



Dental Nurse Network
Professional growth for dental nurses

An introduction to Oral Health Education Part 1 of 3

Presented by Melanie Pomphrett RDH

AIMS



The aim of this webinar...

- Deepen your knowledge of the caries process and aetiological factors.
- Learn the adequate fluoride levels recommended for children
- Increase knowledge on types of sugars and their contribution to caries

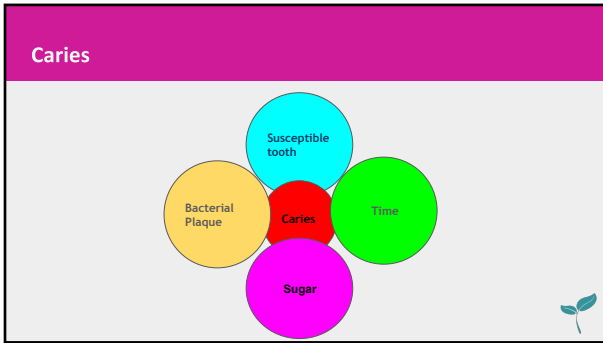


OUTCOMES

By the end of this webinar you should be able to;

- Deliver basic oral hygiene and diet advice to parents and children
- Demonstrate effective tooth brushing techniques
- Delivering basic tailored oral health instructions to children and young adults with orthodontic appliances.

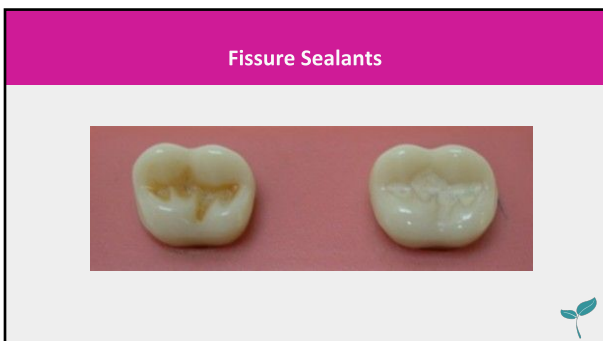




Susceptible sites for caries:

- Deep pits and fissures on the occlusal surfaces of newly erupted premolars and molars
- Interproximal areas
- Exposed root surfaces

Three photographs illustrating susceptible sites for caries. The top photo shows the occlusal surface of a tooth with deep pits and fissures. The middle photo shows the interproximal area between two teeth. The bottom photo shows the exposed root surface of a tooth. A small green leaf icon is in the bottom right corner of the slide.



Ideal for:

- Newly erupted teeth, usually 6's and 7's
- Teeth with deep pits and fissures or sticky fissures
- Patients with a history of caries in their deciduous teeth
- Patients unable to clean adequately
- Extremely anxious patients unable to handle dental treatment
- Patients with complex medical histories



Remember:

- Fissure sealants usually only last for a few years, they eventually wear down with everyday tasks such as brushing and eating
- They are not a replacement for good oral hygiene and reducing sugar intake in a patient's diet
- Use of fluoride should still be encouraged to assist in caries prevention



Fluoride

What is it?

Fluoride is a naturally occurring mineral, it can be found naturally in the environment and in some food and drink.

Fluoride is added to almost all toothpastes, it can also be artificially added to the water supply, it has proven to have massive benefits in reducing tooth decay

It is measured in ppm (parts per million) the optimum level of fluoride in drinking water is 1ppm, toothpaste often contains a much higher concentration ranging between 1000-1500ppm



How does it work?

- Fluoride can remineralise (rearden) early carious lesions when placed onto the tooth topically
- When used systemically it can incorporate into the structure of developing teeth and result in a tooth forming much more resistant to decay with shallower pits and fissures
- It can help to neutralise harmful acids released from plaque bacteria
- It can help return crystals to the tooth surface which are more acid-resistant



Methods of delivery:

Topical Fluoride:

- Fluoride varnish
 - Toothpaste
 - Mouthwash

Systemic Fluoride:

- Fluoride tablets/drops
- Fluoridated water
 - Salt/ milk



Recommended fluoride levels for children:

(DOH Toolkit 2014)

0-3 years of age:

- Supervised brushing, last thing at night and one other time of the day
- Brush x2 daily with a smear of fluoridated toothpaste (no less than 1000ppm) as soon as teeth erupt

3-6 years of age:

- As above but toothpaste should be more than 1000ppm using a pea sized amount

Encourage spit but do not rinse technique




0-6 years of age (Considered high risk of developing caries)

- As above but brush with a fluoridated toothpaste with 1350ppm-1500ppm using a smear or pea sized amount
- Fluoride varnish to be applied at least twice yearly
- Reduced recall period


7 years old and onwards

- As above, using a pea sized amount of toothpaste



7 years old and onwards (Considered high risk of developing caries)

- As above, fissure seal all permanent molars with resin sealant
- Daily fluoride rinse
- Consider prescription high concentrate fluoride toothpaste for those with active caries




Sugar

The Caries Process - When sugar is consumed the PH of the mouth drops, when the PH drops below 5.5 (Critical PH)

The enamel begins to dissolve (demineralisation) saliva can help to buffer away these acids and aid remineralisation of the enamel returning the PH of the mouth to a neutral state

This takes between 30 minutes and 1 hour

When demineralisation occurs more frequently than remineralisation the enamel does not have a chance to repair itself and begins to decay



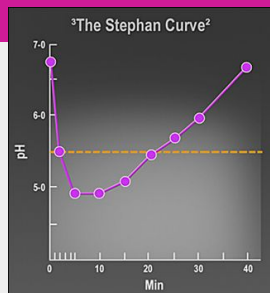
Stephan's Curve demonstrates the drop in PH during consumption of sugar.

The graph demonstrates the time needed for the

The PH of the mouth to return to normal and

Highlights the importance of reducing the

Frequency of sugar intake in caries prevention.



Types of sugar

Intrinsic Sugars

(present naturally in the cell structure)

Found in fruits and vegetables

Less cariogenic than extrinsic sugars

Both have the ability to cause caries!

Extrinsic Sugars

(added sugars)

Found in chocolate, fizzy drinks, biscuits, cakes, fruit juices etc.

Highly cariogenic!

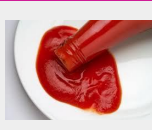
Non-milk extrinsic sugars



Milk Sugars



Hidden sugars



Diet Advice for Caries Prevention

- Always check food labels for hidden sugars
- Aim to keep snacking to mealtimes and avoid snacking between mealtimes where possible
- Find healthy alternatives to sugary snacks e.g. fresh fruit and vegetables
- Avoid adding sugar to food/drinks
- Avoid adding sugar to bottles or dummies which are given to young children over a long period of time
- Try to buy sugar-free medicines for young children where possible



Bacterial
Plaque

Time

- Bacterial plaque is the white sticky substance that continually develops on the teeth. It thrives in the dark, moist environment using sugar as a perfect source for energy.
- Regular toothbrushing is the only way to remove this plaque and prevent the two most prevalent, yet preventable, oral diseases: Caries and Periodontal disease.



Toothbrushing instructions



- Brush x2 daily, one to be last thing at night and then at least one other time of the day
- Brush each tooth including the gum line, aim to spend 2 minutes in total
- Avoid brushing immediately after eating food containing sugar
- Start brushing young children's teeth as soon as they erupt
- Supervise brushing with young children
- Manual toothbrushing: Use small head with soft-medium textured bristles, change toothbrush 3 monthly or when the bristles start to splay



Toothbrushing techniques



- Bristles of the toothbrush should be angled towards the gingival margin at approximately 45 degrees.
- Brush using small circular motions or a gentle scrubbing action depending on the patient's dexterity
- Concentrate on 1-2 teeth at a time working around the mouth in a methodical manner
- Aim to spend 30 seconds on each quadrant
- Include the lingual and palatal surfaces of the teeth
- Finish off by using a gentle scrubbing action

Orthodontic Appliances

Orthodontic appliances are becoming much more common in modern society, the aim is to improve the appearance and function of the teeth. However orthodontic treatment can create a challenge with maintaining good oral hygiene, with treatment lasting anything from months to years oral hygiene instructions are particularly important for these patients.

Risks to oral health include severe demineralisation

Around orthodontic brackets, caries, gum disease,

And delaying of treatment due to poor oral hygiene.

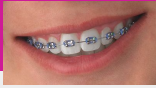


Removable Appliances



- Removable appliances should be cleaned x2 daily over a sink of water using warm soapy water and a toothbrush or nailbrush to remove debris ensuring to clean all wires
- The appliance should be removed and cleaned after eating to avoid food trapping
- Patients should avoid foods that are very hard sticky and could break the appliance e.g apples should be cut up before eating
- Sugary foods/drinks to be kept to mealtimes
- Overall oral hygiene should remain excellent

Fixed Appliances



- Orthodontic toothbrushes or small headed soft-medium textured brushes/ electric toothbrushes are advised
- Care should be taken when brushing around wires and brackets
- Fluoride toothpaste should be encouraged. Spit but do not rinse technique
- Interdental brushes can be used to remove food from wires
- Fluoride mouthwash at a different time to brushing will help prevent demineralisation occurring
- Diet advice: Reduce snacking/ keep to mealtimes, avoid sticky foods, avoid biting



Delivering Oral Health Messages: Children and young adults

- Consider the use of visual aids e.g. posters, videos, models, leaflets
- Tell-show-do method
- Always establish the patient's current oral hygiene routine first
- Disclosing tablets can be used as a fun way to improve brushing
- Take advantage of the child-friendly brushing apps available





- Try to aim your advice at the patient rather than just speaking to their parents
- Keep information short and to the point to hold the patient's interest
- Allow the patient or parents the opportunity to ask you questions
- Never appear judgemental no matter what the patient's circumstances are
- Only give advice that you are confident is correct and evidence-based





Dental Nurse Network
Professional growth for dental nurses

An introduction to Oral Health Education Part 2 of 3

Presented by Melanie Pomphrett RDH

AIMS



The aim of this webinar

- Increase your knowledge of periodontal diseases
- To understand the effects smoking, alcohol consumption and pregnancy have on oral health
- Differentiate between the four different types of tooth surface loss
- Understand the cause and management of dentine sensitivity

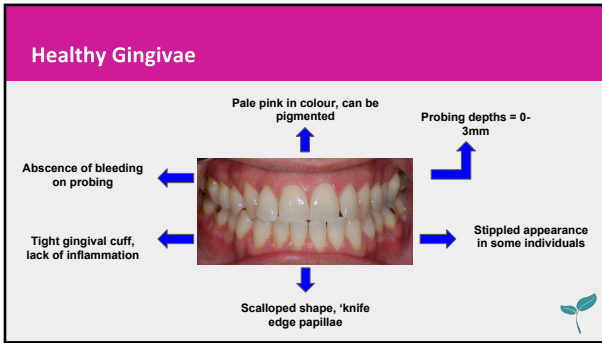


OUTCOMES

By the end of this webinar you should be able to;

- Define the main differences between gingivitis and periodontitis
- Deliver basic smoking and alcohol cessation advice
- Deliver basic oral health advice to adults and pregnant women






Periodontal disease (gum disease)

Gingivitis

- Is very common and can affect anyone at any age
- Common signs and symptoms are: bleeding gums, soreness, redness, inflamed gums, sub and/or supra-gingival plaque and calculus, halitosis, loss of stippling, false pocketing.
- Categorised into **Plaque-induced gingivitis** and **Non plaque- induced gingivitis**

Plaque-induced gingivitis = Caused by poor oral hygiene and a build up of mature bacterial plaque at the gingival margin leading to irritation of the gums, can have contributing factors e.g. overhangs, ill-fitting prostheses.


Non plaque-induced gingivitis = Caused by hormonal changes during puberty, pregnancy and the menopause, lip posture and some medications leading to an abnormal reaction



Periodontitis

- Unlike gingivitis, periodontitis causes irreversible damage to the surrounding structures of the teeth.
- It only occurs in individuals that are susceptible to the disease and is caused by a mixture of poor oral hygiene and the 'host response'
- Signs and symptoms include: inflammation, bleeding gums, sub and/or supra-gingival plaque and calculus, recession, bone loss, drifting of the teeth, mobility.
- Categorised into **chronic periodontitis** and **aggressive periodontitis**

Chronic periodontitis = The more commonly seen form of periodontitis, occurs mainly in middle aged patients, often proceeds gingivitis (but not everyone with gingivitis gets periodontitis), can go through stages of remission and exacerbation, treatment includes correcting causative factors e.g. smoking, removal of any plaque retentive factors, sub ...



... and supra gingival debridement, oral hygiene instructions, regular monitoring and maintenance appointments, specialist referral?

Aggressive periodontitis = Rarely seen, usually occurs in patients under 35, results in rapid bone loss, caused by particularly aggressive bacteria present in the mouth, patients may have relatively good oral hygiene. Treatment is similar to that of chronic periodontitis but patients may need antibiotics and specialist referral if disease progresses.



Smoking



Is a massive risk factor for periodontitis, smokers have a higher rate of tooth loss than non-smokers. Smoking reduces blood flow to the gums and impairs healing after treatment. Many smokers are aware of the general health implications but struggle to see the connection with oral health

- Effects of smoking on general health:
- increased risk of cancers particularly affecting the lungs, oral cavity, larynx and oesophagus.
- Increased risk of heart disease, bronchitis, emphysema and infertility
- During pregnancy - increases the risk of miscarriage, premature labour, stillbirth, lower birth weight babies and developmental problems



Effects of smoking on oral health

- Heavy staining
- Halitosis
- Xerostomia
- Increased severity of periodontitis (bone loss, tooth mobility/loss increases)
- Higher risk of developing oral cancer
- Hairy tongue
- Taste disturbances
- More virulent plaque bacteria



Alcohol



Alcohol is particularly dangerous when mixed with smoking, it also increases the risk of oral cancer and affects the body's ability to heal. Alcohol can also contribute to caries and tooth surface loss.

Effects of alcohol on general health:

- Liver disease (hepatitis, cirrhosis)
- High blood pressure, increased risk of stroke/heart attack
- Increased risk of pneumonia
- Stomach ulcers, internal bleeding
- Infertility
- Mental health problems



Effects of alcohol on oral health

- Poorer oral hygiene when under the influence of alcohol
- Higher risk of developing oral cancer
- Increased caries risk
- Likely to develop erosion from acidic drinks
- Poor wound healing (periodontitis)
- Xerostomia



Very Brief Advice on Smoking

30 seconds to save a life

ASK

AND RECORD SMOKING STATUS

Is the patient a smoker, ex-smoker or a non-smoker?

ADVISE

ON THE BEST WAY OF QUITTING

The best way of stopping smoking is with a combination of medication and specialist support.

ACT

ON PATIENT'S RESPONSE

Build confidence, give information, refer, prescribe. They are up to four times more likely to quit successfully with support.

REFER THEM TO THEIR LOCAL STOP SMOKING SERVICE



Tooth surface loss

Erosion -

The wearing away of tooth structure due to acids (not of bacterial origin) dissolving the enamel, seen commonly on palatal and lingual surfaces of anterior teeth. The main causes are:

Diet - Carbonated drinks (including diet substitutes), citrus fruits and drinks

Gastric conditions - e.g acid reflux

Persistent regurgitation - pregnancy - morning sickness, eating disorders, alcoholics

Xerostomia - Patients with less saliva will struggle to neutralise acids

Advice - Avoid sipping on carbonated drinks for long periods of time, restrict frequency of acidic foods/drinks to allow teeth to recover, do not brush teeth immediately after consuming acidic foods/drinks, fluoride toothpaste - spit do not rinse, sugar free ..



gum, fluoride mouthwash, desensitising toothpaste.

Attrition -

The wearing away of tooth structure due to tooth-to-tooth contact. Commonly seen on occlusal and incisal surfaces of older patients. Causes include:

Grinding/bruxism - Often done at night time and can be stress related

Diet - Eating very abrasive foods (rare in the UK)

Advice - Consider getting a mouthguard made by the dentist to help reduce effects of grinding on the teeth, reduce stress where possible. Desensitising toothpaste.



Abrasion -

The loss of hard tissue due to mechanical force (other than tooth-to-tooth contact) causes include:

Heavy toothbrushing - Brushing too hard/too often

Oral Piercings - such as lip and tongue piercings

Chewing on objects e.g. pens

Pipe smoking

Advice - To try and break any bad habits, consider removing or swapping metal piercings for plastic ones, correct toothbrushing technique. Desensitising toothpaste



Abfraction

The loss of tooth structure due to stress on the teeth from mechanical force

The cause is thought to be **occlusal forces** causing the tooth to flex and the cervical portion of the tooth to break off. This will occur more often in patients with malocclusion. A tooth with abfraction will often have a sharp angled piece of tooth missing. This will often wear down with toothbrushing and look similar to abrasion so abfraction is not always spotted.

Advice - desensitising toothpaste, advise gentle tooth brushing

Remember! Tooth surface loss is often multifactorial

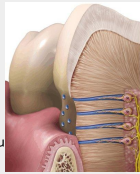


Sensitivity

Also known as dentine hypersensitivity is pain to hot and cold with no signs of decay caused by a change in the flow of fluid in the dentinal tubules.

Sensitivity can occur in those with abrasion often from toothbrushing, gingival recession, patients who have had whitening treatments and patients with erosion

Management - Desensitising toothpaste (works by blocking dentinal tubules) must be used long term, Fluoride varnishes, restorations to cover exposed dentine, fluoride mouthwash, tooth mousse containing calcium phosphate, high fluoride toothpaste.



Pregnancy and oral health

- Pregnancy gingivitis - increased bleeding gums, due to hormonal changes causing the gums to over-react to small amounts of plaque often this resolves after pregnancy and breastfeeding is over but good oral hygiene should still be maintained at a high level to prevent permanent damage
- Pregnancy epulis
- Severe morning sickness - can lead to erosion, should not brush immediately after vomiting
 - toothpaste can cause severe nausea in some women - advise to use toothbrush plain if necessary
- Sweet cravings can cause caries, patients should be advised to reduce frequency of sugary snacks - try neutralising acids with water, fluoride mouthwash, sugar-free gum



Implants



- Used as a permanent solution to replacing teeth, consist of a titanium screw in the alveolar bone and a crown
- Implants are still susceptible to disease (peri-mucositis and peri-implantitis)
- Smoking increases likelihood of failure
- Patients should maintain excellent oral hygiene around implants to ensure longevity



Oral hygiene instructions

- Brushing x2 daily for 2 minutes with a fluoride toothpaste, once in the evening and one other time of day. Spit but do not rinse. Always making sure to include gum line.
- Manual toothbrush - soft-medium textured with a small head, to be changed 3 monthly or when bristles start to splay, small circular/gentle scrubbing motions
- Electric toothbrush - small headed, hold toothbrush still over gingival margin
- Interdentally cleaning x1 daily - floss/tape/interdental brushes, waterpik etc.
- Gums may bleed initially when brushing/interdental cleaning
- Fluoride mouthwash should be used at a different time of day to brushing
- Smoking/alcohol cessation
- Diet advice - reduce frequency of sugary foods/drinks



Delivering oral health messages: Adults

- Flipcharts to show progression of periodontal disease
- Demonstrate correct use of toothbrush and interdental aids on model
- If possible, give patients samples of some of the products you recommended
- Many patients with periodontal disease want a quick solution to the problem, unfortunately there isn't one without the commitment from them to maintain a good oral hygiene routine
- Allow the patient to ask questions, only answer if your confident it is correct





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An introduction to Oral Health Education Part 3 of 3

Presented by Melanie Pomphrett RDH

AIM



The aim of this webinar...

- To understand how some medical conditions can affect oral health
- Appreciate the role of good oral health education in medically compromised patients
- Gain an understanding of the common oral health issues in elderly patients



OUTCOMES

By the end of this webinar you should be able to;

- Provide denture care instructions to patients
- Give advice to patients suffering with xerostomia
- Adapt basic oral hygiene instructions to patients with special needs
- Deliver advice to carers on assisted brushing



Periodontal disease (gum disease) can affect your general health... and it can be affected by your general health. Here are a few examples.

RESPIRATORY INFECTIONS**

- Inhalating bacteria from the mouth and throat can lead to pneumonia
- Dental plaque buildup creates a dangerous source of bacteria that can be inhaled into the lungs

SEVERE OSTEOPOROSIS**

- Reduction in bone mass (osteoporosis) is associated with gum disease and related tooth loss
- Severity has been connected to tooth loss in postmenopausal women

PRETERM OR LOW BIRTHWEIGHT BABIES**

- Women with advanced gum disease may be more likely to give birth to an underweight or preterm baby
- Old infections can cross the placental barrier, exposing the fetus to infection

STROKE*

- Those with adult periodontitis may have increased risk of stroke

HEART DISEASE**

- Those with adult periodontitis may have increased risk of fatal heart attack... or
- And are more likely to be diagnosed with cardiovascular disease
- Bacteria from the mouth may cause clogging problems in the cardiovascular system

UNCONTROLLED DIABETES**

- Chronic periodontal disease can disrupt diabetic control**
- Diabetes can alter the pocket environment, contributing to bacterial overgrowth**
- Diabetes with diabetes increase their risk of tooth loss by 20 times
- People with type 2 diabetes are 3 times as likely to develop periodontal disease than are non-diabetics*

Elderly patients

We as a society are living longer and keeping our natural teeth for much longer thanks to advances in preventative dental care. Elderly patients have higher needs but may struggle to access the appropriate dental care that they require

...

Barriers for elderly patients

- Lack of domiciliary care
- Patients being 'too proud' to seek help
- Access to dental surgeries
- Staff not appropriately trained
- Oral health is no longer a priority
- Consent
- Unable to afford dental treatment

Medically compromised patients

Diabetes - Older patients are more at risk of developing Type 2 diabetes

- Bidirectional link between poorly controlled diabetes and periodontal disease
- Reduced healing ability
- Appointment times have to be carefully scheduled to avoid times when the patient should be eating
- Increased risk of a medical emergency
- Increased snacking to keep sugar levels up can increase caries risk



Epilepsy -

- Some anticonvulsant drugs can cause gingival overgrowth (Phenytoin) making plaque control more difficult.
- Patients with uncontrolled epilepsy may not visit the dental surgery regularly from fear/embarrassment of suffering a seizure
- Patients can sleep for hours after suffering a seizure and oral hygiene may lax during these periods



Haemophilia/Bleeding disorder -

- These patients should avoid invasive dental treatment where possible. Injections (local anaesthetic) is likely to be dangerous so preventative advice for caries/perio is essential!



Mental Impairment - (Learning disabilities, Dementia/Alzheimer's, severe dental phobia, behavioural problems)

- Patients may attend with a carer, try to engage with both when giving advice
- Oral hygiene may not always be a top priority, only set realistic targets
- Try to show patience and understanding, be non-judgemental
- Avoid using jargon, keep advice short and simple
- Patients with severe dental phobia often only attend when they are in pain



Physical Impairment - (Mobility issues, blind/deaf, lack of manual dexterity)

Remember a physical impairment alone does not affect the patient's ability to understand you!

- These patients may struggle to hold toothbrushes/interdental aids but there are plenty of alternatives:

Thickened Handle Adapted Handle Electric


Xerostomia

Occurs commonly in elderly patients as saliva levels reduce. It can also be a side effect of taking many different medications. These patients are at higher risk of caries, gingivitis, taste disturbances, fungal infections, ulceration, difficult swallowing, burning mouth syndrome and glossitis.

Oral health advice: Xerostomia

- Sugar free chewing gum
- Avoid toothpaste with Sodium Lauryl Sulphate (foaming agent)
- Plenty of fresh fruit and vegetables
- Brushing with a high fluoride toothpaste
- Use a fluoride mouthwash at different time to brushing
- Sip water regularly
- Consider saliva replacement products e.g. spray, pastilles, available over the counter or on prescription from GP
- Avoid adding extra sugar to foods/drinks where possible
- Keep snacking to mealtimes if possible
- In severe cases consider seeing GP to see if medications can be changed

Root caries



Diet advice


- Reducing frequency of sugary foods/drinks
- Avoid adding sugar where possible
- Try to neutralise acid in the mouth after consuming sugar

+

Oral hygiene instructions

- Fluoride toothpaste/Mouthwash
- Brushing at least x2 daily
- Interdental cleaning x1 daily


Denture Care Instructions



All denture wearers:

- Remove dentures at night time to reduce risk of fungal infections (not everyone will feel comfortable doing this)
- Remove x2 daily to clean
- Clean over a sink of water with warm water and soap, a toothbrush or nailbrush can be used to remove debris
- Avoid cleaning with toothpaste as this can be abrasive
- Place in a sterilising solution at least x1 weekly (those with chrome dentures need to find the correct solution for them)
- Clean natural teeth thoroughly with fluoride toothpaste

Full dentures



- Also take denture out after meals to clean and remove food debris
- Clean the soft tissues of the mouth with a soft toothbrush
- Stress importance of continuing regular dental visits even if the patient is edentulous! To check condition of dentures and soft tissues.

Oral cancer

The risk of oral cancer increases with age, particularly in patients who smoke and have high alcohol consumption.

- Patients should be encouraged to attend regular dental examinations even if they are edentulous
- Smoking and/or alcohol cessation should be given if necessary (keeping below 14 units of alcohol per week)
- Eating plenty of fresh fruit and vegetables, avoiding processed foods where possible
- Soft tissue examinations should be carried out regularly by dentists/hygienists to spot any abnormalities early.



Assisted brushing



Some patients may require a carer to assist them with brushing, this is necessary to prevent dental problems but some carers may not feel fully comfortable doing this. The following advice should put them at ease:

- Have the patient sitting down in a chair they are comfortable in, ideally with a mirror in front of you
- Stand behind the patient, support their head and brush with a small headed toothbrush with a small amount of toothpaste gently pulling their lips out of the way.
- Brush all surfaces concentrating on a few teeth at a time using small circular motions
- Always wear PPE, only attempt when the patient is co-operating.



Delivering oral health messages

- Try to explain the links between general health and oral health
- Older patients may appear frail but do not assume they are any less intelligent
- Encourage x2 daily brushing and x1 daily interdental cleaning
- Demonstrate brushing techniques on models and use flipcharts as visual aids if available
- Suggest alternatives interdental aids if the patient has poor manual dexterity e.g waterpik