

Dentistry for adolescents

The adolescent years - 12 to 18 year olds

This is the third in a series of articles that has been prepared in conjunction with ADA Dental Health Week. Last year two articles were published relating to the DHW 2005 theme that focussed on dental issues for 0-6 years and 6-12 years. This year Dental Health Week will focus on dental issues for the teenager. Following is the first of two articles that will be published in respect of this theme. Members will find the information useful in their advice to patients and their parents.

Teenagers develop rapidly both intellectually and physically. The changes that take place from the beginning to the end of high school are absolutely amazing. For parents there are times of joy and frustration as children turn into young adults. During this stage 'image' and the development of the 'self' are of prime importance coupled with academic demands and peer relationships. The interaction changes from one of nurturing to acceptance of responsibility for one's own health. The clinician's approach must be modified to accommodate this transition.

ORAL HEALTH RISK ASSESSMENT

A patient's oral health risk assessment remains the single most important determinant of future treatment needs and possibilities. The assessment can be made without any special tests and is best accomplished through knowing your patient well and taking the time to conduct a thorough oral examination.

MEDICAL HISTORY


Medical conditions can contribute to an increased risk of caries, erosion or periodontal disease. Some regularly taken medications can interfere with the quantity or quality of saliva flow

or the health of the gingival tissues. Problems with reliability in the taking of regular medications can arise during adolescence as risk taking and assertion of independence are common. Conditions such as diabetes, epilepsy, ADHD and depression are just a few examples.

DENTAL HISTORY

Young children are generally under the control of their parents during the primary school years and school dental services have ready access to many children. Once they reach high school it is more difficult to capture adolescents for delivery of dental services.

Research has shown that there is a steady rise in the DMFT in 12-18 year olds and a steady decline in regular attendance for routine care. Establishing a trusting relationship



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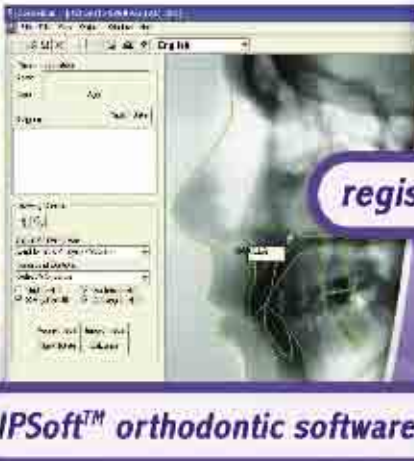
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with young patients over many years can be an advantage when they reach adolescence as you can provide essential advice regarding risky behaviours such as eating disorders, smoking, recreational drugs, body piercing and STDs. A visit to the dentist may be the only opportunity for them to discuss such issues in a familiar environment and in a non-threatening way. Private time and space for such confidential discussions needs to be made available.

BEHAVIOUR HISTORY AND MANAGEMENT

Children previously treated under general anaesthesia or sedation may be more able to cope with regular treatment once they reach this stage. Nitrous oxide sedation is a very safe and relatively predictable method for allaying anxiety and may be particularly useful in the management of teenagers for the more difficult or complex procedures. A high percentage of adolescents are caries free and the first treatment they receive may be extractions as part of an orthodontic treatment plan or the removal of wisdom teeth.

Avoidance of treatment due to fear and anxiety will increase the caries risk as well as lead to a negative attitude towards oral health generally. The aim should be to work with the individual to accomplish the goal of long-term oral health and positive attitudes to oral care. It is necessary to make a careful assessment of the ability of the individual to cope with the treatment and what degree of management of anxiety and pain may be appropriate.

Most adolescents are capable of co-operating for the majority of dental procedures. Extensive restorative or surgical treatment may require general anaesthesia for the comfort of the patient and in order to maintain a positive attitude to dentistry in the future. Special needs patients may require treatment in a hospital environment or under general anaesthesia.

ORAL HYGIENE

Generally, brushing twice a day with fluoride toothpaste and a soft toothbrush with a relatively small head is all that is necessary to keep the teeth and gingival tissues healthy. The addition of dental floss to the nightly routine will help to keep the

interproximal build-up of plaque to a minimum and aid in the control of calculus accumulation. A morning fluoride mouth rinse will freshen the breath and is better than nothing at all at a busy time of the day. Fluoride rinses are indicated when erosion is present. Chewing gum is also an easy way to increase saliva flow and freshen the mouth.

DIET

Three meals a day and two snacks is a good general guideline for both healthy teeth and good nutrition. Water, with and following meals, will aid in the clearing of food particles from the mouth and result in a neutral oral environment. A steady water intake between meals assures good hydration and continued saliva flow. Drinking fluoridated water will reduce the risk of dental caries but in its absence non-fluoridated water is a better choice than any other drink for oral health.

REGULAR CHECK-UPS

Recall schedules are dictated by caries risk, erosion risk and stage of dental development. Some adolescents may need to be closely monitored especially during orthodontic treatment or the final stages of the transition to the permanent dentition.

This age group is generally unreliable with regards to attendance for routine care and there is a need for more concerted efforts at scheduling review appointments. Busy schedules for academic commitments and extra curricular activities make it difficult to capture the reluctant participant. Busy parents easily lose track of time and are usually appreciative of extra efforts made to ensure regular review appointments.

Confirming appointments by phone, SMS or email has become a part of the every day routine of many practices. It can improve attendance rates and allow for rescheduling if the time is suddenly inconvenient.

MOTIVATING YOUR ADOLESCENT PATIENTS

A positive and enthusiastic approach has a greater chance of success. Relaying factual information in a clear and concise way will make it possible for young people to take responsibility for their own oral health and make informed decisions. Emphasizing

the benefits to 'image' is one approach which may be well received. Bleeding gums and halitosis are unlikely to be very popular especially to the opposite sex.

The Internet is a great resource but 'suggested websites' is a safer way to go and be prepared to answer questions once they have done some surfing.

TOPICAL REMINERALIZING AGENTS

High caries risk or erosion patients can benefit from clinical or home application of remineralizing agents. The regimen to be adopted in these cases is related to the extent of the lesions and the level of risk. Orthodontic treatment is an example of one factor that increases the risk in an individual who may otherwise be considered of low risk.

Home application of fluoride products (rinses, gels, high concentration fluoride toothpaste) is of great benefit in remineralizing lesions which, in previous times, would have been restored or continued to decay. When using fluoride products in and around young children, care must be taken with the dosage and safety issues associated with having such concentrated products around the home. They must be kept out of the reach of children and appropriate warnings given to a responsible adult.

The more recent and impressive CPP-ACP products (Tooth Mousse®, Recaldent® chewing gum) have achieved a high level of acceptability and do not have the same safety issues related to dosage as fluoride products.

Both fluoride and CPP-ACP products are great remineralizers but there must be tooth structure in place for them to be effective, accompanied by a change in contributory behaviours such as diet and oral hygiene practices. If cavitation is present then restorative treatment must be a part of the overall treatment plan.

RADIOGRAPHS

Bitewing radiographs are indicated when the interproximal surfaces of the posterior teeth cannot be viewed directly and in order to assess the integrity of the occlusal surfaces of these teeth. The caries risk of the individual will dictate the frequency.

> The late transitional dentition may present the clinician with the opportunity to view the interproximal surfaces of many of the posterior teeth due to primary tooth exfoliation. The six year-old molars most likely will be fissure sealed in a child with a high caries risk. In this case the taking of radiographs may well be unnecessary. The presence of orthodontic bands will also influence the decision to take radiographs.

THIRD MOLARS OR WISDOM TEETH

An OPG for assessment of the stage of development of the third molars is appropriate at a dental age of 16 years. Generally, orthodontists take an OPG post-treatment and a review of the same film will limit the radiation exposure for the patient.

Elective removal of wisdom teeth is preferable to waiting for a problem to occur such as pericoronitis or a facial swelling. This allows for proper planning of the procedure, preferably in the school holidays prior to commencement of year 12 or prior to commencing work or further studies.

TRAUMA PREVENTION

The importance of wearing mouthguards was emphasized during the ADA Mouthguard Campaign in April 2006. Information regarding what to do in the case of a dental injury should be relayed to parents and teenagers.

AUTO TRANSPLANTS

Loss of a tooth due to trauma or caries can lead to the need for a replacement in the future. One possibility is auto transplantation. However, careful planning and timing of the treatment is essential for its success. Premolar or canine teeth can be utilized to replace an upper incisor especially if there is significant crowding and extraction of permanent teeth is contemplated. In the case of congenitally absent teeth, transplants can sometimes be used to redistribute the existing teeth. Third molars may be used to replace first permanent molars that are extensively broken down. The tooth to be transplanted must be at the stage of two thirds root development at the time of transplantation to reduce the need for root canal therapy. Atraumatic

handling of the tooth is necessary as is compliance with post-operative instructions. This procedure is usually completed by a specialist under IV sedation or general anaesthesia.

IMPLANTS

Implants are generally not recommended in growing patients and are usually placed once growth is complete and the occlusion is stable. Implants are sometimes used in children for anchorage during complex orthodontic or orthognathic procedures. Research is continuing in this very specialized area.

VENEERS

As with implants, high quality porcelain veneers are not indicated in a growing patient. Once gingival stability has been accomplished placement of porcelain veneers becomes an option. The timing may differ between males and females. Contact sports will place veneers and implants at risk even if a mouthguard is worn.

ORTHODONTICS

Generally, orthodontic treatment requires a sufficient level of maturity and motivation for compliance. Monitoring of oral hygiene through regular examinations will allow for problems to be dealt with earlier rather than later. Parents are often unaware of the need to continue with their child's routine care once a referral to an orthodontist has been made.

SUMMARY

This outline is a brief summary of some of the more common issues arising during the adolescent years and is not intended as a comprehensive guide to diagnosis and treatment planning for adolescents.

Philippa Sawyer
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Oral Health Committee

FURTHER READING

Australasian Academy of Paediatric Dentistry Inc Standards of Care 2003.
Members of Australasian Academy of Paediatric Dentistry. Sydney: Australasian Academy of Paediatric Dentistry Inc, 2003.
McVeagh P, Reed E. Kids Food Health 3: nutrition and your child's development - from school-age to teenage. Sydney: Finch Publishing, 2001.

ASO'S 'GIVE A SMILE' PROGRAMME

Around 2000 patients undergo their orthodontic treatment each year through Australia's public dental health services.

The 'Give a Smile' campaign introduced by the Australian Society of Orthodontists (ASO) has reduced the public waiting lists by 10 per cent. It is estimated that this may have created a saving of at least \$1 million per year to taxpayers.

Instigated just one year ago by the ASO as a national philanthropic health initiative, Give a Smile™ provides pro bono orthodontic treatment to patients currently on public dental health waiting lists around Australia. Each Give a Smile™ orthodontist accepts at least one patient per year into his or her practice and charges no fee for these treatments.

The Give a Smile™ programme has proven so successful that just one year after its launch, 56 per cent of the ASO's 395 full members have signed up to donate their time and services.

Dr Ted Crawford has said he is thrilled with the overwhelming support for the programme from his fellow ASO members and is proud of how much the programme has already achieved.

For more information about Give a Smile™ and who is involved, visit www.giveasmile.org.au

Pinkham JR, et al, eds. Pediatric dentistry, infancy through adolescence. 3rd ed. Philadelphia: Saunders, 1999.

http://www.chw.edu.au/parents/topics/2000/ad_consult.htm