The Leeds Teaching Hospitals NHS Trust

Molar-incisor hypomineralisation (MIH)

Information for patients and parents/guardians

Leeds Dental Institute

UNIVERSITY OF LEEDS

This leaflet explains more about MIH and answers some common queries you may have. If you have any further questions, please speak to the dentist caring for you.

What is MIH and why does my child have it?

MIH is a dental condition where the enamel (outer layer of the tooth) is softer than normal due to lower levels of mineral in the tooth. The first adult molars (back teeth) and incisors (front teeth) are the commonly affected teeth. MIH is usually not noticed until these teeth come into the mouth around the age 6-7 years old.

Around one in eight children in the UK have this condition. The severity of MIH varies for each person. Some people might have a mild form that they are unaware of. In more severe cases, the enamel is a creamy brown colour and can start to crumble.

MIH is thought to be caused by a disturbance in tooth development around the time of birth or soon after. Often, we cannot determine an obvious cause. Some causes have been suggested such as respiratory illness (chest problems), high fevers, or a traumatic birth period but this is not yet fully understood.

What are the signs and symptoms of MIH?

You or your child may have noticed that their front and/or back teeth may be discoloured and appear creamy, yellow or brown. The back teeth can be more crumbly. Teeth with less mineral (hypomineralised) in the enamel are also more likely to develop dental decay. Hypomineralised teeth may be sensitive or painful. The pain can be triggered by hot, cold or sweet foods and sometimes by toothbrushing. Many children will have MIH with no symptoms or mild symptoms.

See the photos below of teeth with MIH

How is MIH diagnosed? What tests do you need to confirm the diagnosis?

We will carry out a full examination of the mouth and teeth and may take some X-rays of the teeth to help plan your child's care. We may ask questions about you and your child's medical and family history to rule out other dental conditions.

What treatments are available for my child?

There are different types of treatment for different teeth. Your dentist will discuss these options with you in more detail and help you and your child decide the best option. We can use a combination of approaches depending on the type and severity of the defect, your child's age and their ability to cope with dental treatment.

Front teeth

Front teeth are treated to improve sensitivity and appearance, they rarely breakdown or decay:

- Fluoride varnish - to improve sensitivity.
- Microabrasion - uses acid and a polishing brush to remove the most outer layer of enamel to improve appearance. This may take a few visits and is not always an appropriate option if the discoloured area is extensive as it can lead to a worse appearance.
- Resin infiltration - improves appearance by penetrating a white spot with a tooth-coloured resin. This option is only appropriate in some cases.
- Tooth whitening - involves bleaching the discoloured tooth to blend to the colour of the unaffected teeth. This option can cause temporary sensitivity. This option is not currently legal for those under 18 years old.
- White filling - a thin layer of white filling is added to the front of the tooth. This makes the tooth looker thicker. Usually no drilling is required. It will need maintaining over time by your dentist. This option is only appropriate in some cases.

Occasionally, combinations of more than one of the above treatments are provided.

Back teeth

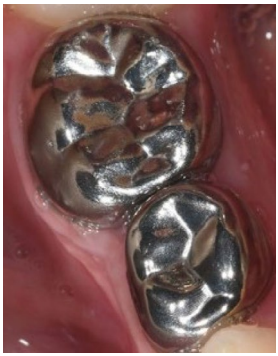
In cases of back teeth, we need to consider how decayed or crumbly the teeth are and whether they are likely to remain healthy for a long time.

- Fissure Sealants - protective coatings which are painted onto the grooves of your back teeth. Can be pink or white in colour.
- White filling - can be temporary or permanent. Your dentist will advise you which is best for your child. This may require numbing with local anaesthesia prior to placement.
- Silver cap - metal crowns which cover the entire tooth surface. They come pre-made in different sizes. The dentist will choose the crown which is the right size for the tooth and glue this on.
- Tooth removal - if the tooth is of poor quality, it may be removed. When completed at the ideal time, this can allow the second adult molar to move into the gap. In some cases, if the bottom first adult molar is of poor quality, the matching top molar may also be removed (even if healthy) to prevent overgrowth into the space. Sometimes an orthodontist (specialist in tooth movement/alignment) helps to make this decision.

Affected teeth may receive some of the treatments outlined above to provide relief from sensitivity and protect from further breakdown as a stabilising measure.

This allows time for growth and development of the remaining adult teeth before they need to be removed.

Below is a photograph of silver crowns:



Is there anything I can do to help?

- Make sure the toothpaste your child uses contains at least 1450ppm Fluoride and they are brushing twice daily. Sometimes brushing with warm rather than cold water can help with sensitivity.
- A healthy diet which limits sweet foods and drinks to mealtimes is especially important in those affected by MIH - these teeth are more susceptible to decay.
- Your dentist may also prescribe a fluoride mouthwash if your child is 7+ years or a high fluoride toothpaste (not available over the counter) at 10+ years.
- Tooth Mousse which can be directly applied to the teeth like a cream can also be helpful for sensitivity. This product should not be used if your child has an allergy to milk protein.
- Keep to appointments and make sure you attend your own dentist for regular dental check-ups.

Below is a photograph of tooth mousse:

Useful links

- https://www.thed3group.org
- https://www.bspd.co.uk/Portals/0/MIH%20statement%20final%20Jan%202020.pdf

Contact us

- **Paediatric Dental Reception**
  Telephone: 0113 343 6229
- **Paediatric Dental Booking Team**
  Telephone: 0113 343 5711
- **Leeds Dental Institute Switchboard**
  Telephone: 0113 244 0111

Phones are answered between 9am-5pm Monday-Friday (excluding bank holidays).

Out of Hours

Contact your family dentist who may be able to see you out of hours or call the NHS 111 helpline to schedule an emergency dental appointment.

Attend your local Accident and Emergency Department if there is spreading infection, fever, facial swelling or difficulty breathing.

What did you think of your care?

Scan the QR code or visit **bit.ly/nhsleedsfft**

Your views matter

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