

Root canal treatment (RCT) in children

Information for patients, parents and carers

This leaflet explains more about endodontic treatment or root canal treatment (RCT) in children. If you have any questions, please speak to a member of staff looking after your child.

Confirming your child's identity

Before your child has a treatment or procedure, our staff will ask you to confirm their name and date of birth and check their ID band. If your child does not have an ID band, we will also ask you to confirm their address. If we do not ask these questions, then please ask us to check.

What is root canal treatment?

When a tooth's nerve and blood supply (pulp) is damaged beyond repair, the tooth can die and pain or infection can occur. Root canal treatment (RCT) is carried out to treat or prevent this pain or infection.

RCT may be the only option available to save the tooth, that is, to prevent the tooth needing an extraction.

What would cause the nerve in the tooth to die?

Dental trauma

If the tooth is broken, the pulp may be exposed to bacteria in the mouth which may result in nerve death. If the tooth is loosened or displaced within its socket, the nerve and blood supply may also be damaged.

Tooth decay

If the tooth is very decayed, the nerve can become inflamed and eventually die off.

Unusual tooth development

Sometimes, a tooth's nerve and blood supply inside the tooth is connected to the outside of the tooth via a small opening. If not identified, bacteria can enter the tooth and harm the nerve inside.

Consent

We must by law obtain your written consent to any operation and some other procedures beforehand. Staff will explain the risks, benefits and alternatives before they ask you to sign a consent form. If you are unsure about any aspect of the treatment proposed, please do not hesitate to ask to speak with a senior member of staff again.

How is it done?

Your dentist will explain the process of RCT to you and your child.

1. Numbing cream and a dental injection (local anaesthetic) may be used to numb the tooth. This is not always required.
2. Rubber dam ('raincoat') isolation of the tooth. This is to keep the tooth being worked on isolated away from spit and bacteria in the mouth and to improve comfort for your child during treatment.
3. Creating a small window in the back of the tooth to allow access to and cleaning of the root canal inside it.
4. Use of special instruments and disinfectant to clean and wash the root canal(s).
5. A special medicinal paste may be put into the canal to keep the canal clean and sterile between appointments. A temporary filling will be placed to close the window created in the back of the tooth as part of this.

6. A special root filling material is placed into the root canal once the tooth is disinfected and symptom-free. There are different materials available for filling the inside of the root.
7. The window at the back of the tooth is then closed with a white filling to prevent the root canal from becoming contaminated or re-infected.

How long does it take?

The appointment may last a few hours and multiple appointments will be required. X-rays of the tooth will be taken at different times throughout treatment to check the length of the root canal and quality of the root filling.

What are the benefits of RCT?

Successful RCT will prevent or relieve pain and infection and so prolong the life of the tooth. This maintains the tooth in the mouth and prevents the tooth from needing extraction. This has many advantages including:

- less burden on your child to maintain a false tooth (for example, denture)
- the tooth will not rely on adjacent teeth or gums for support and therefore won't compromise them.
- maintaining the level of the bone around the tooth, which will be important later if other options such as an implant are considered

What are the risks of RCT?

- If the nerve is inflamed or there is active infection, numbing of the tooth with local anaesthetic may be more challenging.
- Mild pain or discomfort from the tooth can occur after treatment and last for up to 24 to 72 hours. Simple over the counter painkillers (for example, paracetamol) are usually adequate to manage this.
- Occasionally swelling of the gum or lip can occur.
- In an immature (not fully developed) adult tooth, there is an increased risk that the tooth may break. It is important that children who have had RCT on their front teeth wear a mouth guard for any sports, as their teeth are at an increased risk of breaking.
- If pain or infection from the tooth persists, the tooth may need to be extracted.

What will happen after RCT?

Following completion of RCT, there is a risk that the tooth may discolour over time and become darkened or grey compared to the other teeth. Your dentist can advise you about the possible options for improving the appearance of the tooth.

Sometimes, RCT is carried out as a temporary option to keep the tooth for as long as possible. Your dentist will explain if they feel that the tooth will not last and may be lost some time in the future. These teeth will need to be replaced with a false tooth in the future.

When is RCT not suitable?

If there is not enough tooth left to build up or if there is a lot of infection or resorption (dissolving of the tooth root) affecting the tooth, your dentist may not recommend RCT. In these cases, the tooth will need to be removed.

Are there any alternatives?

Doing nothing

If you choose to do nothing, the tooth will cause pain, infection and sometimes bone loss can occur around the tooth. Therefore, doing nothing isn't really an option.

Removing the whole tooth

Alternatively, the tooth could be removed (extracted) which would leave your child with a gap. If it is a front tooth that has been lost, your dentist may discuss the options of replacing the tooth with a false tooth, for example, a denture or a bridge. The options available will depend on your child's age and if other dental problems exist.

When adult teeth are removed, the bone around them naturally shrinks back. This may mean that there will not be enough bone later to support a dental implant (if you wish to consider one) when your child has stopped growing. If once they are an adult, they wish to pursue an implant replacement for the tooth, an additional procedure to increase the amount of bone in the area (a bone graft) may then be required. Most dental implant treatment can only take place once your child has stopped growing and is usually not funded by the NHS.

Contact us

If you have any questions or concerns about the information in this leaflet, please contact the Department of Paediatric Dentistry team. If your child has persistent bleeding, severe swelling or severe pain, please contact us. If out of hours or at weekends, please call NHS 111 or attend your local A&E department for advice.

Central Referral Office	020 3299 4988
Clinic Appointments	020 3299 3055
Secretary	020 3299 3375
	020 3299 4983

The contents of this leaflet have been adapted for use with permission from the Department of Paediatric Dentistry in St George's University Hospitals NHS Foundation Trust.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.kch.nhs.uk/patientsvisitors/patients/leaflets

Sharing your information

We have teamed up with Guy's and St Thomas' Hospitals in a partnership known as King's Health Partners Academic Health Sciences Centre. We are working together to give our patients the best possible care, so you might find we invite you for appointments at Guy's or St Thomas'. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

Care provided by students

We provide clinical training where our students get practical experience by treating patients. Please tell your dentist if you do not want students to be involved in your care. Your treatment will not be affected by your decision.

PALS

The Patient Advice and Liaison Service (PALS) is a service that offers support, information and assistance to patients, relatives and visitors. They can also provide help and advice if you have a concern or complaint that staff have not been able to resolve for you. They can also pass on praise or thanks to our teams. The PALS office is located on the ground floor of the Hambleton Wing, near the main entrance on Bessemer Road - staff will be happy to direct you.

PALS at King's College Hospital, Denmark Hill, London SE5 9RS

Tel: 020 3299 3601

Email: kch-tr.palsdh@nhs.net

If you would like the information in this leaflet in a different language or format, please contact our Communications and Interpreting telephone line on 020 3299 4826 or email kch-tr.accessibility@nhs.net