



Centre for Oral Health Strategy  
NEW SOUTH WALES

NSW HEALTH

# NSW Messages for a healthy mouth



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2007

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**May 2007**

# Foreword

Oral health is not simply the absence of oral health problems but is a state of wellbeing in which an individual can eat, speak and socialise without discomfort or embarrassment.

The cost to individuals and society associated with oral health problems goes far beyond the burden of oral health problems alone. For example: sizable indirect individual and societal costs (such as, lost productivity due to lost work days, educational implications due to lost school days, and reduced quality of life); and direct and indirect health system costs contributing substantially to the cost of illness. Indeed, the burden of illness from oral health problems, as reflected in the direct costs of oral health care in Australia, was estimated as a cost to the health system of \$3.4 billion per annum.

The purpose of *NSW Messages for a Healthy Mouth* is to provide evidence-based, consistent oral health messages, which will help to improve the health of the NSW population. The document provides clear and simple key messages to improve oral health: Eat Well; Drink Well; Clean Well; Play Well; and Stay Well. It reinforces the notion that: oral health is an integral and essential part of a person's overall health; and oral disease has a multifaceted impact on an individual's health and well-being with wide-ranging effects resulting in high health service usage and significant personal costs.

This strategy has been developed by a range of people, demonstrating a commitment to a partnership model to improve the health of the NSW population, consistent with the State Plan and the State Health Plan. We would like to sincerely thank those committed people, and the organisations they represent, who have been involved in the development of this document.



The Hon Reba Meagher MP

Minister for Health

May 2007



Robert McGregor AM

A/Director General

NSW Department of Health

May 2007



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# Acknowledgements

*NSW Messages for a Healthy Mouth* has been produced by the **NSW Oral Health Messages Working Group** on behalf of the **NSW Oral Health Promotion Network**. Refer to *Appendix A* for further information about the key stakeholders involved in the development of the document.

The NSW Oral Health Promotion Network wishes to acknowledge:

- *Australia's National Oral Health Plan 2004-2013: Healthy mouths healthy lives.*<sup>1</sup>
- *the Consensus Conference on the use of Discretionary Sources of Fluorides*<sup>2</sup>, which has provided up to date, evidence-based guidelines on the use of fluoride to prevent dental caries.
- *the draft Oral Health Guidelines for Victorians*<sup>3</sup>, which has provided a format for this document.
- *Colgate™* for the development of accompanying material for the messages.
- *State (NSW) Oral Health Executive*.
- Other health professionals who provided extensive information and expert opinion.

# Executive Summary

*NSW Messages for a Healthy Mouth* reinforces the notion that oral health is an integral component of overall health and that promoting good health and preventing ill-health is a shared responsibility between organisations, communities and individuals. The clear and simple messages include: Eat Well; Drink Well; Clean Well; Play Well; and Stay Well. These messages emphasise the belief that oral health education is a responsibility of significant importance and must be approached with the same dedication that is applied to the treatment of oral disease.

The information in this document can be widely dispersed by a variety of people in a range of settings.

For example:

- parents/carers in a home setting
- health professionals in health clinics
- early childhood professionals in preschools and day care centres
- education personnel in schools and tertiary education facilities
- aged care professionals in residential facilities

It can also:

- promote the inclusion of oral health in ‘general’ health promotion programs and activities; and
- assist advocacy groups with well-documented evidence-based information pertaining to oral health.

# I Introduction

Promoting good health and preventing ill-health is a shared responsibility between organisations, communities and individuals. The *NSW Messages for a Healthy Mouth* includes key oral health messages with supporting evidence. These messages reinforce the belief that oral health education is a responsibility of significant importance and must be approached with the same dedication that is applied to the treatment of oral disease.<sup>4</sup>

*Messages for a Healthy Mouth* has been developed as part of the implementation of the *NSW Oral Health Promotion Framework for Action 2010* to “increase the awareness of the importance of oral health”<sup>5</sup>, which is mirrored in the draft *NSW Oral Health Strategic Plan 2005-2010*.<sup>6</sup>

The aim of the messages is to provide clear and easy to understand information that can be widely used by an extensive range of organisations, communities and individuals across NSW, in a variety of settings, with the ultimate goal of contributing to the improvement of overall health for all people in NSW.

## 2 Rationale

The mouth is the entrance to the body and reflects general health and well-being. The most predominate infectious diseases relating to the mouth are dental caries (tooth decay) and periodontal (gum) diseases; both of which ultimately lead to tooth loss if left untreated. However, they are largely preventable and reversible if identified and treated early.<sup>7</sup>

Oral health is not simply the absence of oral disease but is a state of wellbeing in which an individual can eat, speak and socialise without discomfort or embarrassment. Oral health is about the ability of individuals, groups and populations to have opportunities to make healthy oral choices promoting positive and sustainable wellbeing and contributing to general overall good health.\* Poor oral health has a range of consequences including pain, difficulty in eating certain foods, impaired speech, loss of self-esteem, restricting social and community participation, and impeding the ability to gain employment. Generally, a person’s overall quality of life is affected.<sup>8</sup> Poor oral health is also associated with an increased risk of cardiac problems<sup>9,10,11</sup>, pre-term and/or low birthweight infants<sup>12,13</sup> and poor diabetic control.<sup>14</sup> The development of oral cancer can also lead to loss of function and loss of life.<sup>15</sup>

There is no one single factor that can prevent oral conditions. Rather, there are ranges of factors, which either favour the initiation and progression of the disease, or prevent or control the progression of disease. Most oral diseases involve long-term, chronic disease processes and a complex relationship between body resistant factors, personal hygiene, behavioural factors and social environments. Although continued research is still required to completely understand interactions of the causal and preventive factors in these diseases, the current level of scientific evidence permits us to identify key foundations for prevention.<sup>3</sup> This approach is represented in the *NSW Messages for a Healthy Mouth*.

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\*This definition is adapted from the World Health Organisation [WHO] (1984) definition of ‘health’, and the UK Department of Health (1994) definition of ‘oral health’ cited in AHMAC (2001).

### 3 NSW Messages for a Healthy Mouth

|                   |  |
|-------------------|--|
| <b>Eat well</b>   | <ul style="list-style-type: none"><li>■ Enjoy a wide variety of nutritious foods</li><li>■ Enjoy healthy snacks</li><li>■ Avoid snacking on sugary and sticky foods and sweets between meals</li><li>■ Milk foods help protect your teeth</li><li>■ Chew sugar-free gum to help protect your teeth</li></ul>   |
| <b>Drink well</b> | <ul style="list-style-type: none"><li>■ Tap water is the best drink between meals and at bedtime</li><li>■ Avoid drinking acidic and sugary drinks between meals</li><li>■ Choose sugar-free medicine</li></ul> <p><b>Children</b></p> <ul style="list-style-type: none"><li>■ Breastfeed your baby until at least 6 months</li><li>■ Always hold your baby when bottle feeding and take the bottle away when they've had enough</li><li>■ Putting a baby to bed with a bottle can cause tooth decay</li><li>■ Encourage your baby to drink from a cup at 6-8 months</li></ul>   |
| <b>Clean well</b> | <ul style="list-style-type: none"><li>■ Brush twice a day with a fluoride toothpaste, especially before bed</li><li>■ Brush your teeth and gums with a toothbrush that has soft bristles and a small head</li><li>■ Clean between your teeth every day with floss, dental woodsticks or an interdental brush</li><li>■ Clean your dentures properly every day</li></ul> <p><b>Children</b></p> <ul style="list-style-type: none"><li>■ Brush your child's teeth:<ul style="list-style-type: none"><li>✓when they first appear to 17 months –WITHOUT TOOTHPASTE</li><li>✓18 months to 5 years – pea-sized smear of LOW FLUORIDE TOOTHPASTE</li><li>✓6 years and older - pea-sized smear of STANDARD FLUORIDE TOOTHPASTE</li></ul></li><li>■ Assist your child with brushing at least once a day until he or she is 8 or 9 years old</li></ul> |
| <b>Play well</b>  | <ul style="list-style-type: none"><li>■ Wear a professionally fitted mouthguard when you are playing and training for any sport where there is a risk of mouth injury</li><li>■ You will need to wear a full-faced helmet or face guard for some sports and recreational activities</li><li>■ Provide a safe environment for your child, in the home and in the playground</li><li>■ Adult supervision helps to prevent childhood injuries</li><li>■ If an injury occurs seek professional advice immediately</li></ul>  |
| <b>Stay well</b>  | <ul style="list-style-type: none"><li>■ Dental checkups are especially important during pregnancy</li><li>■ Children ought to have their first dental visit by their 1<sup>st</sup> birthday</li><li>■ Check with a dental professional to see if your child needs sealants or a fluoride treatment</li><li>■ Have regular check-ups – gum disease may not be painful until it's too late</li><li>■ If you have dentures you still need a regular dental check-up</li><li>■ Don't smoke</li><li>■ Limit alcohol</li><li>■ Protect your face, especially your lips, from excessive sun exposure</li></ul>   |

# Eat Well

- Enjoy a wide variety of nutritious foods
- Enjoy healthy snacks
- Avoid snacking on sugary and sticky foods and sweets between meals
- Milk products help protect your teeth
- Chew sugar-free gum to help protect your teeth

**Dental caries** is a significant public health problem and is estimated to be the most expensive diet-related health problem in Australia.<sup>16,17</sup> Eating a wide variety of nutritious foods is important for good health and well-being. The *Australian Guide to Healthy Eating* provides guidance on the types of foods that can be included in a typical Australian diet to meet the dietary guidelines and the recommended dietary intake.<sup>18</sup>

## Sugar and oral health

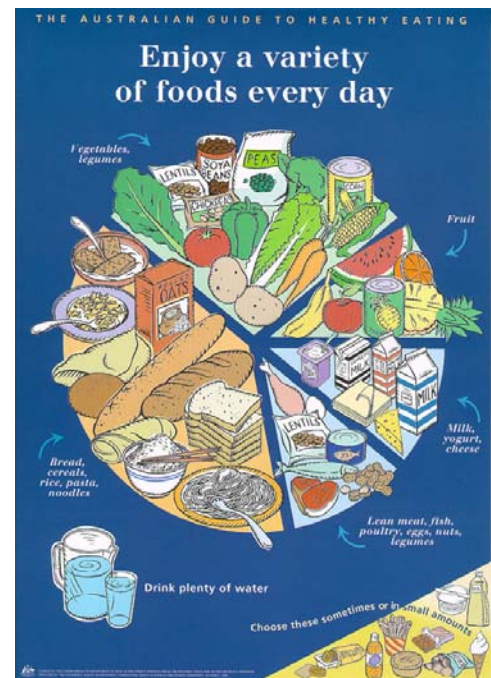
The relationship between sugar (sucrose) and dental caries has been confirmed in numerous studies, as acids produced by dental plaque dissolve the tooth structures.<sup>19,20</sup>

Studies have also found that it is the frequency of eating sugar, rather than the amount of sugar per se that is related to dental caries.<sup>21</sup> Any food that sticks to tooth surfaces and dissolves slowly constitutes a continuous raised risk of tooth decay.

Foods high in extrinsic (added) sugars are the most damaging to the teeth, while intrinsic sugars (such as in fruit) are considered to be less important as a cause of dental decay.<sup>22</sup> Along with increasing caries risk, an increased consumption of sugar-sweetened beverages and snack foods has also been linked to obesity.<sup>23</sup> Health risks associated with childhood overweight and obesity are strong indicators for predisposition to adult morbidity and mortality and include type 2 diabetes, cardiovascular disease and psychological stress, as well as respiratory, orthopaedic and hepatic problems.<sup>24</sup>

**Healthy snacks** between meals include cheese, vegetable sticks, fresh fruit, yoghurt, wholegrain sandwiches and soups.<sup>25</sup> Foods such as cheese or milk that contain casein can assist in the prevention of dental decay. Both casein and whey protein appear to be involved in the reduction of enamel demineralisation.<sup>26,27</sup> The high calcium and phosphorus content is also considered to be another factor in the decay preventing mechanism of cheese.<sup>27</sup> The act of chewing stimulates saliva flow that in turn buffers the acid formed by plaque making sugar-free gum, hard cheese or raw vegetables an excellent choice at the end of, or in between, meals.

**Dry mouth** (xerostomia) results from reduced or absent saliva flow and is a symptom with various causes including: medication; radiotherapy to the head or neck; mouth breathing; anxiety; dehydration; and Sjögren's Syndrome. Both xylitol and sorbitol have been shown to have a preventive effect on dental caries<sup>28</sup> by improving saliva flow<sup>29</sup>, with xylitol-containing gums providing superior efficacy in reducing caries rates in high-risk populations.<sup>30</sup>



# Drink Well

- Tap water is the best drink between meals and at bedtime
- Avoid drinking acidic and sugary drinks between meals
- Choose sugar-free medicine

## Children

- Breastfeed your baby until at least 6 months
- Always hold your baby when bottle feeding and take the bottle away when they've had enough
- Putting a baby to bed with a bottle can cause tooth decay
- Encourage your baby to drink from a cup at 6-8 months

**Fluoridation of public water supplies** is recommended because of its effectiveness in protecting teeth against decay in all age groups. It benefits the community regardless of socioeconomic status, educational achievement, individual motivation and the availability of dental personnel.<sup>31</sup> Compared to the cost of restorative treatment water fluoridation actually provides cost savings.<sup>32,33</sup>

When fluoride is present in saliva it interacts at the tooth surface with minerals and salts to re-crystallise or re-mineralise the enamel attacked by acid. It is this constant supply of a low level of fluoride within the saliva that is most beneficial to the prevention of dental decay and the microscopic repair of any lost minerals. Fluoride, at an optimal level in the water supply, provides the ideal, constant “repair-kit” for all people exposed to



consumption of fermentable sugars within their diet. Thus, tap water should be encouraged as the drink of choice between meals, especially if fluoridated.<sup>34</sup>

**Acidic and sugary drinks** can cause **tooth surface loss** (*pathological*) through **decay** (related to sugar content), and **erosion** (related to acidity).<sup>35</sup> They are particularly harmful when sipped slowly, or when they are swished and swilled before swallowing.<sup>36,37</sup> They should not be carried around in baby’s bottles, nursing cups, drink bottles and the like for drinking occasionally: only tap water should be used in this way.

**Erosion** may occur due to intrinsic sources of acidity (eg gastro-oesophageal reflux and vomiting<sup>38,39</sup>) or extrinsic sources, which include acidic drinks (eg alcohol, citrus-based and other juices, cordial, carbonated and uncarbonated drinks, sports drinks and herbal tea)<sup>4</sup> (refer Appendix B). In addition, long-term use of syrup medicines, which have a high concentration of free sugars, can cause tooth decay and gingivitis.<sup>40</sup>

**Exclusive breastfeeding** to the age of six months gives the best nutritional start to infants.<sup>41,42,43,44</sup> Early childhood caries (ECC) is a recognised problem in infants and toddlers, characterised by extensive and rapid tooth decay.

Pacifying infants by giving them a bottle to suck on for long periods, or allowing them to fall asleep while continuing to feed from a bottle, have been identified as the major cause of ECC.<sup>45</sup> Baby feeding bottles are best used only for breast-milk or infant formula. Babies can learn to **drink from a cup** from about six to eight months of age. Training cups for cool boiled water or formula can be useful in transition to a regular cup.<sup>25</sup> The baby should be drinking from a cup and no longer drinking from a bottle by the time they are 12 months of age.<sup>46</sup>

# Clean Well

- Brush twice a day with a fluoride toothpaste, especially before bed
- Brush your teeth and gums with a toothbrush that has soft bristles and a small head
- Clean between your teeth every day with floss, dental woodsticks or an interdental brush
- Clean your dentures properly every day

## Children

- Brush your child's teeth:
  - ✓ When they first appear to 17 months **WITHOUT TOOTHPASTE**
  - ✓ 18 months to 5 years with a pea-sized smear of **LOW FLUORIDE TOOTHPASTE**
  - ✓ 6 years and older with a pea-sized smear of **STANDARD FLUORIDE TOOTHPASTE**
- Assist your child with brushing at least once a day until he or she is 8 or 9 years old

**Plaque** plays a central role in the cause of dental caries, gingivitis and periodontitis. Effective removal of dental plaque can result in the prevention or reduction of dental caries and gingivitis in children and adults.<sup>47</sup>

**Toothbrushing and cleaning between teeth** play a critical role in the prevention of dental caries and periodontal disease. Thorough toothbrushing twice daily with a soft bristle, small headed toothbrush and fluoride toothpaste is the most effective method of maintaining healthy teeth and gums.<sup>48</sup> Toothpaste should be spat out, not swallowed and not rinsed.<sup>2</sup> It is especially important to brush before bed because the flow of saliva, which is the mouth's own cleaning system, slows down during the night and this leaves the mouth more at risk from decay.<sup>49</sup> Cleaning between the teeth every day with floss, dental woodsticks or an interdental brush is also effective as an adjunct to tooth brushing.<sup>50</sup> Older people<sup>51</sup>, people with disabilities<sup>52</sup> and young children may require assistance in maintaining good oral hygiene and plaque control.



Indeed, most children have insufficient manual dexterity to brush effectively. An adult needs to assist children with thorough brushing at least once a day until they are eight or nine years of age.<sup>53</sup> Dental care for babies should begin within a few days after birth: right after each feeding, wipe the baby's gums and inside of the cheeks, roof of the mouth and tongue with a clean damp washcloth or wet gauze pad to remove plaque.<sup>54</sup>

## Fluoride

Dental fluorosis is a form of developmental defect of tooth enamel caused by the intake of excessive fluoride. To avoid fluorosis the Australian Research Centre for Population Oral Health recommends that: (i) children's teeth should be cleaned by a responsible adult, but **NOT** with toothpaste, from the time that teeth first erupt (about six months of age) to the age of 17 months; (ii) for children aged 18 months to five years (inclusive) teeth should be cleaned twice a day with a small pea-sized amount of low-fluoride toothpaste, under the supervision of an adult; (iii) for people aged six years or more, teeth should be cleaned at least twice a day with a standard fluoride toothpaste; and (iv) people in unfluoridated areas should seek professional advice regarding fluoride.<sup>2</sup>

**Periodontal diseases** are caused by microbial infections, and are plaque-related complex diseases. The mildest form is **Gingivitis**, which is an inflammatory condition that affects the soft tissues surrounding the teeth and is a direct immune response to plaque building up on the teeth.<sup>55,56</sup> **Periodontitis**, a more advanced stage of the disease that involves the soft tissue and bone that support the teeth, may progress and result in abscesses, mobile teeth and tooth loss. Prevention and control of gingivitis and periodontitis are achieved directly through the mechanical removal and disruption of dental plaque<sup>57</sup> by tooth brushing, cleaning between the teeth every day with floss, dental woodsticks or an interdental brush, and professional dental care.<sup>58,59,60,61,62</sup> Pregnant women with severe periodontal diseases are at about seven times greater risk of giving birth to preterm low birth-weight babies.<sup>63</sup>

**Denture wearers** need to ensure they maintain a healthy mouth by safeguarding any remaining teeth and treating dentures the same as natural teeth to prevent further tooth loss, inflamed gums, or bacterial and fungal infections.<sup>64,65</sup> Additionally, it is important to have regular dental check-ups to evaluate the soft tissues and to examine the denture for proper fit, comfort, and function.

# Play Well

- Wear a professionally fitted mouthguard when you are playing and training for any sport where there is a risk of mouth injury
- You will need to wear a full-faced helmet or face guard for some sports and recreational activities
- Provide a safe environment for your child, in the home and in the playground
- Adult supervision helps to prevent childhood injuries
- If an injury occurs seek professional advice immediately

The leading causes of oral and craniofacial injuries are:

- sports
- assault
- falls
- motor vehicle crashes
- (ingestion of) foods containing foreign bodies
- self-inflicted injury.<sup>66</sup>

Facial trauma that results in fractured, displaced, or lost teeth can have significant negative functional, aesthetic and psychological effects on children.<sup>67</sup>

**Craniofacial sports injuries** occur in contact sports (rugby union, rugby league and Australian rules), team sports (basketball, cricket, hockey, soccer, netball, softball and baseball) and in individual activities (bicycle riding, roller skating/blading, swimming, squash, tennis and gymnastics).<sup>68</sup> Dental injuries are the most prevalent type of orofacial trauma sustained during participation in sports with

the upper front teeth being the most affected.<sup>69</sup>

The use of **mouthguards** during sport reduces oral injuries<sup>70,71,72</sup> and programs to increase their usage have been shown to be effective.<sup>70</sup> Mouthguards will only be effective if they are fitted properly and worn properly.<sup>73,74</sup> Some sport and recreational activities such as cricket, squash, skiing and BMX riding may require the additional protection of full faced helmets or face guards which offer greater protection to oral and other facial structures.<sup>75</sup>



**Play** is integral to children's development of motor and social skills, and while playing on playground equipment is an activity enjoyed by children, it can be hazardous.<sup>76</sup> Care in the design of school and public playgrounds is important and must comply with Australian/New Zealand Standards.<sup>77</sup> Children should be taught to play safely and be supervised by a responsible adult.<sup>78,79</sup> **Home** is a place for children to explore, to have adventures and to play. Unfortunately, the home is also the most common place for young children to be injured. One of the best ways to reduce the risk of injury is to make some physical changes to the house: either remove something that is potentially dangerous, or add a safety product.<sup>80</sup>

Where a **dental injury** is sustained, professional dental advice should be sought immediately.<sup>81</sup> Knowledge of first-aid strategies for dental trauma is important and recommended<sup>82</sup>, in particular training for parents/school and sports staff<sup>83</sup> and staff in emergency rooms in hospitals.<sup>84</sup> *Dentist in a Box*<sup>TM</sup> is recommended by Sports Medicine Australia and the Australian and New Zealand Society of Paediatric Dentistry.<sup>85</sup>

# Stay Well

- Dental checkups are especially important during pregnancy
- Children ought to have their first dental visit by their 1<sup>st</sup> birthday
- Check with a dental professional to see if your child needs sealants or a fluoride treatment
- Have regular check-ups – gum disease may not be painful until it's too late
- If you have dentures you still need a regular dental check-up
- Don't smoke
- Limit alcohol
- Protect your face, especially your lips, from excessive sun exposure

**Regular clinical examinations** are recommended for all people (with or without their natural teeth): 12 months for patients younger than 18 years, and 24 months for patients aged 18 years and older, or as advised by your dental professional<sup>86</sup>: both tooth decay and gum disease may not be painful until it's too late.

## Mothers and Children

It is recommended that an oral health risk assessment be performed before a child is one year old.<sup>87</sup> Babies are not born with decay-causing bacteria. Infants and toddlers whose mothers have high levels of mutans streptococci in their saliva, a result of untreated caries, are at risk of acquiring the bacteria.<sup>88,89</sup> This can happen through kissing, food tasting and cleaning the baby's dummy in their mouth. Therefore, steps to prevent caries should begin prenatally and continue with the mother and young child.<sup>90,91</sup>

**Adolescents** are recognised as having distinctive needs<sup>92,93</sup> due to: (i) a potentially high caries rate; (ii) increased risk for traumatic injury and periodontal disease; (iii) a tendency for poor nutritional habits; (iv) an increased aesthetic desire and awareness; (v) complexity of combined orthodontic and restorative care (eg congenitally missing teeth); (vi) dental phobia; (vii) initiation of tobacco use; (viii) pregnancy; (ix) eating disorders; and (x) unique social and psychological needs.<sup>94,95,96,97</sup>

For **older adults**, good oral health is a pre-requisite of good nutrition. Both oral and systemic diseases can profoundly affect appetite, the ability to eat, and diet choices, compromising overall health and well-being.<sup>98,99,100</sup>

**Pit and fissure sealants** are beneficial in preventing the development of caries in the permanent dentition of high risk children.<sup>101</sup> In addition, **Fluoride therapies** (eg fluoride mouth rinses, varnishes, gels and foams) help to protect teeth against decay<sup>2</sup> and also provide additional protection and remineralisation against acid attacks on the tooth enamel.<sup>102</sup> Fluoride supplements, in the form of drops or tablets, are not recommended.<sup>2</sup>

**Smoking** has been identified as one of the most significant causes of avoidable death and disease.<sup>103</sup> Relationships have been reported between smoking and oral diseases such as, dental caries, periodontal diseases, gingival recession, oral mucosal lesions and oral cancer.<sup>104,105,106,107,108</sup> Motivated individuals can be assisted by advice from health professionals to quit smoking.<sup>109</sup>



**Oral and pharyngeal cancers** include cancers of the lips, tongue, pharynx, and oral cavity. Oral cancer is a lifestyle-related cancer, with tobacco as a primary risk factor.<sup>110,111,112,113</sup> Other risk factors include excessive alcohol consumption and sun exposure (for cancer of the lip). Indeed tobacco and alcohol, working in tandem, are thought to account for 75 to 90% of all oral and pharyngeal cancers.<sup>114,115</sup> Reducing tobacco use and alcohol consumption, and increasing fruit and vegetable consumption will contribute to the decrease in the incidence of oral cancer and pre-cancer.<sup>116,117,118,119,120</sup> Regular oral examinations, particularly as people age, are important for early detection of oral cancers and referral.<sup>121</sup>

The damaging effects of **ultraviolet light** (UVL) on the skin (including the lips and mouth) and the importance of photoprotective sunscreen and other sun-protective measures are well documented. *SunSmart* messages, such as sunscreen application, safe levels of sun exposure and wearing protective clothing, should be reinforced<sup>122</sup> and championed in schools.<sup>123</sup>

## 4 Glossary of Terms

|                              |  |
|------------------------------|--|
| Abfractions                  | (Or stress lesions) a consequence of eccentric forces on the natural dentition   |
| Abrasion                     | External agents, such as toothbrush bristles and dietary factors, which have an abrasive effect on the teeth.  |
| Attrition                    | A process in which tooth tissue is removed as a result of opposing tooth surfaces contacting function or parafunction.   |
| Cardiovascular disease       | A disease of the heart or blood vessels  |
| Craniofacial                 | Pertaining to the head and face  |
| Casein                       | The predominant phosphoprotein found in fresh milk and also in cheese  |
| Dental caries                | Tooth decay  |
| Dentition                    | The development of teeth and their arrangement in the mouth  |
| Early childhood caries (ECC) | Dental decay of the primary teeth of infants and young children often characterised by rapid destruction of the upper and lower incisors (front teeth)                                     |
| Extrinsic sugars             | Sugars that are usually added to foods and beverages   |
| Fluoride                     | A compound of the element fluorine (F), the 13 <sup>th</sup> most abundant element in nature: used in a variety of ways to reduce dental decay   |
| Gingivitis                   | An inflammatory condition of the gum tissue, which can appear reddened and swollen and frequently bleeds easily  |
| Hepatic                      | Refers to the liver  |
| Intrinsic sugars             | Are those naturally present in fruit and vegetables  |
| Morbidity                    | The rate of incidence of a disease   |
| Mortality                    | Death rate   |
| Orthopaedic                  | Pertaining to injuries or disorders of the skeletal system and associated muscles, joints, and ligaments   |
| Periodontal disease          | A cluster of diseases caused by bacterial infections and resulting in inflammatory responses and chronic destruction of the soft tissues and bone that support the teeth                   |
| Periodontitis                | Disease of the gum or bone   |
| Plaque                       | A sticky bacterial film that coats the teeth   |
| Predisposition               | The state of being susceptible; easily affected  |
| Professional advice          | Advice given by registered dental providers including dentists, dental specialists, dental therapists, dental hygienists and dental prosthetists   |
| Sealant                      | Plastic coatings, which bond to the biting surface of the back teeth, providing protection from dental decay   |
| Sjögren's Syndrome           | A chronic, inflammatory, autoimmune disorder characterised by dry mouth (xerostomia) and dry eye (keratoconjunctivitis sicca)  |
| Sorbitol                     | A naturally occurring sweetener found primarily in fruits and berries  |
| Sucrose                      | A crystalline disaccharide of fructose and glucose found in many plants but extracted as ordinary sugar mainly from sugar cane and sugar beets, widely used as a sweetener or preservative |
| Xerostomia                   | A condition in which the mouth is dry because of a lack of saliva  |
| Xylitol                      | Pure xylitol is a white crystalline substance that looks and tastes like sugar   |

## 5 Further information

|   |   |
|---|---|
| Australian Dental Association   | <a href="http://www.ada.org.au">http://www.ada.org.au</a>   |
| Australian Dental Association (NSW)   | <a href="http://www.adansw.com.au/">http://www.adansw.com.au/</a>   |
| Australian Institute of Health and Welfare<br>Dental Statistics and Research Unit | <a href="http://www.adelaide.edu.au/spdent/dsru/">http://www.adelaide.edu.au/spdent/dsru/</a>   |
| Australian Research Centre for Population Oral<br>Health                          | <a href="http://www.arcpoh.adelaide.edu.au/">http://www.arcpoh.adelaide.edu.au/</a>   |
| Australia's National Oral Health Plan 2004-<br>2013: healthy mouths healthy lives | <a href="http://www.health.vic.gov.au/dentistry/downloads/oralhealth.pdf">http://www.health.vic.gov.au/dentistry/downloads/oralhealth.pdf</a>     |
| Centre for Oral Health Strategy NSW   | <a href="http://internal.health.nsw.gov.au/public-health/ohb/">http://internal.health.nsw.gov.au/public-health/ohb/</a>                           |
| The Cochrane Library  | <a href="http://www3.interscience.wiley.com/cgi-bin/mrwhome/106568753/HOME">http://www3.interscience.wiley.com/cgi-bin/mrwhome/106568753/HOME</a> |
| Dietary Guidelines for Children and<br>Adolescents in Australia                   | <a href="http://www.nhmrc.gov.au/publications/synopses/dietsyn.htm">http://www.nhmrc.gov.au/publications/synopses/dietsyn.htm</a>                 |
| Fluoride and water fluoridation   | <a href="http://www.fluoridenow.com.au/">http://www.fluoridenow.com.au/</a>   |
| Health Insite   | <a href="http://www.healthinsite.gov.au/topics/Dental_Health_for_Children">http://www.healthinsite.gov.au/topics/Dental_Health_for_Children</a>   |
| National Center for Chronic Disease<br>Prevention and Health Promotion            | <a href="http://www.cdc.gov/OralHealth/">http://www.cdc.gov/OralHealth/</a>   |
| National Health and Medical Research Council                                      | <a href="http://www.nhmrc.gov.au/">http://www.nhmrc.gov.au/</a>   |
| National Institute for Health and Clinical<br>Excellence (UK)                     | <a href="http://www.nice.org.uk/">http://www.nice.org.uk/</a>   |
| World Health Organisation   | <a href="http://www.who.int/healthpromotion/en/">http://www.who.int/healthpromotion/en/</a>   |

# 6 Appendices

## Appendix A - Key stakeholders

### NSW Oral Health Messages Working Group

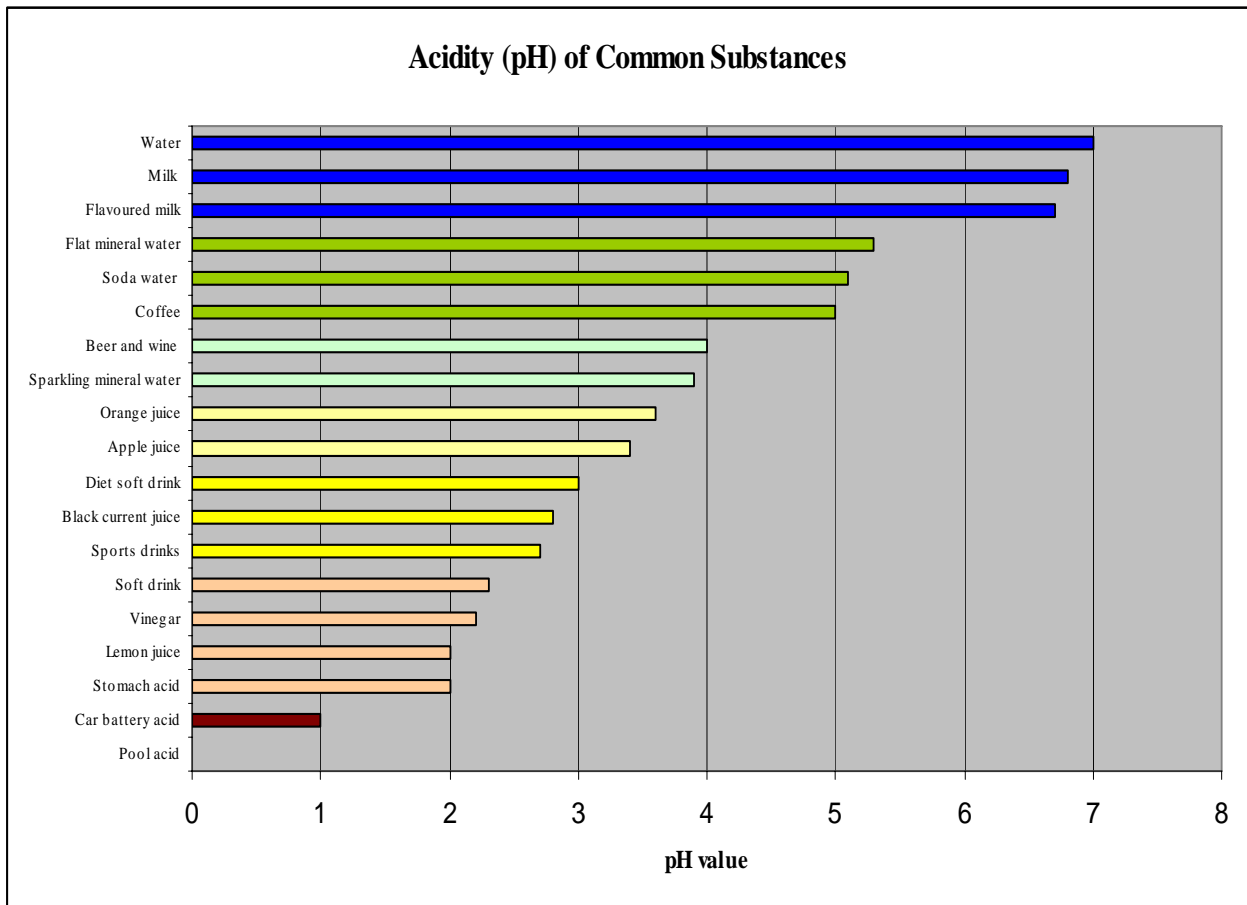
|                            |  |
|----------------------------|--|
| Dr Sally Clark             | Senior Dental Officer, Sydney South West Area Health Service               |
| Mr John Irving             | Project Manager Oral Health, North Coast Area Health Service               |
| Ms Jennifer Noller (Chair) | NSW Oral Health Promotion Coordinator, Centre for Oral Health Strategy NSW |
| Ms Georgette Roumanos      | Administration Officer, Centre for Oral Health Strategy NSW                |
| Mr Bernard Rupasinghe      | Policy Analyst, Australian Dental Association (NSW Branch)                 |
| Ms Lenore Tuckerman        | Professional Relations Consultant, Colgate Oral Care                       |

### NSW Oral Health Promotion Network

|                            |  |
|----------------------------|--|
| Ms Linda Barlow            | Dental Therapist, Greater Western Area Health Service  |
| Ms Michelle Bonner         | Senior Policy Officer, The Council of Social Services of NSW (NCOSS)   |
| Dr Sally Clark             | Senior Dental Officer Wingecarribee Health Service, Sydney South West Area Health Service  |
| Dr Peter Dennison          | Director, Bachelor of Oral Health, Faculty of Dentistry, The University of Sydney  |
| Ms Lisa Fitzgerald         | Program Manager Oral Health Service, Hunter/New England Area Health Service  |
| Ms Jonine Gilmour          | Senior Dental Therapist, Justice Health  |
| Ms Leonie Green            | Oral Health Promotion Coordinator, South Eastern Sydney/Illawarra Area Health Service  |
| Mr John Irving             | Project Manager Oral Health, North Coast Area Health Service   |
| Ms Jennifer James          | Oral Health Promotion Officer, Bathurst Child Dental Clinic, Greater Western Area Health Service                                     |
| Ms Bronwyn Johnson         | Coordinator, Oral Health Promotion, Sydney West Area Health Service  |
| Ms Debbie Lee              | Oral Health Promotion Coordinator, South Eastern Sydney/Illawarra Area Health Service  |
| Ms Helen Lee               | Area Dental Program Coordinator, Northern Rivers, North Coast Area Health Service  |
| Ms Leanne Martin           | Service Manager, Oral Health Services, Hunter New England Area Health Service  |
| Ms Angela Masoe            | Oral Health Programs Officer, Greater Southern Area Health Service   |
| Ms Jennifer Noller (Chair) | NSW Oral Health Promotion Coordinator, Centre for Oral Health Strategy NSW   |
| Ms Claire Phelan           | A/Senior Policy Analyst Oral Health Programs, Centre for Oral Health Strategy NSW  |
| Mr Bernard Rupasinghe      | Policy Analyst, Australian Dental Association (NSW Branch)   |
| Ms Georgette Roumanos      | Administration Officer, Centre for Oral Health Strategy NSW  |
| Ms Lindy Sank              | Dietician, Sydney Dental Hospital  |
| Ms Karen Sleishman         | Dental Therapist, Hunter New England Area Health Service   |
| Ms Lenore Tuckerman        | Professional Relations Consultant, Colgate Oral Care   |
| Ms Janet Wallace           | Senior Dental Therapist/Oral Health Educator, Central Coast Child Dental Services, Northern Sydney/Central Coast Area Health Service |
| Ms Linda Wallace           | Oral Health Promotion Educator, Hunter/ New England Area Health Service  |
| Ms Marie Wilson            | Statewide Aboriginal Oral Health Manager, Centre for Oral Health Strategy NSW  |
| Ms Grace Wong              | Senior Dental Therapist, Willoughby Child Dental Clinic, Northern Sydney/Central Coast Area Health Service                           |
| Dr Clive Wright            | Chief Dental Officer, Centre for Oral Health Strategy NSW  |

## Appendix B – Acidity (pH) level of common substances

Figure 1: Acidity (pH) of Common Substances



**More acidic** ← **pH** → **Less acidic**  
(the **smaller** the pH the stronger the acid)

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