

Risks of cardiac surgery in children

Information for families and carers

You have been given this factsheet to help you understand the risks of cardiac (heart) surgery in children. Cardiac surgery is only undertaken when the risk of operating is less than that of not operating, or when the potential benefits of the operation substantially outweigh these risks. This factsheet is intended to offer an overview to help you understand the risks and is not meant to be comprehensive. Please feel free to ask any questions you may have about your child's surgery.

What are the benefits of cardiac surgery?

The benefits of surgery will be different for every child, based on the type of heart problem they have and the level of complexity. For some children, surgery will be necessary to save their life. For others, it may be the best way of improving their quality of life. Your child's healthcare team will discuss the type of surgery your child needs, and the detailed benefits and risks.

Understanding the risks

As with any major operation, cardiac surgery carries a risk of complications (problems associated with the surgery) leading to serious injury or death.

Complications may occur either during the surgery itself or afterward, in the early post-operative period. The risks vary from child to child and depend on many factors including:

- the child's age
- the nature of their heart defect
- their health and condition
- the type and extent of surgery required
- other medical conditions they may have
- previous heart surgery

Usually the risk of death for simple defects is around 1% (1 in 100) but for more complicated defects the risks can be higher. Your child's surgeon will advise the risks based on your child's case.

In a small number of cases, the actual type of operation that is needed can only be known once the surgery has started, when the surgeon has been able to expose and examine the heart and great vessels. A different operation may then be necessary, which may pose different or greater risks.

Complications

Some of the complications that can occur may be specific to the type of surgery. For example, when operating from the side of the chest or when using cardio-pulmonary bypass (when the function of the heart and lungs is taken over by a machine to allow the surgeon to operate on the heart itself), there may be different or additional risks involved, and these will be discussed with you.

Complications of cardiac surgery can include:

- **Bleeding around the area of the surgery** requiring transfusion or even further surgery (the need for this is about 2% or 2 in 100).
- **Infections** of the surgical site, lungs and bloodstream.
- **Fluid collection** in the chest or around the heart requiring drains to be inserted sometimes for prolonged periods.
- **Effects on the heart itself:**
 - poor heart function due to the condition itself, the surgery, or both.
 - damage to heart valves (this is rare).
 - damage to the electrical conduction system, which provides the regular heartbeat. This may require insertion of a permanent pacemaker (a small device placed in the chest which sends regular electrical pulses that help keep the heart beating regularly).
- **Kidney failure** - this is infrequent, but is more common in newborn infants, and nearly always resolves though a period of dialysis (a treatment which replicates many of the kidney's functions to filter the blood and rid the body of harmful waste) may be necessary.
- **Neurological complications leading to brain damage** - this is rare and children tend to recover better than adults. It can be due to a period of low blood flow to the brain or a blood clot or air bubble. On rare occasions, there may be long-lasting problems.
- **Intestinal damage** - especially in newborn infants. Antibiotics may be given, and intravenous feeding (via a tube into a vein) may be necessary for weeks. In addition it is sometimes necessary to perform intestinal surgery.
- **Damage to the nerves** leading to the:
 - **diaphragm** (the muscle between the chest and abdomen which is required for normal breathing). This may cause prolonged dependency on a ventilator or even an operation on the diaphragm itself.
 - **vocal cords** - rarely, permanent hoarseness or the need for prolonged tube feeding can occur. These complications can occur together and even one after another. They can prolong the need for intensive care.

If you would like more information about any of the risks outlined here, please speak to your child's healthcare team.

Support for you and your family

We understand that a child's surgical journey can take a huge emotional toll on families. The cardiac clinical nurse specialist (CCNS) team is available to support your whole family throughout your stay and we have access to a psychology service if you feel you would like to talk to someone further.

Arranging to discuss your child's case with another centre (a second opinion)

If you would like to discuss your child's condition or treatment at another children's cardiac centre (a second opinion), please let us know and we will be happy to arrange this for you.

Suggestions and comments

We greatly value your feedback, as it helps us to keep improving our services. We would like to hear your thoughts about the quality of the hospital and the care your child has received. Please complete our short online survey. You can find details on the ward or please see www.uhs.nhs.uk

Patient advice and liaison service (PALS)

The PALS team work to support patients and their representatives. PALS can provide support and information and help to resolve any issues or concerns you may have. You can visit their office near the main entrance at Southampton General Hospital. No appointment is needed. You can also get in touch via the contact details below.

Telephone: **023 8120 6325**

Email: pals@uhs.nhs.uk

Complaints

If you have any concerns during your visit, please speak to the cardiac clinical nurse specialists (CCNS's) on E1 or the ward sister via the contact details below.

Further information

If you have further questions or would like to discuss anything covered in this factsheet please speak to your child's cardiac clinical nurse specialist (CCNS) who will be pleased to help.

E1 Ward

Telephone: **023 8120 6470**

If you are a patient at one of our hospitals and need this document translated, or in another format such as easy read, large print, Braille or audio, please telephone 0800 484 0135 or email patientsupporthub@uhs.nhs.uk

For help preparing for your visit, arranging an interpreter or accessing the hospital, please visit www.uhs.nhs.uk/additionalsupport

Join our family of charity supporters with a monthly donation!
It's a wonderful way to show your ongoing support of our patients and staff.

Scan the QR code or visit southamptonhospitalscharity.org/donate



**Southampton
Hospitals
Charity**
Charity Registration Number 1051543

