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Welcome to this CPPE presentation on Children's oral health.

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By the end of this e-lecture you will be able to:

- outline what is meant by oral health, the process of tooth decay and how this can be prevented
- describe the state of children's oral health in England
- explain what is being done to address this issue currently
- use this information to plan how you can help to improve the situation.

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The World Health organisation states that oral health is essential to general health and quality of life. They define oral health as a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, gum disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual's capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing.

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In children, poor dental health impacts not just on the individual's health but also on their wellbeing and that of their family. Children who have toothache or who need treatment may have pain, infections and difficulties with eating, sleeping and socialising

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(**indicates a click on slideshow):

One of the most common causes of poor oral health in children is dental caries or tooth decay, it affects 60 to 90 percent of schoolchildren worldwide.

Before we look into the state of children's oral health in England and what we can do to help address the issue, we will look at the process of tooth decay. The tooth is made up of a hard outer layer called enamel.

**

Beneath this there is a sensitive bony layer called dentine**

and within this layer at the centre of the tooth there is the dental pulp. **

The pulp is the most sensitive layer and is made up of blood vessels, connective tissue and nerve fibres.

A colourless biofilm of bacteria, commonly known as plaque, builds up on the outer surface of the teeth. The build-up of plaque is a normal process and it can be removed by brushing.

When sugars from food and drink come into contact with plaque, the bacteria produce acid. This acid causes weakening of the enamel by causing calcium and phosphate loss, this process is known as demineralisation. **

This is also a normal process and is counteracted by saliva which helps to neutralise the acid and remineralise the enamel. When there is more frequent demineralisation and less time for remineralisation, for example when sugary food or drink is consumed on a frequent basis between meals, this can lead to an area of weakened enamel. **

The area of weakened enamel is not painful but is the first stage of tooth decay.

The next stage is when the decay spreads to the softer dentine layer of the tooth. **

This stage is painful.

Finally the decay can progress to the dental pulp. **

This stage is very painful.

In addition to being associated with chewing problems and tooth loss tooth decay can lead to serious complications such as abscesses and serious infections.

Tooth decay can be treated by dentists by removing the decay and putting in a filling, but if the decay is more extensive there may be a need for a root canal treatment or even tooth extraction.



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Tooth decay is preventable in 90 percent of children but it remains a serious problem.

To avoid the need for treatment there are several steps that can be taken to help prevent tooth decay:

- regular brushing to remove plaque
- reducing the amount of time that teeth are exposed to sugar and
- using fluoride toothpastes which have been shown to slow down the demineralisation process
- regular visits to the dentist.

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All children who have teeth are at risk of tooth decay. The risk increases in those with a high sugar diet or those who are not brushing their teeth twice a day with fluoride toothpaste.

There is a link between deprivation and prevalence of tooth decay. Those living in the north of England and in more deprived local authority areas have been shown to have poorer dental health.

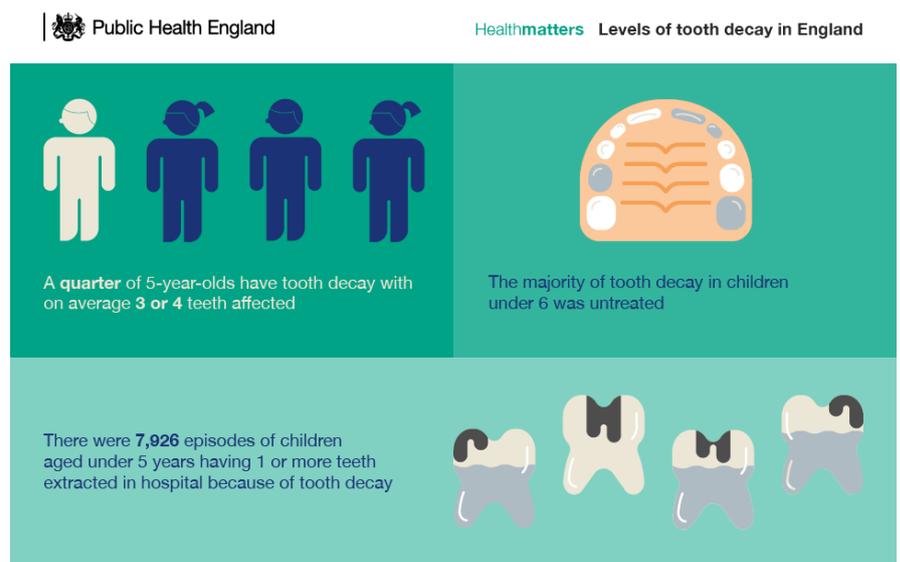
Children's oral health and reducing tooth decay in children is a Public Health England priority.

Health matters guidance on child dental health release in June 2017 explores the issue in detail so I am going to take you through some Public Health England infographics to highlight the current situation.

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Data from public health England shows that in England in 2015, a quarter of five-year-olds experienced tooth decay having on average three to four affected, and the majority of tooth decay in children under six was untreated.

There were nearly 8000 episodes of children aged five and under having a tooth extracted in hospital under a general anaesthetic because of tooth decay; and it was the most common reason for hospital admission for children aged five to nine in 2015/2016.

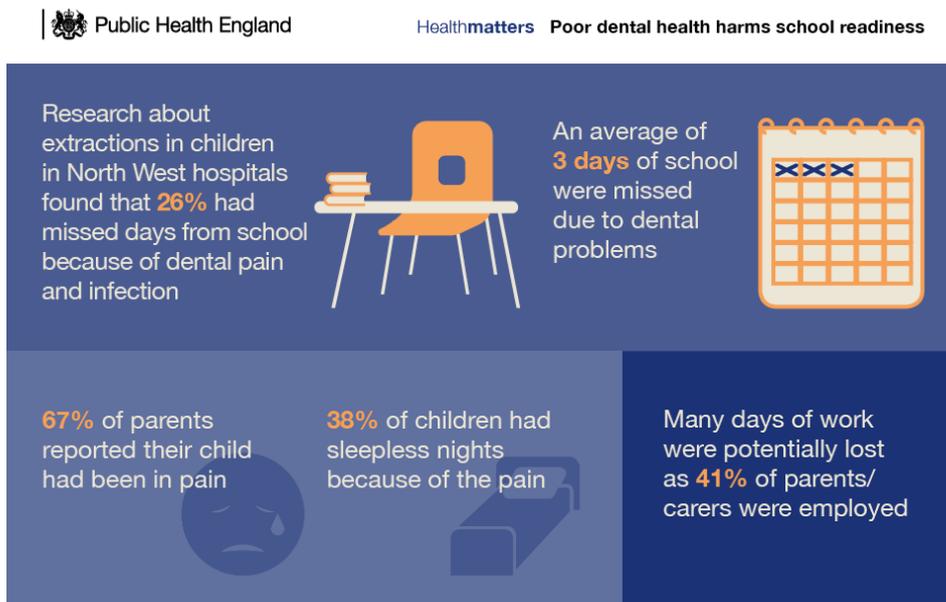


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Tooth decay comes with a significant financial implication for the NHS. The average cost of a tooth extraction in hospital is over £800, the large number of extractions, the majority of which were for tooth decay, which were performed in under 19s in 2015/2016 translated as a 50.5 million pound spend, with 7.8 million of this going on extractions for under-fives.

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In addition to tooth decay having a significant financial implication for the NHS, it can also lead to significant distress and disruption to a child and their carers. Tooth decay can lead to absence from school and impacts on readiness for school. It can also lead to pain, loss of sleep and parent/carers absence from work.



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Public Health England set up the Children's Oral Health Improvement Programme Board in 2016 with a wide range of partners and stakeholders with the aim of to improve the oral health of all children and reduce the oral health gap for disadvantaged children. The board's ambition is that every child grows up free from tooth decay as part of every child having the best start in life.

The board had five objectives over their 2016-2020 plan, these objectives are to ensure:

- child oral health is on everyone's agenda
- the early years and dental workforce have access to evidence-based oral health improvement training
- oral health data and information is used to the best effect by all key stakeholders

- all stakeholders use the best evidence for oral health improvement and
- child oral health improvement information is communicated effectively.

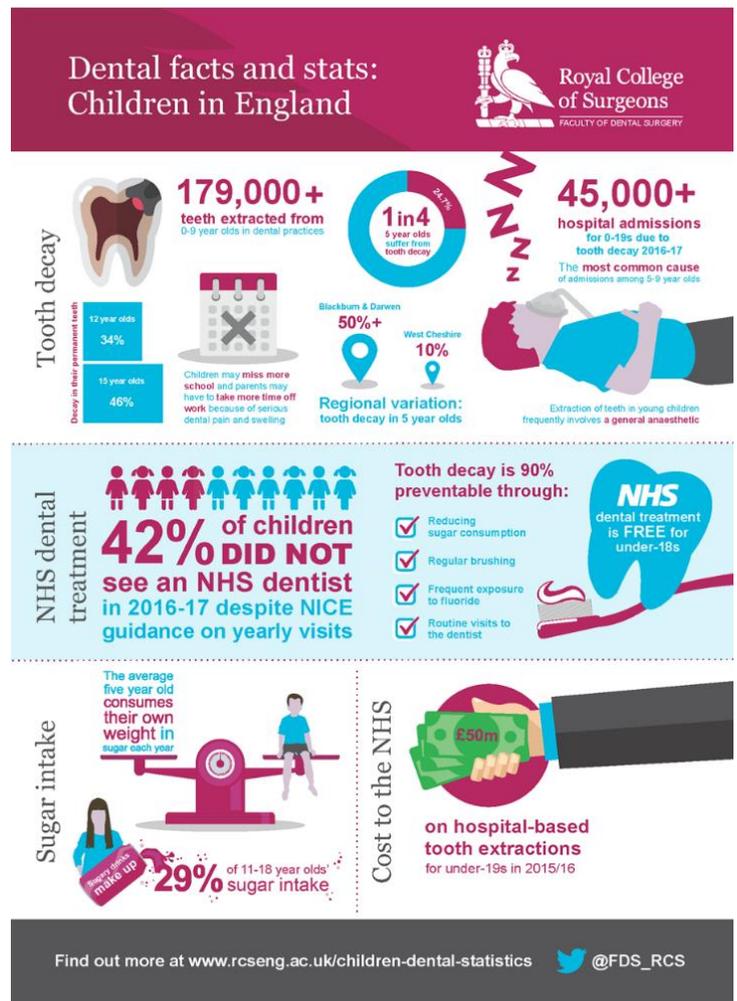
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The Faculty of Dental Surgery at the Royal College of Surgeons has been campaigning for several years about the need to tackle the appalling state of child tooth decay in England.

The Faculty, which supports over 5500 specialist dental surgeons, has been calling for action in a number of areas, including improving education around the importance of good oral health amongst children, parents and the wider health care team such as early years health professionals and pharmacists.

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This datasheet from the Faculty of Dental Surgeons shows that 42 percent of children did not see an NHS dentist in 2016-2017, despite the fact that NHS Dental treatment is free for under 18s, the average five year old consumes their own weight in sugar each year, and that sugary drinks make up 29 percent of 11-18 year olds sugar intake.



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Here are some basic community pharmacy statistics.

- There are 1.6 million visits to a pharmacy every day in England.
- In England 95 percent of the population live within a 20 minute walk of their local pharmacy.
- Around 79 percent of people have visited a pharmacy at least once in the last 12 months and 37 percent visit at least once a month.
- Over 90 percent of pharmacies now have a private consultation room and many have already taken on a wider public health role.

This means that community pharmacy and their teams are in the perfect position to offer oral health advice to children and their parents.

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We need to remember that tooth decay is preventable. If a child is suffering from tooth decay they need to see a dentist, but we can take steps to help prevent children's oral health from deteriorating to that stage.

The following information can be provided by every member of the pharmacy team:

- think about how you can offer tooth brushing tips
- talk to parents and carers about the need to start brushing with fluoride toothpaste as soon as a child's first tooth appears.
- seize opportunities, for example when making a sale of a children's toothbrush, ask if a parent supervises or helps their child's tooth brushing.
- advise them to supervise or help their children when they are brushing their teeth. Brushing teeth twice daily, last thing at night and on one other occasion helps to prevent tooth decay.

It is important for parents and carers to know that teeth should be brushed last thing at night as this means the fluoride continues to protect their child's teeth whilst they are in bed.

Parents and carers should brush or supervise tooth brushing of their child's teeth until they are at least seven years old.

Disclosing tablets are available and can be used by older children to show if there is plaque left on their teeth. Think about whether your pharmacy stocks these?

Top 3 interventions for preventing tooth decay

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1
Reduce the consumption of foods and drinks that contain sugars
- 
2
Brush teeth twice daily with fluoride toothpaste (1350-1500ppm), last thing at night and at least on one other occasion. After brushing, spit don't rinse
- 
3
Take your child to the dentist when the first tooth erupts, at about 6 months and then on a regular basis

Under 3s should use a smear of toothpaste 

3 to 6 year olds should use a pea sized amount 

Parents/carers should brush or supervise tooth brushing until their child is at least 7

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You and your team can make specific recommendations about the type of toothbrush and toothpaste which should be used.

It's best to use a toothbrush with a small head and medium-textured bristles alternatively a manual or electric toothbrush can be used. Think about the suitability of the toothbrushes that you have on offer.

You can also recommend a fluoride toothpaste. Children up to six, who do not have tooth decay, should be using a toothpaste that contains at least 1000 parts per million of fluoride.

For the maximum prevention of tooth decay for children aged zero to six years, toothpastes containing 1350-1500 parts per million fluoride should be used.

Under threes should be using a smear of toothpaste whilst children aged three to six should be using a pea-sized blob.

You can check that the toothpaste that you stock meets this recommendation. Not all toothpaste aimed at children has the required amount of fluoride.

Recommend that its best if excess toothpaste is spat out, but the mouth isn't rinsed. Rinsing the mouth washes away fluoride and makes it less effective.

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Sugar is a major cause of tooth decay.

Think about when sugar free medicines can be used. Have a discussion with the child's parents or carers. If they are happy then switch to the sugar free preparation. This is a good opportunity to explore a parent or carers ideas surrounding sugar intake.

You can offer advice on how to reduce sugar intake.

Advise that children should only be having sweet foods, including dried fruit, at meal times and the amount and frequency of these foods should be kept to a minimum.

Think about general health promotion, how does this fit in with public health campaigns that your pharmacy runs? How can you ensure that the information you deliver is applicable to children?

Does your pharmacy sell food and drink products that are aimed at children? Are they high in sugar? Do you or could you stock low sugar alternatives?

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The other key piece of information that the public needs is that NHS dental treatment is free for under children under 18 or under 19 and in qualifying full-time education.

You can refer children and adolescents to an NHS dentist, not only when there is a problem, but also for a routine check-up. Children should be seen when they get their first tooth at about six months of age and then at regular intervals for preventive advice.

Dental Check by One is a national initiative led by the British Society of Paediatric Dentistry, and supported by the Faculty of Dental Surgeons, which aims to improve the number of children under two years who are seen by a dentist. It recommends that all children should be seen by a dentist before their first birthday, at which point most of a child's front teeth should be present.

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Every member of the pharmacy team can offer advice. All of the information within this learning programme can be delivered by the whole team.

Ensure that they feel confident to do so by training your team. Use the information from this learning and links on the CPPE website to educate your team.

You may want to run a public health campaign on this topic. If you are a Health Living Pharmacy or working toward HLP status then you could use this topic for your Health Promotion Zone. By doing this you can help to empower your team to offer advice to patients and ensure that they are confident in the advice that they are giving.

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There are many things that you can do to start addressing the oral health of children in your area.

To access the following resources you can either search for the document title on a search engine or click on the hyperlinks available in the associated transcript.

In 2016 Public Health England ran the sugar smart campaign. The **resources are still available via the public health England website**. They contain information and colourful resources which can be used to promote the need to reduce sugar intake.

In January 2017 Public Health England launched a new **Change4Life Be food smart app**. The app alerts parents to the hidden sugar, saturated fat and salt in every day food and drink, and highlight the harm this can do to their child's health, including oral health.

If you would like to know more then you can read the Faculty of Dental Surgery, Royal College of Surgeons **report on the State of children's oral health**.

You can also read the **Health Matters guidance** on child dental health.

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Have a look at **All Our Health – Children**. All Our Health contains evidence and guidance to help health care professionals improve child oral health.

Take a look at the **Delivering better oral health – quick guide to a healthy mouth factsheet**. Public Health England has highlighted this document as a resource which pharmacists can use when offering oral health advice.

If you would like to access and use the Public Health England infographics from this presentation then they are available to download from **box.com**.

All of the resources here are listed on the CPPE website on the **Oral health** gateway page:

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In England a quarter of five-year-olds have tooth decay.

Simple steps can help to prevent tooth decay:

- regular brushing with a fluoride toothpaste at least twice a day including last thing at night
- parents or carers should brush or supervise tooth brushing until children are at least seven
- reducing the consumption of foods and drinks that contain sugars
- regular visits to the dentist from when the first teeth appear.

These messages can be delivered by the whole pharmacy team.

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To revisit the learning outcomes from the start of this learning, you should now be able to:

- outline what is meant by oral health, the process of tooth decay and how this can be prevented

- describe the state of children's oral health in England
- explain what is being done to address this issue currently
- use this information to plan how you can help to improve the situation.

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Take some time to think about what you have learned about children's oral health and the steps that you can take to address the issue.