# Bila Muuji School Toothbrushing Manual







#### Bila Muuji Aboriginal Health Service Incorporated

Dear Colleagues,

On behalf of Bila Muuji Aboriginal Health Services Incorporated, it is my pleasure to introduce you to the Bila Muuji Toothbrushing Manual.

The Bila Muuji Aboriginal Health Services Incorporated comprises Aboriginal Community Controlled Health Services from Brewarrina, Bourke, Coomealla, Coonamble, Dubbo, Forbes, Orange, Wellington and Walgett. Our approach is to "provide health services addressing not just the physical well-being of the individual but also the social, emotional and cultural well-being of the whole community".

Since 2006 Bila Muuji has worked in partnership with the Western New South Wales Local Health District to run community based oral health promotion programs in the Bila Muuji region. The levels of tooth decay in the children in these rural and remote areas is very high, and programs have been developed to try to reduce these unacceptably high rates of decay.

Getting children to brush their teeth at school, on a daily basis, is effective in helping to prevent tooth decay. To achieve this we require the cooperation from school staff to work with local dental and health teams.

By producing this Manual we hope to assist school staff in the management and supervision of school based daily toothbrushing programs. It is a valuable resource developed by Dr Suman Kavooru, Bila Muuji Oral Health Promotion Coordinator, with assistance from health staff working in Bila Muuji partner organisations.

Together we can increase the opportunities to fight dental disease in our communities and help all children to smile proudly.

Yours sincerely

Jamie Newman Chairperson

26<sup>th</sup> June 2015

#### **Acknowledgements**

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- Dr Sandra Meihubers
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- Ms Jennifer Floyd Director, Oral Health Services, Western NSW LHD
- 3. Bila Muuji staff
- 4. Centre for Oral Health Strategy (NSW Ministry of Health)
- 5. Queensland Oral Health



Meaning of the Bila Muuji Logo: "River Friends"

- External Circle: The Goannas; On the outside are our "Protectors of our well being".
- 2. <u>1st Circle</u>: Is a representative concept of the Goanna footprints of the future walkway to Oral Health and wellness.
- 3. **2nd Circle** Seated together by the River is the family: A representative concept that oral health is holistic, it is inclusive of everyone from babies, to parents, great grandparents and our ancestors of the past. They sit by the river as a source of life, and the Water also supports the Bila Muuji strategy as a means to improving our oral health.
- 4. <u>The shape:</u> The oval shape is representative of the shape of our mouths and a circle of wholeness.
- 5. **Wording:** "Stay Strong" is acknowledgement of the importance of our Aboriginal cultural in our daily living for the generations to come.
- 6. "<u>Teeth for life</u>" Good oral health supports our cultural with its strength in language (speech), and holistic wellbeing towards the future.

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# Introduction to Oral Health



Oral health is important in everyone's life. Oral health affects overall health, which in turn determines quality of life. Good oral health enables an individual to eat without discomfort, to speak and to socialise, and leads to improved general health. You cannot be healthy without good oral health. Oral diseases can compromise our ability to work at home, at school or on the job. The main oral diseases are dental decay (dental caries) and gum disease (periodontal disease). Dental erosion is another condition, where acids wear away tooth structure.

Oral diseases are one of the most common health problems experienced by Australians and there is increasing concern regarding the oral health of Australian children, especially the oral health of Aboriginal children when compared to non-Aboriginal children. Rural and remote communities suffer greater burdens of dental disease. Factors that contribute to dental disease are minimal toothbrushing, a lack of exposure to fluoride, excessive and frequent consumption of sugar and a lack of access to dental services.

The resulting dental decay is a preventable disease. The following will help to reduce the incidence of dental decay:

- Adding fluoride to drinking water
- Brushing teeth twice a day with a fluoride toothpaste
- Improving access to appropriate preventive dental care
- Reducing the consumption of sugar in foods and drinks

It is important to introduce these preventative measures into a child's life at an early stage, so that good habits are developed and maintained over their lifetime.

#### Why do we support toothbrushing at school?

Studies have shown that supervised brushing once per day in preschool or school using a fluoride toothpaste prevents cavities and can reduce gum disease<sup>i</sup>. Brushing at school also ensures that children brush their teeth at least once a day with a fluoride toothpaste<sup>ii</sup>.



Children should also be encouraged to brush at home:

Before coming to school



Before going to bed



The whole family should also be encouraged to brush at home. Brushing before bedtime is especially important to prevent plaque and food particles remaining in contact with teeth throughout the whole night.

This manual will provide information on how to set up and run a school based toothbrushing program, and will also describe the structure of teeth, the main dental diseases and how to prevent them.

#### Why do we need teeth?

- > To give shape and form to your face
- > To chew
- > To talk
- > To smile



Baby teeth are very important to maintain the space for adult teeth and give shape to the face.

#### Our Teeth - how many, their structure, and what they do

Teeth come in different sizes and shapes, and erupt (grow into the mouth) at different times.

There are **two sets of teeth** in human life:

- > Primary (baby) teeth
- Permanent (adult) teeth

There are usually 3 dental "stages" in human development:

- ➢ 6 months to 6 years Primary Teeth
- ➤ 6 Years to 12 years Mixed Teeth (when both primary and permanent teeth are present in the mouth)
- > From 12 years Permanent Teeth

Ages are approximate and may vary between individuals.

#### Numbers of teeth in the mouth

	Incisors	Canines	Pre molars	Molars	Total
Primary teeth	8	4	0	8	20
Permanent teeth	8	4	8	12	32

A five year old will typically have 20 primary teeth.

An adult will typically have 28-32 permanent teeth.

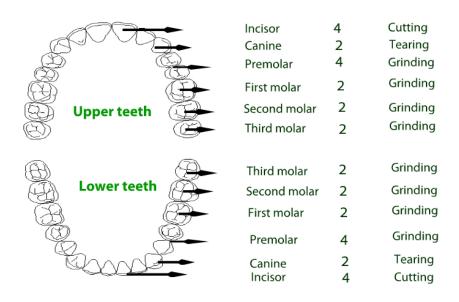
Most primary school children will have 24 teeth, a mix of primary and permanent teeth.

**Note:** These numbers may vary in individuals, as some people might have some teeth that are naturally missing (for example wisdom teeth).

#### **Primary Teeth (Baby Teeth)**

	Names	How many?	<b>Function</b>
	Incisor	4	Cutting
CVV3-	Canine	2	Tearing
ET TH	First molar	2	Grinding
Upper teeth	Second molar	2	Grinding
Lower teeth (1)	Second molar	2	Grinding
(F) (F)	- First molar	2	Grinding
Ø Ø -	Canine	2	Tearing
CA AS	Incisor	4	Cutting

#### **Permanant Teeth (Adult Teeth)**



#### Anatomy of a tooth

A healthy tooth is essential for chewing, to speak, and to smile. Above all, it is necessary to keep you healthy.

A tooth has 2 parts:

Crown: visible part of a tooth in the mouth

> Root: holds the tooth in the jaw bone

There are several structures in a tooth:

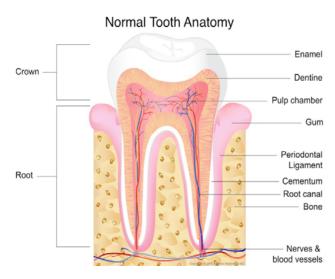
**Enamel**: A white mineralised outer layer of a tooth and the hardest substance in the body. It is composed of calcium hydroxyapatite, made of calcium phosphate. When bacteria and acids attack this layer, it softens, losing minerals which then leads to dental caries.

**Dentine**: This is the layer underlying the enamel and cementum and forms the largest part of the tooth. Dentine is formed by cells similar to bone and is harder than bone. When this layer is exposed to the oral environment, our teeth become sensitive to sweet, hot and cold foods and drinks.

**Cementum**: This is the tough layer that binds the roots of teeth to the jaw bone. It helps to hold the tooth in the socket.

**Dental Pulp**: This is the softer living substance beneath the dentine. Blood vessels and nerves run through the pulp and it nourishes the dentine. This is where toothache starts when it gets affected by bacteria.

**Periodontal ligament**: This is the tissue that helps to hold the tooth in position in the bone.





# Dental diseases/conditions Dental decay, gum disease and erosion



The most common dental diseases are dental decay (caries) and gum disease (periodontal disease). Dental erosion is another condition, where acids wear away the hard tooth structure.

One of the factors instrumental in causing dental diseases is dental plaque, a bacterial film that grows every day on a tooth's surface. There are other factors, and these will be described in the following sections.

#### **Dental Plaque**

Plaque is a soft, sticky deposit that is continually forming on our teeth and gums from food debris and bacteria.

It is invisible when it initially starts forming and can be shown up with staining by vegetable dyes. If this plaque is not removed by brushing and flossing on a regular basis, it will cause cavities (dental caries) and lead to gum disease (periodontal disease).



Dental plaque made visible (pink) by vegetable dye

#### **Dental Decay (Caries)**

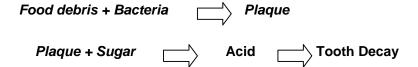
Acids and by-products released by bacteria present in the plaque cause dental decay. The outer layer of a tooth (the enamel) is composed of various minerals and crystals. Acids produced by the bacteria in plaque dissolve these minerals and crystals, a process called "demineralisation". This makes the enamel more prone to developing cavities.



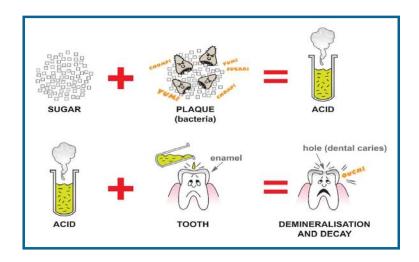


Decay (caries) in young children

Dental decay (**dental caries**) is a preventable disease and can be prevented by maintaining good oral hygiene and dietary habits.



#### Plaque also causes Gum Disease



#### Contributors to dental caries:

- > Frequent consumption of sweets and Iollies
- Sweet drinks fizzy soft drinks, sports/energy drinks, cordials, fruit juices, iced teas, flavoured milks are some popular drinks with a high sugar content
- Poor oral hygiene not brushing the teeth

#### Tooth decay leads to:

- Discolouration of teeth
- Loss of tooth structure and shape
- > Food lodgement between teeth
- > Pain and infection
- Difficulty in chewing and speaking

- > Difficulty in concentration
- > Loss of self esteem
- Poor nutrition
- Lost school days

#### **Gum (Periodontal) Disease**

Gum disease is caused by bacteria present in the plaque. Bacteria and their byproducts cause inflammation in the surrounding gum tissue and as a result the gums become red and swollen and will bleed easily. This is called **gingivitis**.

Plaque can also calcify (harden) and form tartar (**calculus**). Once the plaque becomes calcified it cannot be removed by brushing and needs to be removed by a dental professional. If these conditions are left untreated, infection progresses and causes destruction of the tissues and bone which support the teeth. Eventually the tooth or teeth are lost to gum disease.

To prevent gum disease it is necessary to clean our teeth with fluoride toothpaste at least twice a day. Older children and adults should also floss between their teeth daily.

#### **Dental Erosion**

Dental erosion is the irreversible loss of tooth structure on the hard tooth surfaces like enamel, dentine and cementum. It can be caused by exposure to too much acid from acidic foods and drinks, some medicines and by stomach acid (reflux or vomiting) causing sensitivity to cold and hot, sweet foods and drinks, and if severe, can require extensive care to restore the teeth.



Erosion on bottom teeth

Acidic foods and drinks dissolve minerals from teeth and make the teeth soft. This leads to a loss of the hard outer layers of the teeth.

#### Foods, drinks and habits that can cause dental erosion:

- Sweet drinks with a low pH (i.e. high acid level) fizzy soft drinks (including diet soft drinks), sport/energy drinks, cordials, fruit juices
- > Regular sucking of lemons and other citrus fruits
- Pickles
- > High and regular consumption of sour lollies

#### Some tips to avoid erosion:

- Plain tap water is the best drink
- Limit acidic food and drinks (citrus fruits, soft drinks, sport drinks or juice)
- Swallow acidic drinks quickly do not hold or swish them in your mouth. Do not sip drinks over long periods
- ➤ Have a glass of water or a piece of cheese to neutralise the acids
- Do not brush your teeth immediately after consuming acidic food or drinks
- > Chew sugar free gum. It stimulates saliva which protects teeth
- > Rinse your mouth with water after using asthma inhalers
- Use a soft toothbrush and fluoride toothpaste twice daily



# Preventing Dental Disease









It is important to prevent dental diseases to keep you fit and healthy. There are many ways to keep these dental diseases away. But the important ones that everyone should follow are toothbrushing and maintaining a good diet.

#### **Toothbrushing**

It is important to clean your mouth regularly in order to clean all the rubbish off teeth and prevent bacterial growth. This in turn prevents dental decay and gum disease.

The most effective way of cleaning the mouth is to brush the teeth with fluoride toothpaste at least twice a day and using dental floss to clean in between the teeth. Fluoride in the toothpaste reduces the levels of bacteria and strengthens teeth.

People can also clean their teeth for other reasons:

> To have fresh breath



- > To remove stains
- > To whiten the teeth
- > To have a nice smile



For more information on Fluoride and its effect on teeth see Appendix 1

#### Diet and oral health

Diet and nutrition play a major role in the oral health of an individual. Poor dietary habits increase the risk of oral disease.

Eating nutritious, balanced meals and limiting snacks, especially sugary snacks and fizzy drinks between meals, helps maintain good oral hygiene.

The frequency of consuming sugary foods and drinks is more important than the quantity you consume. By limiting the number of snacks you are lessening the number of attacks on your teeth from the acids produced by the breakdown of sugars.

### Sometimes foods / Unhealthy snacks that have high percentage of sugar and acid







To achieve this, schools can create a healthy eating environment by ensuring the provision of

- > Healthy snacks, fruit and dairy products
- > Limiting sugary foods, minimising sweets, lollies
- Avoiding fizzy drinks

#### **Examples of everyday foods / Healthy snacks**









Schools can support healthy eating behaviours and provide nutritious meals. It is important for schools, teachers, students and health educators to collaborate closely with tuck shops and canteens to support healthy eating initiatives<sup>iii</sup>.

**Example:** A few of the schools in Western New South Wales have implemented healthy eating policies in their schools. They are strongly discouraging children from bringing junk foods and fizzy drinks to school. Initially, it was hard for the teachers, but slowly children are getting used to bringing nutritious meals to school.

#### Amount of sugar in some drinks







Amount of sugar measured by sugar cubes

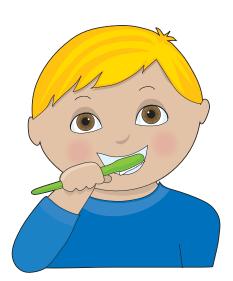
#### Other tips for preventing dental disease:

- Rinse your mouth with water after having sugary foods or drinks
- Have a piece of cheese after sugary foods or drinks. This will help neutralise the acid produced by oral bacteria
- Do not put sweet drinks, juices or sweeteners in baby's bottles
- Using sugarless chewing gum may help protect your teeth by stimulating extra saliva. Saliva is very important in protecting your teeth from decay
- Spit out excess toothpaste after brushing your teeth, do not rinse. This ensures the beneficial effect from fluoride in the toothpaste will last longer on the tooth surface<sup>iv</sup>
- > Encourage children to **drink water**. It is the healthy and natural choice

# Toothbrushing at School

The aim of this program is to ensure children brush their teeth at least once a day with a fluoride toothpaste. These guidelines will provide valuable information for teachers and health workers to support a toothbrushing program at school.





#### When to brush at school?

Best after breakfast/lunch every day to clean the food debris and prevent plaque formation



➤ No eating or drinking anything for 30 minutes immediately after brushing - in order to gain the greatest benefit from the fluoride in the toothpaste



#### Where to brush?

Brushing can take place in the regular childcare or classroom setting



Access to a sink is necessary for washing the toothbrushes and for spitting out toothpaste



#### **Supervision**

> Children up to year 3 require close supervision by an adult when brushing their teeth: to ensure the correct brushing technique, and to

maintain hygiene



- > Toothbrushing can be best achieved by:
  - Demonstrating the appropriate brushing technique
  - · Adults supervising a group activity of brushing
  - Assisting each child when necessary





#### What type of toothbrush and paste to use?

Recommended toothbrushes have soft, rounded bristles



- Toothbrushes with smaller heads and shorter handles are most appropriate for younger children
- > Fluoride toothpaste must be used, but in appropriate small amounts

Children under 6 years - Use a smear of fluoridated toothpaste

Children over 6 years - Use a small **pea-sized amount** (size of their small finger nail). Children may develop fluorosis (staining and mottling of teeth) if they swallow too much fluoride over time. For this reason, toothpaste should be spat out and should not be swallowed



Adults should always dispense the toothpaste.

#### **Dispensing the toothpaste**

Each child should have their own toothpaste tube and they should be labelled to ensure they are not accidentally shared between children.



> "Dip the tip" of the toothbrush into the top of the toothpaste tube, which will pick up a small amount of toothpaste for a smear or pea sized amount

Where it is not possible to have individual tubes:

Teachers / carers can dispense a pea size amount of tooth paste on a piece of clean cling wrap/clean paper



Use a dispenser to dispense toothpaste
 (see Useful Resources section for buying options)



To avoid the risk of cross contamination between the children's toothbrushes and toothpaste, the toothpaste should not be applied directly to the toothbrush of different children from one large toothpaste tube.







## How to brush?





Dental plaque accumulates each day near the gums. Children should be encouraged to brush gently near the gums, using the following techniques. Avoid hard scrubbing near the gums as this could damage them.

#### **CIRCLES, SCRUBS AND WRIGGLES**

CIRCLES: The children should gently brush the <u>outside surfaces</u> of their teeth using the toothbrush in large "circle" movements (picture 2 and 3). This will move the brush near the gums and should be done on all the teeth, front and back, top and bottom.

WRIGGLES: The <u>inside surfaces</u> of the teeth are cleaned by placing the bristles of the toothbrush on the inside surfaces of the teeth (picture 4), and "wriggling" the brush to clean these surfaces without damaging the gums.



SCRUBS: The <u>chewing surfaces</u> of the teeth are cleaned with a backwards and forwards "scrub" movement, to clean the grooves and tops of the teeth (picture 5).

Children should be allowed to spit out excess toothpaste after brushing, but rinsing should be avoided if possible. Rinsing can wash away the beneficial effects of fluoride.

#### **Duration of brushing**

Advise the children to brush gently **15 times each side** and per each circle, scrub and wriggle action. This is working quite well in many school programs with kids brushing for at least 1-1.5 minutes.



# Toothbrush hygiene and storage





#### **General hygiene**

To avoid the spread of bacteria, the supervisor and the child should thoroughly wash their hands before and after toothbrushing.

#### Toothbrush hygiene and storage

Appropriate cleaning, storage and replacement of toothbrushes are also important to prevent cross contamination and oral disease.

After each use, toothbrushes should be:

- Rinsed under running water
- Stored in an upright position
- Allowed to air dry



Toothbrushes should be stored so that they do not touch each other, and they should not drip on one another. They should not be covered with anything that could prevent them from drying between uses.

## Toothbrushes and toothpaste must not be shared between children.

#### Storage ideas:

Special storage racks



Toothbrush storage containers

The toothbrush should be rinsed, shaken dry, placed in the container with the lid open, allowed to air dry, and then the lid may be closed after a couple of hours.



The most appropriate containers are those with perforations, to allow air to flow and dry the toothbrush.

# The brush must be dry before being sealed in a container. If not, bacteria and mould will grow on the bristles

Cardboard egg cartons. It is best to purchase new, unused cartons to avoid any possibility of salmonella contamination from eggs.



Egg cartons should be closed and placed flat-side down. Children's names are written on the individual egg-shaped protuberances, and holes are poked in the protuberances to accommodate the toothbrush handles. It would be good to cover these with mesh and netting, to stop the flies.

### Responsibilities of teachers/carers/leaders for effective toothbrushing at school

While the following routine is provided as a guide, your facility may need to modify it slightly to suit your environment.

#### Daily toothbrushing routine

Follow the steps outlined below.

- > Step 1 After washing their hands, then eating their lunch, children should be encouraged to drink water before brushing their teeth
- ➤ Step 2 The teacher or supervisor, after washing hands, places a smear or small pea-size amount of toothpaste onto each child's brush, depending on their age, using one of the methods as mentioned under the "Dispensing the toothpaste" section
  - Smear for kids under 6
  - Pea size for children over 6 years
- ➤ Step 3 Children should be encouraged to clean their teeth using the demonstrated technique and should brush for approximately 1-1.5 minutes for the whole mouth or counting 10-15 times for each side (some groups have found it useful to play a song during this time)
- > Step 4 When the children have finished brushing, they
  - Spit out the toothpaste foam and do not rinse the mouth
  - Wipe the mouth with tissue or paper towel and dispose of it in the garbage bin
  - Rinse their toothbrush individually and shake off excess water in the sink, or place their toothbrush in their cup for carers to rinse and store.
- Step 5 Toothbrushes are replaced in the child's case/storage rack

- > Step 6 If cases are used, they must be kept open for a couple of hours to allow brushes to dry. This will prevent bacteria and mould growing on them
- > Step 7 A solution of detergent and water or detergent wipes should be used to clean the sink where the toothbrushes have been rinsed. Gloves should be worn to do this. Wipe the sink dry with paper towels.

## School based toothbrushing infection control policies

You can find some relevant policies by following the links below

http://www.health.qld.gov.au/oralhealth/documents/ht\_38\_44.pdf

http://www.health.nsw.gov.au/oralhealth/Publications/nsw-little-smiles.pdf

#### Hygiene and infection control

Since some infectious disease can be transmitted via saliva, the following infection control principles are summarised to prevent the possible spread of disease.

#### Infection control protocols

- Children and staff must wash their hands prior to eating, or brushing their teeth
- > Toothbrushing must be supervised to ensure toothbrushes are not shared and are handled correctly
- ➤ Toothpaste tubes must not be shared. Toothbrushes can touch the toothpaste tube and there is the potential for cross infection from sharing toothpaste
- ➤ Each child must have his or her own toothbrush, toothpaste and bag/case
- > Toothbrushes must be rinsed under running water, one at a time, and then gently shaken to remove excess water. Toothbrushes must not come into contact with the basin or each other

- ➤ To prevent bacterial and mould growth toothbrushes and cases must be allowed to dry thoroughly.
  - Remove toothpaste and brush, wrap in a paper towel
  - Cases are washed with detergent and water (can be put through a dishwasher cycle)
  - Cases are then cleaned with an anti-bacterial solution or alcohol wipes and left to dry

Your local dental team will work with you to make sure the toothbrushing program is operating well. They will be able to assist with any further advice, and may be able to provide any additional resources you might need.

# Other Important things to consider for good oral hygiene practices at home

#### Cleaning between teeth / Flossing (8 years and over)

Cleaning between the teeth removes food debris and plaque and is important to help prevent gum disease, bad odour and tooth decay.

Many products are available such as dental floss, dental tape and interdental brushes. It is recommended to clean between the teeth everyday.

Children require supervision when cleaning between their teeth.





#### **Tongue cleaning**

Studies have shown that over 50% of the odourcausing bacteria are located on the surface of the tongue. So the best and most effective way of preventing bad breath is to scrape off the odourcausing bacteria with the toothbrush. This will freshen breath and also improve the taste of food.



After children have finished brushing their teeth, you can encourage them to brush the tongue from back to front to remove odour producing bacteria and food debris.

There may be a possibility of children gagging initially. If this continues, you can ask kids to stop tongue cleaning until they feel comfortable.

#### **Useful resources**

There are various resources available to start and implement this program. These can be obtained by contacting your oral health promotion coordinator, Aboriginal Medical Service, Local Health District, the Centre for Oral Health Strategy (NSW Ministry of Health), and dental companies.

Some of the resources that might be useful to you are:

 Lift The Lip/See My Smile, Tooth and Nale (Story Book), Toothbrushing posters, Toothbrushing Tips Under 5, Healthy Mouth For Kids Under 5, Keep Our Kids Smile Strong (DVD and Poster), Eat Well, Top Dental Tips

You can find more information about these oral health resources from the following link.

http://www.health.nsw.gov.au/oralhealth/Pages/Resources.aspx

- Toothpaste dispensers can be purchased from various websites like eBay, Amazon
- Storage racks/containers for toothbrush and toothpaste can be purchased from

https://oraline.net/CHILD\_CARE/Brush\_Racks/20\_Hole\_Toothbrush\_Rack)

www.3p.com.au

#### Contacts for information regarding dental services

#### **Bila Muuji Member Services**

- 1. Bourke Aboriginal Medical Service Limited Ph: 02 6872 3088
- 2. Brewarrina Aboriginal Health Service Limited Ph: 02 6839 2150
- 3. Coomealla Aboriginal Health Corporation Ph: 03 5027 4226
- 4. Coonamble Aboriginal Health Service Ph: 02 6822 5217
- 5. Orange Aboriginal Health Service Incorporated Ph: 03 6393 9000
- 6. Walgett Aboriginal Medical Service Co-Operative Limited Ph: 02 6820 3777
- 7. Wellington Aboriginal Corporation Health Service Ph: 02 6845 3545
- 8. Yoorana Gunya Family Healing Centre, Forbes Ph: 02 6850 1222

#### **Contacts for education and information resources**

	Organisation/ Company	What you may get	Contact
1	Centre for Oral Health Strategy (NSW Ministry of Health)	Toothbrushes, toothpastes, water bottles and sippy cups	02 8821 4300
2	Western NSW Local Health District	Toothbrushes, toothpastes, water bottles and sippy cups  May be able to send dental clinicians for health checks	1300 552 626 02 6841 2343
3	Better Oral Health Centre	Oral health education and awareness resources	02 9887 5450 http://www0.health.nsw.gov.au/res ources/pubs/pdf/bhcoralhealth112 012.pdf
4	Colgate	Toothbrushes, toothpastes, floss, information brochures, Dr Rabbit and Brushwell costumes on loan for any community and educational events	1800 262 111 http://www.colgatebsbf.com.au/
5	Oral B	Toothbrushes, pastes, floss, information brochures	1800 641 820 http://www.oralb.com.au/topics/
6	Caredent	Toothbrushes and pastes	02 9987 4891 http://www.caredent.com.au/
7.	Maclean	Toothbrushes and pastes	1800 028 533 http://www.macleans.com.au/
8	Queensland Health	Education and information brochures	http://www.health.qld.gov.au/oralh ealth/promo_programs/
9	Oral Health Promotion Clearing house	Education and information resources	http://www.adelaide.edu.au/oral- health-promotion/resources/
10	Northern Territory	Education and information resources	http://www.health.nt.gov.au/Oral_ Health/Resources/index.aspx

#### **Glossary**

Bacteria Germs

Caries A disease of the teeth where microorganisms

convert sugars to acid, which then dissolves calcium out of the tooth and causes cavities

(decay)

**Calculus** A calcified build up on the teeth caused by plaque.

Tartar is a common name for calculus

**Dental Erosion** Dental erosion (tooth wear) is the irreversible loss

of tooth structure on the smooth tooth surfaces. It can be caused by chemical substances (e.g. acids) from acidic foods and drinks, some medicines and from the acid from stomach (reflux

or vomiting)

**Enamel** The hard mineralised outer surface of the tooth

Floss/Dental tape A ribbon of waxed nylon or silk used to aid in

cleaning between the teeth

Periodontal disease This is a disease that affects the soft and hard

tissues that support and anchor the teeth,

commonly referred to as gum disease

**Permanent teeth** These grow after the primary teeth and are 32 in

number usually (adult teeth)

Plaque A soft sticky substance on the teeth composed of

saliva, food debris and bacteria

**Primary teeth** The first set of teeth, 20 in all, that usually erupt

(grow into the mouth) between 6 and 28 months of

age (baby teeth)

#### **Appendix 1**

#### Fluoride and its effect on teeth

Fluoride is a natural element found in nature. Researchers in the 1940s found it helped to prevent dental decay. Since that time Fluoride has been used in various forms to help prevent and control dental decay.

- > Fluoride plays a major role in the prevention of dental caries
- > Fluoride is incorporated into the enamel and makes it resistant to attack by the acids from plaque bacteria
- > Fluoride is available in
  - Drinking water (either naturally occurring, or added as part of the treatment of a water supply)
  - Fluoridated toothpastes
  - Fluoride rinses
  - · Professionally applied fluoride gels and varnishes
  - Foods like tea and fish

#### Role of Fluoride in Preventing Dental Caries (decay):

The outer layer of a tooth (the enamel) is composed of various minerals and crystals. Acid produced by the bacteria in plaque dissolves these minerals and crystals, a process called "demineralisation". This makes the enamel more prone to cavities.



Demineralisation

Using fluoridated toothpaste daily and preferably at least twice a day helps to prevent dental decay by binding the fluoride into the demineralised enamel and strengthening the tooth by a process called "remineralisation". Fluoride also slows down the development of plaque and this helps to prevent caries.

Bacteria + sugar (carbohydrate) -> Acids -> Dissolve minerals and crystals (demineralisation) -> Causes tooth decay

Fluoride -> Remineralises the partly demineralised enamel (remineralisation) -> Prevents decay

#### References

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