Oral Health Zone

Issue 4

How to Prevent Tooth Decay in Young Children

Everything you need to know about fillings

Get the facts about mouth, head and neck cancer

Have you had a mouth cancer check-up yet?

If you haven't had a mouth cancer check-up yet, then now is the time to take control. Early diagnosis results in easier treatment, better outcomes and a higher quality of life after treatment. Most mouth cancers can be detected at an early stage by a simple examination as part of a regular dental check up. Just ask your dentist to include an oral cancer exam when you book your appointment.

Here are some good reasons to make that appointment...

- Over 400 cases of cancer of the mouth are diagnosed every year in Ireland
- It is the 5th most common cancer in men and 16th in women in Ireland
- There are approximately 3 men to 1 woman affected
- Increasing numbers of younger people are now affected
- The survival rate is greatly improved with early diagnosis

FREE mouth cancer examinations

Mouth Cancer Awareness Day is an annual event that provides FREE mouth cancer examinations to the public throughout the country.

The initiative was started by the dental profession in 2010 with the aim of raising awareness of mouth cancer in Ireland. The campaign is supported by The Dublin and Cork Dental Schools, The Irish Cancer Society, The Dental Health Foundation and The Irish Dental Association.

In 2010, The Dublin and Cork Dental Universities successfully hosted the first Mouth Cancer Awareness Day, conducting 1,661 examinations. 30 individuals were referred for further investigation and 5 individuals were diagnosed with early or established cancer.

In 2011, the campaign grew in scale and was supported by dentists throughout the country. 7,767 individuals were examined, 63 biopsies conducted and 12 people were diagnosed with cancer of the mouth. These results highlight just how important it is to have a mouth cancer check-up

For details on the next Mouth Cancer Awareness Day, log onto **www.mouthcancerawareness.ie**

Get in touch
T: 1890 130 017 | E: query@decaredental.ie | W: www.decaredental.ie

DeCare Dental

Oral Health Zone

Welcome to the fourth edition of the Oral Health Zone, created by DeCare Dental Insurance to help increase public awareness of oral health issues.

A key feature of this edition is Dental Decay and how it is managed by restorative dental care (fillings), a very relevant and important topic for dental patients. It is central to the emergence of dentistry as a profession and continues to dominate much of dental practice today.

Our guest contributors, are Dr. Denise McCarthy, who gives us a unique insight into the topic of Oral Cancer in Ireland and Dr. Anthony Coughlan, who discusses the key parental concern of orthodontic treatment & timing. For parents and sports enthusiasts, there is a must read article about sports mouthguards and readers can also get great advice from our resident dental expert.

We hope you enjoy
The Oral Health Zone Team

inside

Get Wise to Dental Decay

How does it start?

The initiating factor for dental decay in all circumstances is the presence of undisturbed dental plaque biofilm. This is an organised collection of specific dental bacteria, mainly lactobacillus combined with other oral debris including proteins from saliva, that adhere to an area of tooth surface that is not easily accessible to cleaning routines.

There are particular areas of the tooth that are very vulnerable. The deep grooves and fissures of molar teeth are especially vulnerable in young children because of the difficulty of cleaning the base of grooves and fissures.

In teenagers and adults, the most vulnerable location is just beneath the contact area between adjacent teeth. This is an area that is very often inadequately cleansed because of failure to use dental floss and other interdental cleaning aids.

In the population over 65, the most vulnerable area is the root surface, which becomes exposed due to gum disease. It does not have a protective hard enamel layer, only cement-like material that gets washed away. Oral hygiene for this age group becomes more important than ever to control the spread of dental decay.

How Does It Progress?

Dental decay level 1

The dental plaque biofilm acts like a small chemical factory producing enamel dissolving acid at the site where it is located. If it is left undisturbed for a prolonged period of time it will cause demineralisation of the outside enamel of the tooth, causing dental decay level 1 with an intact outer surface and no cavity present. This may appear to the naked eye as a white spot with a shiny hard surface.

Dental decay level 2

If the decay is more aggressive there may be a break in the enamel surface, and it will have a duller appearance and be softer to touch. However, on radiographic examination it is still contained within the enamel layer. This is dental decay level 2. This is important because dental decay at level 1 and level 2 can be controlled by changes to the diet, better oral hygiene techniques which removes the plaque biofilm and fluoride toothpaste which helps to harden and remineralise the damaged enamel.

Dental decay level 3

If there is no improvement in diet or oral hygiene including fluoride use, the plaque biofilm will dissolve so much enamel that bacteria are able to penetrate through the enamel surface to dentine (dental decay level 3) and set up similar chemical mini-factories inside the tooth. These factories depend on a constant supply of carbohydrates and sugars to maintain the spread of dental decay into the tooth. A filling will usually be required at this stage.

Dental decay level 4

Further progression of dental decay will lead to the pulp and nerve of the tooth (dental decay level 4). A filling may be successful at this stage but sometimes a root filling may be required to save the tooth.

How can I control it?

Dental decay can be stopped in its tracks and prevented from spreading by modifying your diet and improving your oral hygiene technique, including maximising the benefits you receive from fluoride in toothpaste.

Diet

Reduce frequency of eating carbohydrate or sweet foods between meals. This type of food dramatically increases the bacterial count for lactobacillus, the main bacteria associated with dental decay.

Oral hygiene

Brush at least twice a day with fluoride toothpaste. Ask your dentist if you need to use a higher dose fluoride toothpaste, which is available through pharmacies. Fluoride in toothpaste and in water slows down the activity of bacteria in the mouth and also assists with remineralisation of tooth surface affected by tooth decay, making it more resistant to future attacks from dental plaque biofilms.

Interdental cleaning

Interdental cleaning is essential for removing dental plaque biofilm from areas of tooth surface, which are vulnerable to developing tooth decay, such as the areas beneath the contact point of adjacent teeth. Dental floss is one of several devices that can be used effectively for interdental cleaning.

Sealants

Fissure sealants are hard, plastic glass-like adhesive materials that are extremely successful at preventing dental decay from occurring in the deep fissures and grooves of the permanent molar teeth in young children. Ideally they are placed as soon as the first permanent molar teeth appear in the mouth. Once placed they should be checked each year to ensure they are retained up to at least 16 years of age, covering the period of greatest risk for a child to develop dental decay in the permanent molar teeth. The retention rates are very high - up to 80% after 5 years.

Topical fluorides

High strength fluoride toothpaste and varnishes can be prescribed for adults and children who are at high risk because of dental decay.

Sources: 1. Dental Caries. The Disease and it's Clinical Management, Ole Fejerskov,Edwina A.M. Kidd Editors. Blackwell Munksgaard 2006.

Why do I need a filling?

Fillings or restorations are by far the most common treatment procedure carried out by dentists everywhere. The best available evidence indicates that up to one million fillings may be placed each year in Ireland costing as much as one hundred million euro.

How does a dentist decide that you need a filling?

Clinical reasons

1. A filling is placed in a tooth for the first time when a dentist has made a diagnosis of dental decay, which has progressed from the outside white enamel of the tooth and penetrated the softer dentine. The tooth may have an obvious cavity or hole but sometimes it may only be visible on a radiograph or after visual inspection by a dentist. This is called primary dental decay level 3 and is the level at which most fillings are placed.
2. A filling may be placed when dental decay is diagnosed around the margin of an existing filling extending into dentin (secondary dental decay) or when another surface of the tooth is affected by primary dental decay level 3. However, staining around either a silver filling or a white filling is not a reliable indication that decay is present unless there is a gap (ditching) wider than 0.4 of a millimetre and confirmation may be made by a radiograph (x ray) or other reliable diagnostic methods.
3. A filling may be placed when a tooth is fractured due to trauma or when an existing filling has fractured.

Non clinical reasons or elective treatment

A filling may be placed for elective reasons, in other words there may not be a valid clinical reason for placing the filling but the dentist and the patient may decide for a variety of reasons to replace a filling.

1. There has been a trend recently to remove old silver fillings and replace them with more aesthetic white fillings.
2. Sometimes fillings are removed and replaced at a patient's request as a result of reading something in the media or internet regarding the safety of a particular filling material.

How does the dentist find dental decay (dental caries) in my teeth ?

Visual

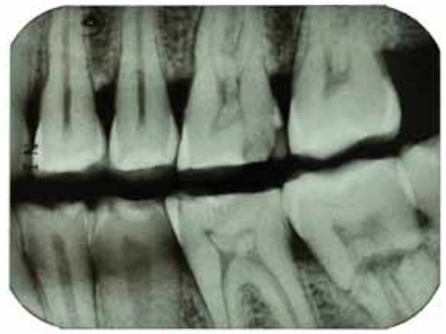
The dentist may make a visual diagnosis with standard operating light source in a dental surgery with or without magnification. This is the most widely used method for diagnosing dental decay at D3 level where dental decay has progressed into dentin. There is usually a cavity (hole in tooth) or there has been such loss of translucency in the enamel that there is obvious shadowing beneath the enamel signaling to the dentist that dental decay is present underneath at D3 level.

Tactile

The use of a probe in dentistry is now reduced to that of assisting diagnosis by confirming whether a surface is plaque free and clean enough to allow visual inspection. It can also be used to confirm the hardness or softness of a tooth surface indicating to the dentist whether dental decay may be active or arrested and not progressing. A probe is never used to make a diagnosis because of the damage it can cause to a tooth surface.

Radiographic diagnosis

Dental decay may be under-diagnosed by between 25% and 40% without the assistance of bitewing radiographs (x rays).



Example of a bitewing radiographs (x rays)

These are regarded as the gold standard for diagnosis of dental decay in adults and children. Baseline records of bitewing radiographs should be kept for all patients and repeated according to the risk level of each individual patient in compliance with the EU directive on health protection of individuals against the dangers of ionizing radiation in relation to medical exposure. Individual periapical radiographs may be substituted where bitewings are not feasible. Diagnosis of dental decay at D1 (in enamel no cavity), D2 (in enamel with a cavity), D3 (in enamel and dentin with a cavity) and D4 (in enamel and dentin and reaching the nerve and pulp) is possible with bitewing and periapical radiographs (xrays)

Pantomograph (large) radiographs (x rays) have no place in the diagnosis of dental decay. These are screening radiographs (x rays) for detecting the presence of impacted teeth, the absence of missing teeth or other oral pathology.

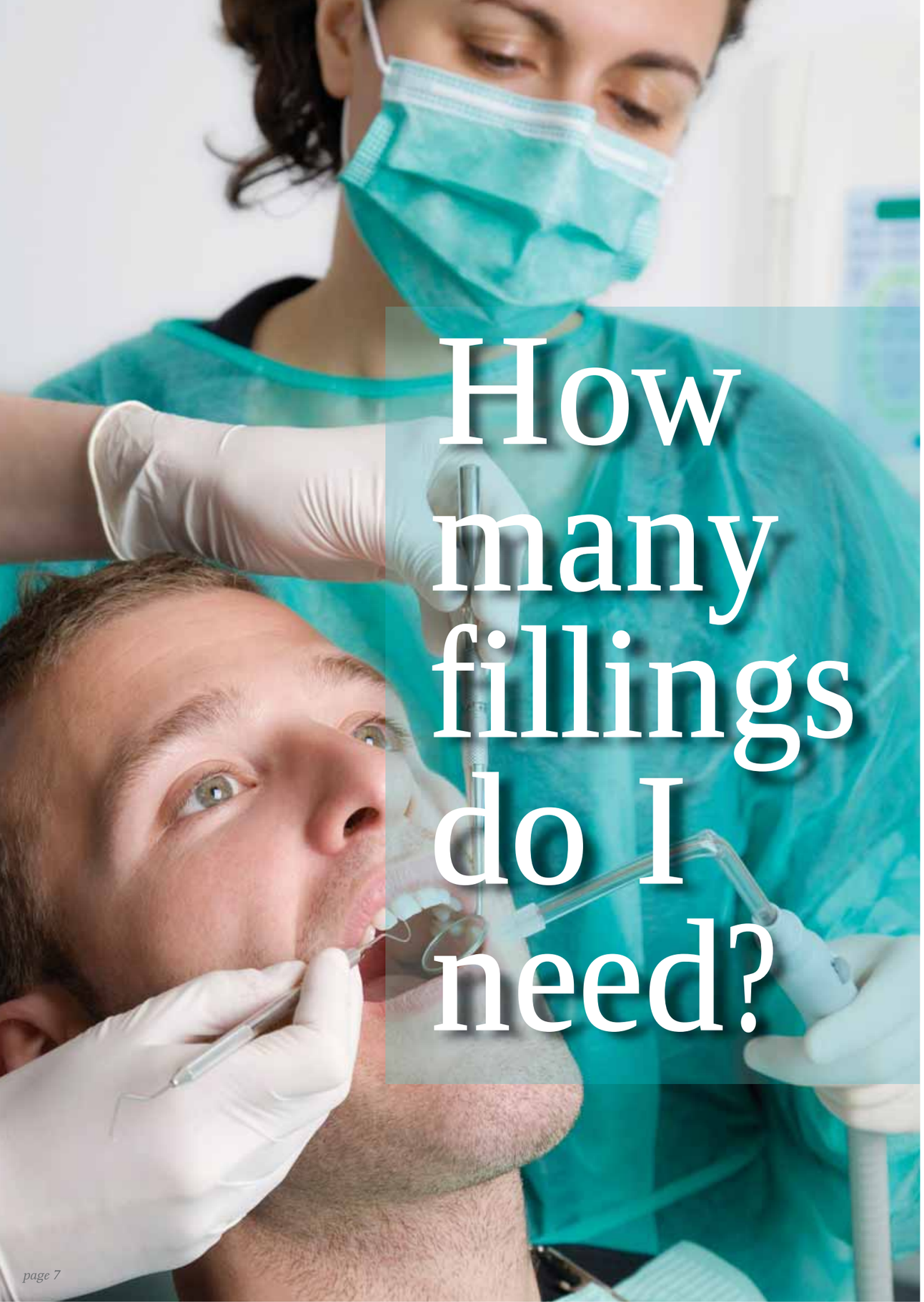
Laser fluorescence

Laser fluorescence is the most widely used method for diagnosing dental decay after bitewing x rays. Laser fluorescence combined with bitewing radiographs can diagnose up to 50% more dental decay than a visual examination on its own. Bitewing radiographs detect dental decay in the contact areas between teeth and laser fluorescence detects dental decay on the biting (occlusal) surfaces. Tooth surfaces must be clean and dry for this method to work best.

Transillumination

Transillumination with a fibre optic light source is useful for diagnosing dental decay in front teeth.

Sources: 1. Dental Caries. The Disease and it's Clinical Management, Ole Fejerskov,Edwina A.M. Kidd Editors. Blackwell Munksgaard 2006.



How many fillings do I need?

You can work out reasonably accurately how many fillings you should need as a result of dental decay in your teeth by reference to the most recent survey of the oral health of Irish adults. Ireland has a very good record for carrying out dental epidemiological studies. The Oral Health Services Research Centre at University College Cork has carried out a number of studies on the oral health status of Irish adults jointly with the Department of Health and the Health Services Executive. The most recent survey was carried out in 2002 and these results are still relevant because the long term trend is for diseases levels and treatment need to decrease over time. The boom and recession periods will affect the uptake of treatment and this impact will be reflected in future surveys.

Three key age groups of national and international significance were selected for examination in the 2002 survey: 16 to 24 year olds, 35 to 44 year olds, and over 65. Trained and calibrated examiners in diagnostic methods were used to carry out the examinations using visual / tactile method and standard light source. The following method was used to calculate the actual treatment need for fillings. These figures are based on a diagnosis of dental decay by standard examination adjusted upwards by 50% to allow for the use of gold standard diagnostic technology of bite wing radiographs and laser fluorescence. This adjustment ensures that there is no underestimation of the need for fillings due to dental decay in the selected age groups.

Age Group 16 – 24 Years	**Male**	**Female**
Average number of decayed teeth detected by visual examination 2002	1.7	1.5
Adjustment for additional cavities detected by bitewing radiographs and laser fluorescence + 50%	2.6	2.3

Age Group 35 – 44 years	**Male**	**Female**
Average number of decayed teeth detected by visual examination 2002	1.7	1.3
Adjustment for additional cavities detected by bitewing radiographs and laser fluorescence + 50%	2.6	2.00

Age Group 65 years +	**Male**	**Female**
Average number of decayed teeth detected by visual examination	0.8	0.6
Adjustment for additional cavities detected by bitewing radiographs and laser fluorescence	1.2	0.9

Comment

These figures are average national figures for males and females rounded up to the nearest decimal point for the selected age groups. They are useful in that they give an indication to the general public of what the expectation is for dental decay experience for different age groups in the population. These figures are realistic with a generous allowance made for any possible under-diagnosis.

If you are told at your next dental examination that you have a significantly higher level of dental decay than what is expected for your age group, you should enquire further about why your risk level is so high and how you can reduce it.

There are a number of factors which can give rise to a deviation from these average figures. People who are medical card holders and who live in areas without fluoridated water tend to have average figures above those quoted here. Some health areas, for example, the mid west region tend to have consistently higher average scores than the rest of the population. It could also be expected that some migrant populations would have higher levels of dental decay because of different cultural practices related to nutrition and oral hygiene practices.

Sources:
1. Dental Caries, The Disease and its Clinical Management, Ole Fejerskov, Edwina A.M. Kidd Editors, Blackwell Munksgaard 2006.
2. Oral Health of Irish Adults 2000 - 2002. 2007. www.dohc.ie/publications/oral_health02.html.
3. Using laser fluorescence (DIAGNOdent) in surveys for the detection of noncavitated occlusal dentine caries. Rando- Meirelles M.P.M., de Sousa M.D.L.R.,Community Dental Health (2011) Vol 28, 17-21.
4. Marginal Ditching and Staining as a Predictor of Secondary Caries Around Amalgam Restorations: A Clinical and Micorbiological Study. Kidd E.A.M., Joyston-Bechal S., Beighton D., Jour.Dent Res. Vol. 74 No. 5 1206 -1211.
5. European guidelines on radiation protection in dental radiology. The safe use of radiographs in dental practice. Radiation Protection 136, European Commission, 2004.

How Safe Are My Fillings?

The general public is frequently bombarded with conflicting messages about the safety of a range of everyday items from household furnishings to mobile phones and in the case of dentistry, dental amalgam fillings. The story of mercury in dental amalgam fillings has been the subject of occasional media interest and much medical research for almost 150 years. It is only natural in these circumstances that people can become confused and need reassurance and guidance on this important topic.

There is a wealth of scientific research about dental amalgam which has been reported on recently by an independent committee of the Health and Consumer Protection Directorate of the European Commission (1), and separately by the World Health Organisation (WHO) (2). This short paper describes the current status of dental filling materials, explores the safety issues surrounding the use of mercury in dental amalgam and looks at the safety of other dental filling materials and future trends.

Do dental amalgam fillings contain mercury?

Yes, mercury is the major constituent in dental amalgam fillings. Mercury in general is a hazard in the environment. It occurs in nature but it is also produced by human activities. Exposure to mercury like other hazardous substances is carefully monitored in the population. A decrease in its use would be beneficial to the population and to the environment and both the United Nations (UN) and the WHO are both working together to achieve this objective.

Is mercury in dental amalgam fillings harmful to human health?

Even though mercury has been used in dental filling materials for over 150 years, a link with any form of ill health has never been established other than minor local irritations.

A low incidence of an allergic type rash in the mouth has been noted which can be easily reversed by removing contact between the tissues and dental amalgam.

Of much greater significance is the volume of research that has been conducted into claims linking amalgam fillings with a range of medical conditions including Alzheimer's disease, Parkinson's disease, Multiple Sclerosis and Kidney disease. These studies have included assessments in children, pregnant and lactating women. None of the studies has shown a casual relationship between any of these conditions and use of dental amalgam. The most recent studies have found no association between use of dental amalgam fillings and the neuropsychological development of children. The body of research concludes that the current use of dental amalgam does not pose a risk of systemic disease.

Why it is not a good idea to remove dental amalgam fillings?

The main exposure to mercury in individuals with amalgam fillings occurs principally during removal of the fillings. It should be noted that the removal of dental amalgam fillings will increase the exposure of the individual patient to relatively high levels of mercury compared to leaving the amalgam filling intact. There is therefore no clinical justification for removing clinically satisfactory amalgam fillings unless in the rare circumstance of a proven allergy to one of its constituents. Any such allergies should be investigated only through registered medical practitioners.

Is it safe to have a filling in pregnancy?

Pregnancy is always regarded as a very special time for the health of the mother and the developing foetus. There is a general consensus within healthcare that avoidable medical procedures or pharmaceutical interventions should be avoided during pregnancy. Similarly, caution should be exercised when placing any filling material in pregnant women. While there is no evidence to suggest that pre-existing fillings including amalgam fillings pose any risk to the health of the mother or developing child, the removal of amalgam fillings during this time would result in greater exposure to mercury and should be avoided as a precautionary measure.

Are new dental filling materials safe?

Although alternative filling materials have been in use for more than 30 years, relatively little is known about their constituents and possible long-term side effects. Allergies have been reported to some of the constituents both in patients and in dental personnel. In particular some low molecular weight substances have been associated with a low incidence of local allergic reactions. However, no association has been found between any of these substances and any other health disorder, as the substances are used clinically.

Future trends in fillings

All types of filling materials are safe to use even in young children. Some local irritation occurs in a tiny number of cases but there is no association between any type of filling and any medical disorders. Dental amalgam fillings historically have been found to last longer but the newer filling materials have other advantages including better appearance and adhesion to tooth substance allowing for smaller fillings. As the newer materials continue to improve, their longevity will increase and their use will extend to most cavity types resulting in less use for dental amalgam fillings. However, it is also likely that dental amalgam will continue to be used for large fillings and for the replacement of old defective amalgam fillings.

Sources:
1. EU Health and Consumer Protection Directorate General: The safety of dental amalgam and alternative dental restoration materials for patients and users. Opinion for public consultation Scientific committee on emerging and newly identified health risks: November 2008.
2. Future use of materials for dental restoration. World Health Organisation, Geneva 2010

...ask the Dentist

Welcome to the 'Ask the Dentist' corner, where your dental queries and worries are answered.

The following questions are a sample of your most frequently asked queries. If you have dental queries that you would like answered, please visit www.decaredental.ie to submit your question online or browse our archive of dental questions and answers. Dr. Gavin will endeavour to answer all queries. Answers provided are for general, non-diagnostic purposes only. Information provided is not a substitute for the professional medical advice provided by your dentist.

Meet our resident dental expert, Dr. Gerard Gavin

Dr Gerard Gavin, who is a registered dentist with the Dental Council of Ireland, is the Chief Dental Officer for DeCare Dental in Ireland and Europe. Dr Gavin joined the DeCare team in 2004 from the Department of Health and Children, where he held the post of Chief Dental Officer.

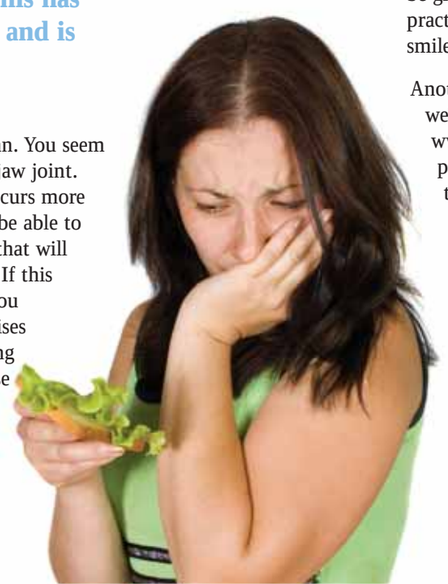
In this role, he advised the Minister and Department on all matters relating to oral /dental health. He had specific responsibility for planning dental health services, including The Dental Health Action Plan 1994–1998 and for strategy and development of dental services and oral health 1998–2004.

Dr. Gavin, in his previous roles as a Lecturer in the Dublin Dental Hospital / School of Dental Science, Trinity College Dublin and Principal Dental Surgeon in the Eastern Health Board, played a leading role in developing Dental Health Education / Oral Health Promotion as an academic discipline and also as a practical intervention in the community health services in the Dublin region.

A Trinity College Dublin dentistry graduate, Dr. Gavin is widely published in dental public health. He is also responsible, unless otherwise stated, for the content and scientific accuracy of the oral health tips and dental articles of the Oral Health Zone publication.

Q: **My jaw clicks when I eat and my bite seems to be out of line. This has only occurred in recent weeks and is getting very uncomfortable. What might be the problem?**

A: Go to your dentist as soon as you can. You seem to have developed a problem with your jaw joint. This is quite a common problem and occurs more frequently in females. Your dentist may be able to construct a plastic bite guard appliance that will help to alleviate the discomfort for you. If this does not bring about an improvement you may be referred to a dentist who specialises in the treatment of this condition. Taking prompt action now will help to minimise the damage to your masticatory system.



Q: **I have been, avoiding the dentist for years due to several bad experiences. What is the main thing to check before going to a dentist to find out that they are reputable and won't just tell me I need everything done? I am terrified of dentists and money is tight.**

A: Doing a bit of research on your own is a good way to start finding a dentist that is suitable for you. One of the most widely used and successful methods for finding a suitable dentist is to seek a recommendation from somebody you know and trust, such as a close relative or friend. Because each person's needs are so different, it is important that you have an in-depth discussion with such a person so that you can ask all the questions that are relevant to you.

Many dental practices have their own website and post a lot of helpful information. In particular the section on the philosophy of the dental practice is often the most revealing and informative section of the website. The genuinely caring dental practice will put most effort into this section. Everything you will need to know about the attitude of the dentist and his or her team can be gleaned by carefully reading this piece. A dental practice that concentrates too much on getting your smile right may not be what you are looking for.

Another vitally important source of information is the website of the Irish dental council www.dentalcouncil.ie, whose sole purpose is to protect the public. This is achieved by monitoring the education of all grades of dental practitioners, maintaining a register of dentists, dental specialists, dental hygienists, clinical dental technicians and other grades as when approved by the Minister for Health. Attached to all of these grades there are also mandatory codes of behaviour which are published on the website. The dental council is very vigilant about the enforcement of these codes.

Q: **My nine year old daughter has yellow stains and discolouration on some of her teeth, especially her top two. Is there anything I can do or any toothpaste or toothbrush you would recommend?**

A: If you can, try to find out from your dentist what is the cause of your daughter's tooth discoloration. If the stains are extrinsic (on the outside of the tooth), perhaps they can be removed by having a dental cleaning from the dentist or hygienist.

If the stains are intrinsic and contained within the tooth structure, a more invasive form of treatment may be required. The treatment will depend on the type of staining. Tooth whitening materials such as carbamide peroxide are being used with success in treating staining on the teeth of children over 10 years of age.

This should only be done under the care and supervision of a paediatric dentist because of extra considerations in treating a child of this age. This type of treatment requires patience and your daughter must be really committed to having it done, otherwise it may not be successful. Waiting until she is a little bit older could prove beneficial.

Q: **I have quite sharp teeth, especially my upper and lower canines. I was wondering if there is a procedure that is available in Ireland where maybe these are filled down slightly to achieve a smoother look. Also if there was, would this increase teeth sensitivity?**

A: Canine teeth are naturally more pointed and sharper than other teeth. As we get older they become more blunted in response to our eating and general dietary pattern.

As a general rule, it is not a good idea to remove enamel because it protects the rest of the tooth from all types of insults, including bacterial, chemical and thermal. The tooth may become more vulnerable to further enamel loss from dental erosion, which is the chemical wearing away of enamel. This may give rise to sensitivity.

If you go to your dentist and explain your concern he or she may be able to make some very minor adjustments that will meet with your satisfaction.

Get the facts about mouth, head and neck cancer

What is mouth, head and neck cancer?

Tumours develop when cells change and start to grow outside the body's normal control. Tumours may be benign (not cancer) or malignant (cancer). Head and neck cancer is described as cancer of the lip, mouth, tongue, tonsil, pharynx (part of the throat immediately below the mouth and nasal cavity), salivary gland, hypopharynx (area where the larynx and oesophagus meet), larynx (voice box) and other. Oral (mouth) cancer refers to cancers of the tongue, gingiva (gums), floor of mouth, palate, vestibule (space between the lips and the teeth) and the area behind the molar teeth. (1). Unlike other areas in the body, the mouth is readily accessible for inspection and self-examination, but over 60% of patients present with mouth cancer with either regional or distant spread (2). The 5-year survival rates of mouth cancer ranges between 50-80%, depending on the stage of the disease, varying from 86% for early to 12-16% for late presentation (3,4).

What if I am diagnosed with mouth, head and neck cancer?

Early detection can save a life. The earlier the detection, the better the quality of life the affected individual is likely to have. Cancer screening is a vital part of every dental examination. If a suspicious area is located in your mouth, this will be investigated and monitored.

If tests show that you have mouth, head and/or neck cancer, your dentist or doctor will refer you to a specialist who will plan your treatment. This will depend on a number of factors, including:

- Your general health
- The type and location of cancer cells found
- How early the cancer was discovered

Every case is different and treatment is planned to suit each individual and may include:

- Surgery
- Radiotherapy, chemotherapy
- Combinations of these treatments

As well as positive effects of treating cancer, there may be certain negative effects such as post treatment problems with eating, speech, weight loss and appearance. Radiation affects the salivary glands causing dry mouth which may persist long-term. Radiation also affects the jaw bones so that, post radiotherapy, healing following trauma such as a dental extraction is unpredictable and may result in osteo-radionecrosis. This is a painful condition in the mouth characterised by exposed bone and a painful wound that does not heal. Intra venous bisphosphonate therapy which is used to prevent the spread of cancer in bone may have a similar effect on the jaws with a condition called chemonecrosis. This condition has a similar presentation to osteoradionecrosis. In this case, the damage results from exposure to a specific chemical agent. Oral bisphosphonates maybe used in the treatment osteoporosis.

To prevent these problems dental assessment and advice are essential before the start of cancer treatment. Excellent oral hygiene is necessary as well as the use of caries preventive gels to help avoid the need for dental extractions.

Surgical treatment of cancer may result in removal of parts of your jaws. You will be referred to a maxillo-facial prosthodontist who will advise you about treatment options including obturator prostheses (device used to close an opening or defect in the hard palate).

What are the risk factors?

- Smoking - cigarettes, cigars, pipes, marijuana
- Chewing smokeless tobacco (paan, gutkha, quid)
- Alcohol and alcohol-containing products
- Smoking and alcohol combined increase mouth cancer risk substantially
- Some cancers may have a genetic (family) link
- Human Papilloma Virus (HPV) has been linked with cancer in the tonsil/throat area. It occurs more frequently in young adults and this oral infection with HPV may be sexually transmitted. These tumours respond well to treatment
- Over-exposure to sunlight, especially in outdoor workers, increases the risk of lip cancer
- The cause of mouth, head and neck cancer is sometimes unknown

What are the symptoms?

- A sore area or ulcer in the mouth that does not heal within three weeks
- White or red patches inside the mouth
- Lump developing in the mouth or neck
- Thickening or hardening of the cheek or tongue
- Difficulty chewing, swallowing or moving the tongue
- Numbness of the tongue or face
- A persistent sore throat, hoarseness of the voice or pain in the ear
- Persistent nosebleeds and a stuffy nose
- Sudden, unexplained looseness of the teeth

How can I reduce my risk of head and neck cancer?

- Do not smoke and if you do, plan to quit
- If you drink alcohol, do so in moderation
- Use a lip balm that contains a total sun block
- Eat a healthy diet – 5 a day fruit and vegetables!
- Attend your dentist regularly for a mouth examination, even if you have no teeth and wear dentures
- Check your own mouth regularly for changes – this can be done while you brush and clean your teeth and mouth

Over 400 cases diagnosed every year in Ireland

Guest Contributor
This article was kindly submitted by Dr Denise MacCarthy, BDS (NUI), MA., M Dent SC,FDS RCS (Ed). Denise is a senior lecturer and consultant in Restorative Dentistry and Periodontology at the Dublin Dental School. She established a clinic for the dental management of head and neck cancer patients in 1997 and is a founder member of the Mouth, Head & Neck Cancer Awareness Group (MHNCA) Ireland (2009).

Sources:

1. National Cancer Registry Ireland. 2010; Available from: http://www.ncri.ie/data.cgi/client/generate_stats.php
2. Altekruse SF, Kosary CL, Krapcho M and Neyman N. SEER Cancer Statistics Review 1975-2007. 2009 [cited 2010, 27 November]; Available from: http://seer.cancer.gov/csr/1975_2007
3. Vokes EE, Weichselbaum RR, Lippmann SM, Hong WK. Head and neck cancer. N Engl J Med 1993; 328: 184-194
4. Kerdpon D, Sriplung H. Factors related to advanced stage oral squamous cell carcinoma in southern Thailand. Oral Oncol 2001; 37(3): 216-221.
5. Lia Mills. In Your Face. One woman's encounter with cancer, doctors, nurses, machines, family, friends and a few enemies. Penguin Ireland. 2007; ISBN:978-0-141-03333-4
6. Outcomes from the Mouth Cancer Awareness & Clinical Check-up Day in Dublin Dental University Hospital. MacCarthy et al (2012). 58;2:101-108. J Irish Dent Assoc
7. The Development of Mouth, Head and Neck Cancer Awareness in Ireland (MHNCAI) and Results of the 2011 Mouth Cancer Awareness Day (MCAD). MacCarthy et al (2012). 58;2:109-113. J Irish Dent Assoc
8. Mouth, Head and Neck Cancer – What you should know. Irish Cancer Society 2010; Dublin, Ireland

Are braces the right choice for your child?

Most parents want to do the best they possibly can to ensure that their children have a healthy, happy and confident smile. When it comes to braces, knowing when and why to seek dental help is always a good first step.

What is the best time to have my child assessed by an orthodontist?

According to the American Association of Orthodontists, age 7 years is the best time to assess a child for orthodontic treatment. Most orthodontic treatment is not carried out at this age; however it helps us plan for the future so that we can start at the optimum time.

Some orthodontic treatment is carried out at this stage for functional reasons for instance, to correct a crossbite: (where the upper and lower teeth do not fit together). Ironically, it is probably more important to correct this than crowded and prominent teeth which are mainly aesthetic issues.

So, early assessment is very important even if we don't commence active treatment at this time.

What is the best time to commence orthodontic treatment in most children/ adolescents?

90% of all growing individuals can be treated successfully in one phase at the end of the mixed dentition i.e. just before the last of the baby teeth are shed. This is usually about age 11/12.

What do you mean by most children?

Most children seek orthodontic treatment because:
1) Teeth are crowded or crooked
2) Prominent teeth, the upper teeth stick out

Why is age 11 years the best age to treat children with crowded teeth?

If we commence treatment at this age, in most cases, we can avoid removing four permanent teeth. When teeth are crowded, space is required to place the teeth in an aligned position. Sometimes we create space by removing permanent teeth, this is sometimes unavoidable and not necessarily a bad thing.

Other times we can create space without removing permanent teeth. We do this by pushing permanent molar teeth back in the upper arch and thus creating space in the crowded area or by preventing permanent molar teeth coming forward and stealing space when the last baby teeth are shed.

How do you get space if you do not remove teeth?

1) Expanding the arches
2) Pushing the permanent molar teeth back in the upper arch
3) Preventing the permanent molar teeth coming forward in the lower arch

What kind of braces do you use to carry out these movements?

We use a combination of removable appliances and fixed appliances i.e. train tracks.

How long does this treatment take?

Usually it takes around 30 months but sometimes less

What is the main advantage of treating at this age?

1) It is easier to move teeth
2) It reduces the chances of removing permanent teeth
3) Children are psychologically malleable, that is they are more likely to be cooperative with the wearing of appliances

Does this mean that we cannot treat crooked teeth at a later age?

No. We can align crooked teeth at all ages, adolescents and adults. However it is easier to do it at this age.

Why is age 11 years the best age for treating children with prominent teeth?

The main reason upper teeth stick out is that the lower jaw is set back a little too far, sometimes known as mandibular retrognathia. If we can get the lower jaw to move/grow forward, a lot of this prominence can be corrected. Age 11 years is just before the pre-pubertal growth spurt and this is the stage when we have maximum rate of lower jaw growth in most individuals.

Do you use a specific type of brace to help the lower jaw grow/ move forward?

Yes. We use a functional appliance brace which helps us posture the lower jaw into an advanced position. Nature then does the rest i.e. we place the lower jaw in a forward position and hope that it will grow into that position.

Is growth guaranteed?

No. But it is more likely to grow at this age than when growth is finished.

Does this functional appliance type of brace fit inside or outside the mouth?

It is completely inside the mouth.

Do you also use train track braces with this type of treatment?

Yes, we use train tracks to align the teeth and to get the teeth to fit together in the new jaw position.

Orthodontic treatment can be carried out at almost any age; however, in most cases the most effective and efficient time to treat is when most of the baby teeth have been shed, which is about age 11 – 12 years.

Expert View

This article was contributed by Dr. Anthony Coughlan of Dublin Orthodontics. Dr. Anthony Coughlan received his dental degree from Trinity College Dublin in 1983 and worked in general practice in the UK for ten years. He received his post-graduate orthodontic training in Tufts University, Boston and graduated in 1995.

He was president of the Orthodontic Society of Ireland in 2007 and has been in private orthodontic practice in Dublin since 1995.

Mouth Guard Alert

Everything you need to know

Why wear a mouth guard?

Each year approximately 10,000 primary school children in Ireland damage one or more of their front permanent teeth. This figure derived from recent research carried out by a team of researchers led by oral health education specialist Margaret O'Malley in HSE West is consistent with international research and previous epidemiological research on children's dental health in Ireland.

The extent of the damage can range from a small chip fracture to a front tooth, to fracture of the root of the tooth and in some cases, a tooth knocked out of the mouth completely.

The cost of treatment can be substantial for the initial emergency visit and for the follow up long-term care that is eventually required in most cases. Most chip fractures are treated by tooth coloured fillings initially but eventually a crown or permanent cap is required. In more complicated cases a root treatment, a bridge, an implant or even orthodontic treatment may be required to correct the damage caused by a sports injury. This treatment can take several years to complete and cost several thousand euro. All of this could be prevented in the first place if mouth guards were worn when playing contact sports.

What is current practice in Ireland?

Up to recently, wearing of mouth guards was optional for children in many sports varying from 5% usage in soccer to a high of 60% in rugby. The recent decision of the GAA to make wearing of mouth guards compulsory for children playing Gaelic from January 2013 is a very welcome development. However, with over two thirds of schools and sports clubs reported as not having a policy on mouth guard use, it is obvious that parents will need to become much more vocal in advocating for change on this important oral health issue.

How effective are mouthguards at preventing dental injuries?

Ice hockey is the most dangerous sport in the world when it comes to dental injuries. In Ireland anecdotal evidence would indicate that gaelic football, hurling, rugby, hockey, soccer, basketball and boxing are all high risk for dental injuries. Other leisurely pursuits like skate boarding and rollerblading also carry significant risk of facial and dental injury.

In Canada the introduction of compulsory wearing of mouth guards in professional ice hockey resulted in a decrease in the annual rate of dental injuries from 8% to 1%. In the USA over a 14 year period there has been a dramatic reduction in the annual incidence of dental injuries following the introduction of face masks and later mouth guards. Similar reductions were achieved in basketball over the same period following the introduction mouth of guards.

Which type of mouth guard is the most effective?

There are three types of mouth guard

Stock mouth guard
These are the cheapest. They are made of latex rubber or polyvinyl chloride and come in three sizes. They are of little or no value and may in fact be unsafe as they interfere with breathing and speech and do not redistribute forces on impact.

Boil to fit mouth guard
These are the most widely available type of mouth guard and can be bought in most sports stores. This mouth guard comes in a kit of the 'do it yourself' variety consisting of a fairly rigid outer shell and a soft but resilient heat or self cured lining. Once the lining is softened in boiling water, the person bites down to help it take the shape of their mouth. However, by biting down the thickness of the mouth guard is reduced therefore reducing effectiveness. Because of their bulkiness, these mouthguards can be uncomfortable to wear. On the positive side they are relatively inexpensive and do provide a basic level of protection.

Custom made mouth guards
These provide the highest level of protection. A randomised controlled trial in Australia concluded that there was a significant protective effect of custom made mouth guards relative to all other types of mouth protectors. This effect was enhanced when custom made mouth guards were worn during both practice and play sessions. A recommendation that all Australian football players should wear custom made mouth guards has been accepted by sporting authorities in Australia.

Custom fitted mouth guards are constructed and fitted to the shape of the mouth. The essential difference between this and other varieties is that the guard is constructed on a plaster model replica of the teeth made from an impression of the teeth taken by a dental professional. This results in a mouth guard that is comfortable and fits more snugly on the teeth. Because of the better fit, breathing and swallowing is easier and speech is less affected. Because of the laboratory construction technique a minimum of 4mm thickness is guaranteed enabling the redistribution of forces when there is an impact or trauma to the face. These mouth guards are more expensive because of the additional steps taken during construction. However, this additional expense is more than compensated for by the additional advantages and effectiveness associated with wearing this type of mouth guard.

How to care for your mouth guard

- Rinse in cold water before use
- After use, dry and store in a plastic container with air vents to allow the air to circulate
- Once in a while, clean with a mild detergent and rinse thoroughly
- Store in a cool place as mouth guards can distort if left in the sun or hot water
- Bring along when visiting the dentist to ensure that it still fits properly

Mouth guards and orthodontic treatment

An Orthodontist will advise on the correct type of mouth guard for people wearing braces while playing contact sports. Separate upper and lower custom made mouth guards may be required. Removable orthodontic appliances should be removed when playing any type of contact sports. Custom made mouth guards should be an essential part of the kit of every child and adult playing contact sports in Ireland. Much unnecessary and avoidable permanent injury to the face and teeth costing families thousands of euros could be prevented if wearing of custom made mouth guards was made compulsory for all contact sports in this country.

Sources:
1. Mouthguard use and dental injury in sport: a questionnaire study of national school children in the west of Ireland. O' Malley M., Evans D.S., Hewson A., Journal of the Irish Dental Association 2012 ; 58(4): 205-211
2. www.dentaltraumaguide.org
3. Textbook and Color Atlas of Traumatic Injuries to the Teeth: J.O. Andreason et al Blackwell Munksgaard 2007
4. Should football players wear custom fitted mouthguards? Results from a group randomised controlled trial. C.Finch et al, in Injury Prevention.bmj.com 2005

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