or untreated urinary tract infections have the potential to cause kidney damage. Always get urine tested at the onset of any symptoms. Early detection and prompt treatment can avoid the risk of damage to the kidneys.

### **Is there any monitoring or surveillance?**

If you have had previous kidney injury or are at an increased risk of kidney disease, we recommend you arrange an annual blood pressure check-up and urine dip for protein with your GP. If your kidneys are under stress, persistent protein in the urine is one of the first signs and may indicate that you need further investigation. This is particularly important during periods of increased stress on the kidneys such as puberty or pregnancy.

### **Useful sources of information**

[www.infokid.org.uk](http://www.infokid.org.uk)

[www.kidneyresearchuk.org](http://www.kidneyresearchuk.org)

## Contact us

If you have any questions or concerns about keeping your child's kidneys healthy, contact the paediatric medical secretaries on email [children.secretariesC@stgeorges.nhs.uk](mailto:children.secretariesC@stgeorges.nhs.uk) or 020 8725 2931 (Monday to Friday 9am to 4:30pm.)

If possible, please give the name of the doctor you saw. Out of hours, please leave a voice message.

**For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit [www.stgeorges.nhs.uk](http://www.stgeorges.nhs.uk)**

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## Additional services

### Patient Advice and Liaison Service (PALS)

PALS can offer you advice and information when you have comments or concerns about our services or care. You can contact the PALS team on the advisory telephone line Monday, Tuesday, Thursday and Friday from 2pm to 5pm.

A Walk-in service is available:

Monday, Tuesday and Thursday between 10am and 4pm  
Friday between 10am and 2pm.

Please contact PALS in advance to check if there are any changes to opening times.

The Walk-in and Advisory telephone services are closed on Wednesdays.

PALS is based within the hospital in the ground floor main corridor between Grosvenor and Lanesborough Wing.

**Tel:** 020 8725 2453    **Email:** [pals@stgeorges.nhs.uk](mailto:pals@stgeorges.nhs.uk)

## NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health. **Web:** [www.nhs.uk](http://www.nhs.uk)

## NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

**Tel:** 111

## AccessAble

You can download accessibility guides for all our services by searching 'St George's Hospital' on the AccessAble website ([www.accessable.co.uk](http://www.accessable.co.uk)). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



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