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HOW CAN YOU ENSURE YOUR PATIENTS HAVE MAXIMUM PROTECTION AGAINST CARIES?

A multitude of risk factors can lead to caries



Despite water fluoridation, dental caries continues to be a major issue for children and adults across Australia and New Zealand.

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ARE YOU CONSIDERING **ALL** YOUR PATIENTS AT INCREASED RISK OF CARIES?

Patient: Emma

- Likes fizzy drinks
- Obvious plaque build up



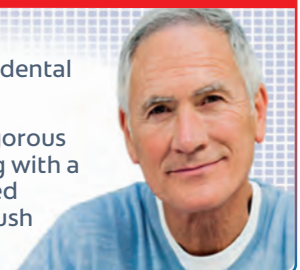
Patient: Michael

- Smoker
- Good daily oral care routine



Patient: David

- Regular dental visits
- Over vigorous brushing with a hard/med toothbrush



Patient: Anne

- Wears partial dentures
- History of periodontal disease
- Extensive restorative treatment



Patient: Jenny

- Orthodontic treatment with fixed appliance
- White spot lesion around one bracket



Patient: Carl

- Only attends dentist when he has a problem
- Sometimes forgets to brush twice a day



Patient: Alisha

- High sugar diet
- Early carious lesions



Patient: Sunny

- Takes medication causing dry mouth
- Extensive restorations and crowns



1-6 yrs

Patient: Emma

- Likes fizzy drinks
- Obvious plaque build up



Patient: Alisha

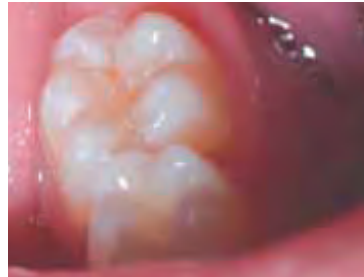
- High sugar diet
- Early carious lesions



High caries-risk children



Fissure-caries



- Increased caries risk resulting in initial lesions and/or filled teeth.
- Colgate Duraphat® Varnish helps to prevent early childhood caries effectively: up to 83% of children who remained in the study were caries-free after 2 years.¹

- Caries risk due to dental plaque accumulation on affected areas.
- Colgate Duraphat® Varnish application twice a year reduces caries in first permanent molars by 38%.²

1. Weintraub et al.: Fluoride varnish efficacy in preventing early childhood caries. J Dent Res 85(2), 172-176, 2006

2. Bravo et al.: A 24-month study comparing sealant and fluoride varnish in caries reduction on different permanent first molars. J Public Health Dent. 57(3): 184-186, 1997

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Duraphat® Varnish, NeutraFluor® 5000 Plus Toothpaste and Maximum Cavity Protection plus Sugar Acid Neutraliser Toothpaste

6-18 yrs

Patient: Jenny

- Orthodontic treatment with fixed appliance
- White spot lesion around one bracket



Orthodontic appliances



White spot lesions



- Orthodontic appliances increase caries risk due to difficulty of proper plaque removal.
- Colgate Duraphat® Varnish application reduced white spot lesion depth by 48%.³



- NeutraFluor® 5000 Plus reduced the risk of white spot lesions by 32%.⁵

- White spot lesions, which may progress to caries cavities if not treated.
- Colgate Duraphat® Varnish reduces white spot depth by 76% (in vitro).⁴



- 20% less new cavities at 2 years^{^##}

3. Øgaard et al. Microradiography and confocal laser scanning microscopy applied to enamel lesions formed in vivo with and without fluoride varnish treatment. Eur J Oral Sci 104,378-383,1996

4. Arends & Schuthof: Effect of Fluoridation on Lesion Depth and Microhardness Indentations of Artificial White Spot Lesions. Caries Res 15, 176-178, 1981

5. Sonesson et al: Randomized Controlled Trial Effectiveness of high-fluoride toothpaste on enamel demineralization during orthodontic treatment – a multicenter randomized controlled trial. The European Journal of Advanced Orthodontics Dec 28, 2013

[^] Results from a 2-year clinical study vs a regular fluoride toothpaste, both with 1450ppm fluoride.

[#] Kralvaphan P, Amornchat C, Triratana T, et al. Caries Res, 2013; doi:10.1159/000353183.

[%] Data on file. Colgate-Palmolive Company 2013.

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18-35 yrs

Patient: Carl

- Only attends dentist when he has a problem
- Sometimes forgets to brush twice a day



Patient: Michael

- Smoker
- Good daily oral care routine



Approximal lesions



Exposed dental necks



- Approximal caries can be difficult to detect visually but can be detected on radiographs.
- Colgate Duraphat® Varnish is proven to reduce new approximal lesion development by over 60% in high risk groups.⁷

- Dentine on exposed root surfaces is highly susceptible to caries, needing additional protection.
- Colgate Duraphat® Varnish application decreased caries incidence in root surfaces by more than 50%.⁸



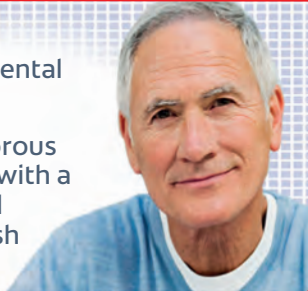
- In a clinical trial with 186 subjects Colgate NeutraFluor 5000 Plus showed significant anti-caries benefit (p=0.005): under home use conditions it hardened 55% of non-cavitated root carious lesions after 3 months and 76% after 6 months compared with a regular fluoride toothpaste (1100ppm) which showed only 16% (3 month) and 35% (6 month) hardening respectively.⁶

6. Baysan A et al: Reversal of primary root caries using dentifrices containing 5,000 and 1,100 ppm fluoride. Caries Research, 2001;35:41-46
 7. Moberg Sköld et al.: Effect of school-based fluoride varnish programmes on Approximal caries in adolescents from different caries risk areas Caries Res 39,273-279,2005
 8. Schaeken et al. Effects of fluoride and chlorhexidine on the microflora of dental root surfaces and progression of root-surface caries. J Dent Res 70 (2), 150-153, 1991

> 35 yrs

Patient: David

- Regular dental visits
- Over vigorous brushing with a hard/med toothbrush



Patient: Anne

- Wears partial dentures
- History of periodontal disease
- Extensive restorative treatment



Hypersensitivity



Secondary caries



- Hypersensitivity is caused by the rapid flow of fluid in the dentinal tubules of exposed dentine.
- Colgate Duraphat® Varnish applied over 4 weekly visits significantly reduced sensitivity ($p < 0.005$).⁹
- Crown and restoration margins are high risk caries sites and a common cause for restoration replacements.
- Colgate Duraphat® Varnish significantly slowed down lesion progression.¹⁰



- The use of NeutraFluor 5000 Plus toothpaste without postbrushing rinsing significantly increases the fluoride retention in proximal saliva by 2.5 times compared with ordinary 1450ppm fluoride toothpaste.¹¹

9. Gaffar A. Treating hypersensitivity with fluoride varnishes. *Compend Contin Educ Dent* 20(1) Spec Iss, 27-32, 1999
 10. Fontana et al. Inhibition of secondary caries lesion progression using fluoride varnish. *Caries Res* 36,129-135, 2002
 11. Nördstrom, Birkhed. Fluoride retention in proximal plaque and saliva using two NaF dentifrices containing 5000 and 1450ppm F with and without water rinsing. *Caries Res* 43, 64-69 2009

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Dental Caries in teenagers and adults



Recommend
NeutraFluor® 5000+
for moderate to high
caries risk

Over 50% of teenagers have tooth decay¹

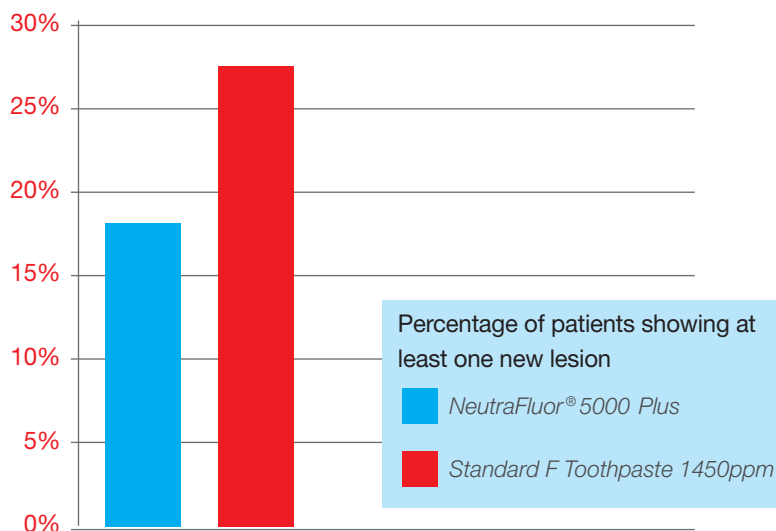
- 10% of the teenage population have a DMFT \geq 6.5²

25% of adults (15 years+) have untreated decay³

Study of orthodontic patients and white spot lesions (WSL)⁴:

- Home use of NeutraFluor® 5000 Plus Toothpaste versus control fluoride toothpaste (1450ppm) in 424 adolescents undergoing fixed orthodontics.
- Prevalence and incidence of white spot lesions during fixed orthodontic treatment (at least 1 year duration)
 - Examination of digital photos taken at baseline and immediately after debonding.
 - Two blinded examiners
- Results showed significantly fewer WSL's in NeutraFluor® 5000 Plus group compared with standard fluoride toothpaste.

NeutraFluor® 5000 Plus – new white spot lesions



PREVENTED
FRACTION
32%

¹ Child Dental Health Survey Australia 2007: 30 year trends in child oral health. AIHW dental statistics and research unit. Research report 60. ² Dental health of Australia's teenagers and pre-teen children. AIHW dental statistics and research unit. Research report 52. ³ Australia's dental generations: the National Survey of Adult Oral Health 2004-06. AIHW dental statistics and research unit. <http://www.aihw.gov.au/publication-detail/?id=6442467953>. ⁴ Sonesson M. et al. Eur J Orthod epub Dec 28, 2013.

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Adult patient case study from a Queensland Dentist

29/07/2014

- **Medical History:** Medical condition poor; patient is on home dialysis 8 hours a day
- **Primary complaint:** No pain. Patient has a dry mouth at night and to control a tickle in his throat sucks on cough lollies all night
- **Oral hygiene:** Reasonable/good but is not flossing
- **Periodontal condition:** Light inflammation and some plaque
- **Decay:** Many white lesions and early cavities. Caries rate very high.
- **Treatment plan:** Filled only the essential cavities. Discussed alternatives to cough lollies. Advised to visit GP to see if nasal breathing could be improved to limit dry mouth.
- **Duraphat applied**
- **Neutrafluor® 5000+** regime (twice daily brushing)

02/12/2014

- Review with new photos

3rd Quadrant



4th Quadrant



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PREVENT DECAY WITH THE RANGE OF COLGATE® PRODUCTS FOR GOOD PATIENT COMPLIANCE



COLGATE DURAPHAT®

- Proven caries prevention in primary and permanent teeth¹⁵
- Also for remineralisation of initial caries – white spot lesions
- High fluoride concentration and adhesion
- Very cost effective per application
- **Compliance guaranteed** due to “in-office” use



COLGATE® NEUTRAFLUOR® 5000

- High strength fluoride toothpaste
- Proven prevention of root caries¹³ and white spot lesions¹⁴
- **One step** concentrated fluoride treatment and toothpaste ensures good patient compliance
- Widely available behind pharmacy counter
- Available in Sensitive variant – low SLS for low foaming – good for special needs patients and older adults



COLGATE® MAXIMUM CAVITY PROTECTION PLUS SUGAR ACID NEUTRALISER™

- **Baseline protection** for all caries-prone patients over 6 years
- Proven to fight caries in two ways:
 - Fluoride 1450ppm
 - Arginine – to neutralise plaque pH
- 20% less new cavities at 2 years¹² compared with 1450ppm fluoride toothpaste
- Good patient compliance – available in supermarkets, low cost, no change in routine

12. Kraivaphan et al. Two-Year Caries Clinical Study of the Efficacy of Novel Dentifrices Containing 1.5% Arginine, an Insoluble Calcium Compound and 1,450 ppm Fluoride Caries Res 2013; 47:582- 59

13. Baysan. Colgate NeutraFluor 5000 Plus High Fluoride Toothpaste Restores primary root carious lesions. Caries Res 35, 41-46. 2001

14. Sonesson M. et al. Effectiveness of high-fluoride toothpaste on enamel demineralization during orthodontic treatment – a multicenter randomized controlled trial. Eur J Orthod epub Dec 28, 201

15. Marinho V et al. Fluoride varnishes for preventing dental caries in children and adolescents. Cochrane Database Syst Rev. 2013, Issue 7. Art. No.: CD002279



COLGATE® PREVENTION – MANAGEMENT THROUGH THE LIFE CYCLE

At risk	In office	At home	At home
<p>Babies and Toddlers Early childhood caries</p> <ul style="list-style-type: none"> • 0-17 months – start using F toothpaste • 18 months – 5 years use adult F toothpaste • Apply Duraphat® to white spot lesions 	<p>Highest risk Every 3-6 months</p> 	<p>High risk – ongoing Twice daily for 3+ months</p> 	<p>Baseline prevention 2 - 3 times daily</p> 
<p>Primary school</p> <ul style="list-style-type: none"> • Use adult F toothpaste from 6 years • Apply Duraphat® to newly erupted first permanent molar 	✓	✓	✓
<p>Adolescence – high risk</p> <ul style="list-style-type: none"> • Including during fixed orthodontic treatment 	✓	✓	✓
<p>Adults</p>	✓	✓	✓
<p>Older adults</p>	✓	✓	✓