

Endodontic (Root Canal) Treatment in Children

Patient Information Leaflet

This leaflet explains more about endodontic treatment or Root Canal Treatment (RCT).

If you have any further questions, please speak to the dentist looking after your child.

Why is RCT needed?

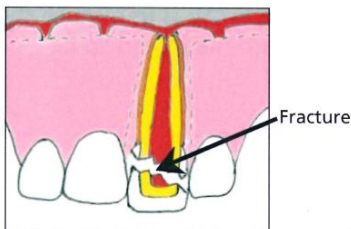
Root canal treatment (RCT) is carried out to treat or prevent pain or infection in a tooth where its nerve and blood supply (pulp) is inflamed or damaged beyond repair and has died off.

If your dentist has recommended that your child needs this, it will be the only option available to save the tooth (i.e. to prevent it from needing extraction). Your dentist will explain if this is a short, medium or long term solution for your child's problem tooth.

What would cause the nerve in the tooth to die?

Reasons include:

i. Dental Trauma

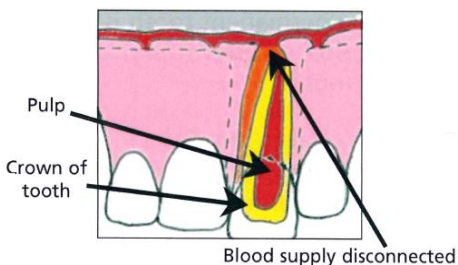


Exposure of the pulp

If the crown of the tooth is broken, the pulp may be exposed to bacteria in the mouth which if left untreated may result in nerve death.

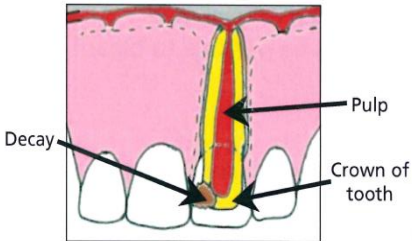
Disrupted nerve / blood supply.

If the tooth is loosened or displaced within its socket the



nerve and blood supply may not recover.

ii. Dental decay



If dental decay is deep in a tooth, it can reach the nerve causing it to become inflamed and eventually to die off.

iii. Dens in Dente (unusual tooth development)

Sometimes a tooth can develop in such a way that the nerve and blood supply inside the tooth is connected to the outside of the tooth via a small opening. If not identified and sealed off, bacteria can enter the tooth and harm the nerve inside. If the nerve dies off, RCT is needed to keep the tooth.

How is it done?

Your dentist will explain the steps below and talk your child through the treatment:

1. Dental injection (local anaesthetic) to numb the tooth – this is not always required and your dentist will advise.
2. Rubber dam ('raincoat') isolation of the tooth – to keep the tooth being worked on isolated away from spit and mouth bacteria and 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.

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 about which your dentist will tell you more.
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 will last up to 1-1 ½ 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 from the tooth being treated and so prolong the life of the tooth. This will maintain the tooth in the mouth which has many advantages over having to wear a false replacement tooth including:

- Less burden on your child to maintain their own natural tooth than an imitation tooth (e.g. denture)
- The tooth won't rely on adjacent teeth / gums for support and therefore won't compromise them.
- Maintains the level of the bone around the tooth which will be important later if other options such as an implant want to be considered.

What are the Risks of RCT?

If the nerve is inflamed or there is active infection, this can make numbing the tooth with local anaesthetic more challenging.

Mild discomfort from the tooth and its immediate area can occur after treatment and last for up to 24-72 hours. Simple over the counter painkillers (e.g. paracetamol) are usually adequate to manage this. Occasionally swelling 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 afterwards?

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 teeth which have an uncertain or poor long-term outlook can still have RCT to try to keep them for as long as possible. Your dentist will explain if they feel that the tooth will not last and will be lost some time in the future. Such teeth will need to be planned for replacement with a false tooth.

When should RCT not be done?

If there is not enough tooth left to build up or there is a lot of infection or resorption (dissolving of tooth structure) affecting

the tooth, your dentist may recommend that the tooth is best removed.

What alternative treatment is there?

1. Doing nothing

Your child's dentist has advised that a RCT is required. This means doing nothing about the tooth is not an option. This is because no treatment will result in continued or later development of pain, infection and sometimes bone loss around the tooth.

2. 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 and the gap is not filled, your child may lose space if nothing is made to put in the gap as nearby teeth will likely drift into the space.

To prevent this happening and to restore your child's smile he/she would then need to have something false made to fill the gap (e.g. a denture, 'sticky' bridge). Your dentist will explain what options there are to do this which will depend on your child's age and if other dental problems exist, e.g. crowded teeth needing brace treatment.

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 when 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 first 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 RCT, please contact the paediatric dental team on 020 8672 1255 (Monday to Friday, 9am to 5pm).

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

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough Wing (near the lift foyer).

Tel: 020 8725 2453 **Email:** 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

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



Reference: DEN_ETC_02 **Published:** March 2023 **Review date:** March 2025