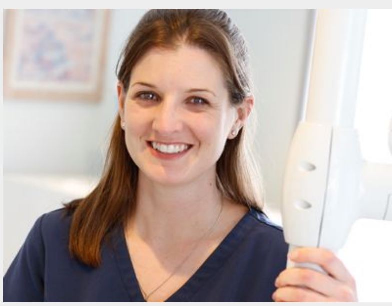
Dental Nurse Network
Professional growth for dental nurses

Fluoride Varnish Application

Presented by Stephanie Carter DipDT, DipDH, RDN

About Me



- 2003 Trainee Dental Nurse
- 2006 Qualified NEBDN Dental Nurse
- 2007 NEBDN Dental Radiography
- 2010 Diploma Dental Hygiene / Therapy (RCS)
- 2013 Level 3 Assessors Award
- 2016 Level 3 Award Education / Training
- 2016 Level 3 Award Leadership and Management
- 2018 Level 5 Diploma Education / Training

Course Aim

The aim of the course is to provide training for nurses to become confident and competent to apply fluoride varnish under the prescription of a dentist or as part of a structured oral health programme.

Course Plan and Assessment

- Pre-course e-learning: 'Introduction to OHE'
  2.5 hours verifiable CPD
- Five 1 hour Webinars: Theoretical knowledge of Fluoride Application
  5 hours verifiable CPD
- Record of Competence: Carried out in practice under dentist supervision
  2 hours verifiable CPD
- 3 live classrooms - Attendance awards additional CPD

Record of Competence

10 Log Sheets:

- 5 adults
- 5 children and young adults (18 and under)

Application for purposes of Caries or Dentine Hypersensitivity Prevention

Record of Competence

- 3 months to complete the course, including Record of Competence
- One case study per week for duration of online training
- After online training it is up to your supervising dentist as to how many case studies are referred / completed a week
- No 'Fail' for record of competence **HOWEVER** if not considered as adequately competent may be asked to complete and submit further case studies.**Extension fees apply if the RoC is not successfully completed within the 3 months.**

Record of Competence: Practical Training

Your supervisor needs to demonstrate before your first patient how to appropriately Check:

- Referral / prescription
- Consent
- Medical history
- Use Personal Protective Equipment for yourself and patient!
- Isolate teeth for fluoride application
- Give pre and post application advice
- Write up adequate clinical notes

Complete practical training evidence sheet at start of Record of Competence

Record of Competence: Practical Training

Referral / prescription:

- Who? Patient Name
- Why? Reason for treatment
- Treatment requirements? Fluoride application requirements

Record of Competence: Practical Training

Consent:

- What?
- Why?
- Outcomes / risks
- Happy?

Record of Competence: Practical Training

Medical history:

- Any contraindications or risks?

Record of Competence: Practical Training

Use Personal Protective Equipment for yourself and patient:

- Should be 'second nature'!

Isolate teeth for fluoride application:

- How?

Record of Competence: Practical Training

Give pre and post application advice:

- Clear
- Appropriate to patient

Write up adequate clinical notes:

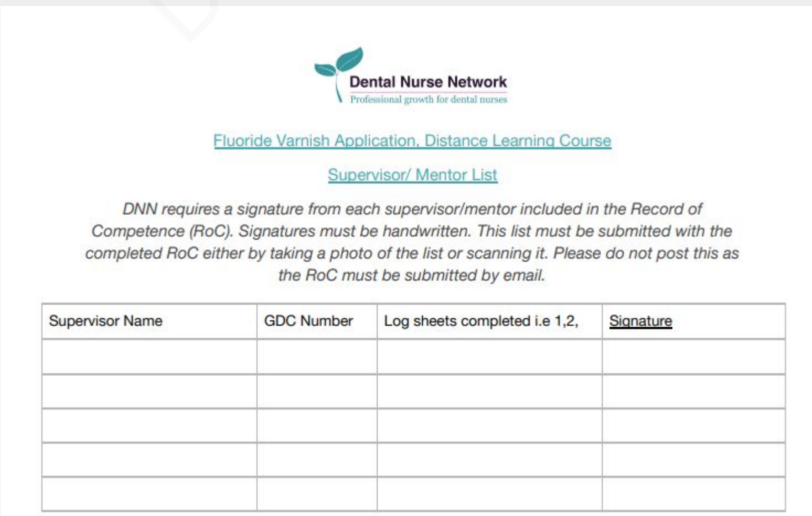
- Clear
- Covers all relevant information about appointment

Record of Competence: Practical Training

Application of Colgate Duraphat Fluoride Varnish Video

[Duraphat]

Record of Competence: Before you start



Dental Nurse Network
Professional growth for dental nurses

Fluoride Varnish Application, Distance Learning Course

Supervisor/ Mentor List

DNN requires a signature from each supervisor/mentor included in the Record of Competence (RoC). Signatures must be handwritten. This list must be submitted with the completed RoC either by taking a photo of the list or scanning it. Please do not post this as the RoC must be submitted by email.

Supervisor Name	GDC Number	Log sheets completed i.e 1,2,	Signature

Record of Competence: Before you start

Supervisor Guidance

The Record of Competence (RoC) is designed to demonstrate the student's progression through their learning journey towards becoming competent and confident in the skill they are training for under supervision. The role of supervisor is vital in ensuring a beneficial learning journey and that the student achieves their maximum potential.

The supervisor is responsible for demonstrating the skills relevant to the procedure in which the student is training. The supervisor is also responsible for supervising each patient the student treats until the student is assessed as competent. The student may only start their case studies once they have observed and written up the supervisor's demonstration. In some courses, they may also have requirements relating to their online training. These will be stated within the course overview.

The supervisor is also required to provide the student with constructive feedback after each appointment – there is a section on the case study sheets for the supervisor's comments. Please try to ensure that whilst comments are made on positive aspects of the appointment, any advice for improvement is also noted – this will provide guidance for the student to develop their skills for the future.

Alongside training students in their practical skills (including patient management and communication), the supervisor is also a key role-model for instilling a professional attitude.

Please ensure that each section of each case study within the RoC is fully completed with all names and GDC numbers included where required.

Record of Competence: Before you start

1. Watch week 1 and week 2

2. Complete multiple choice questions for week 1 and 2

3. You must only complete **one** log sheet per week alongside completing the learning materials i.e after completing week 2 you can do 1 log sheet, after completing week 3 learning materials you can complete 1 log sheet.

4. As soon as you complete week 1-6 you can complete the log sheets at your own pace before the submission deadline.

Record of Competence: Before you start

File format

1. This assessment must be completed using Microsoft Word or Google Docs. Google Docs is a free software program that is very similar to Word: https://www.google.com/docs/about/.

2. Font must be Arial, Calibri or Helvetica and size 10, 11 or 12.

3. Please use spell check.

Record of Competence: Submitting your work

1. Write in the subject line of the email: RoC Fluoride Varnish.

2. Attach your completed file as a Word document and not any other format, e.g. pdf.

3. Submit as one Word document, i.e. not as separate files.

4. Send to: info@dentalnursenetwork.com

Record of Competence: Submitting your work

Answering questions

There is no word limit for each answer

Pass rate and marking guidance

Minimum pass rate required: Grade C (55%+).
Each question is allocated a set maximum number of marks. This maximum score is indicated in the marking box below each question (e.g. _/3).

Grade	Percentage %	Grade	Percentage %
A+	90-100	B	70-74
A	85-89	B-	65-69
A-	80-84	C+	60-64
B+	75-79	C	55-59

Record of Competence: Example

Log Sheet No.1

Full Name		GDC Number	
Supervisor Name		GDC Number	
Appointment Date			

Patient Profile

Age	
Medical History	
Dental History	
Current Dental Status	

Record of Competence: Example

Treatment Required

Fluoride Varnish Prescribed	
Teeth and Surfaces for application	
Reason for Application	

Record of Competence: Example

Supervisors Observations

To be completed by the supervisor. Has the student met the following criteria: Y = Yes N= No.

Treatment and reason for treatment explained to patient and informed consent gained and patient given opportunity to ask questions pre-application	
Student able to position self, patient and dental light to allow good access and visibility	
Application carried out competently including gaining good moisture control and isolation of teeth	
Post application advice given, appropriate basic OHI / diet advice to support fluoride application if required	

Record of Competence: Example

Additional Supervisor Feedback *Please ensure your comments are constructive and provide the student with tips / areas for improvement paying particular attention to the application procedure including positioning of patient, self, dental light and gaining moisture control.*

Record of Competence: Example

Student Reflection

How did you prepare for this appointment?

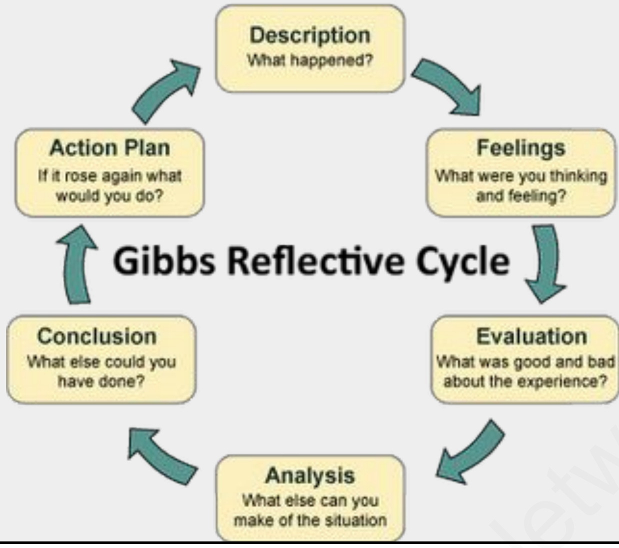
How did you carry out the procedure?

How do you think and feel the appointment went?

What would you do to improve for future appointments?

Additional Comments

Record of Competence: Reflective Writing



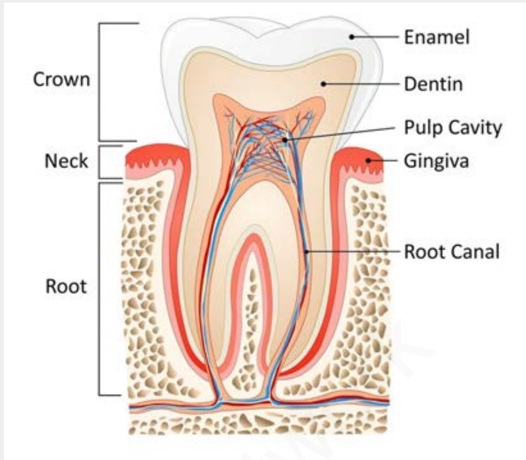
Aims: Week 2

By the end of this webinar you should be able to:

1. Confidently explain to a patient the process of caries and dentine sensitivity
2. Have a good understanding of how fluoride helps to prevent caries and sensitivity
3. Have knowledge of the supporting evidence for the use of fluoride in caries and sensitivity prevention and be aware of the Delivering Better Oral Health Toolkit

Caries and Sensitivity

Brief review of Tooth Anatomy



Caries and Sensitivity

Caries and Sensitivity

Sensitivity:

- Caused by exposure of the dentine
- Tiny tubes ('Dentine Tubules') lead to nerve and filled with fluid
- Movement of fluid causes nerve endings to react in response resulting in a short, sharp pain

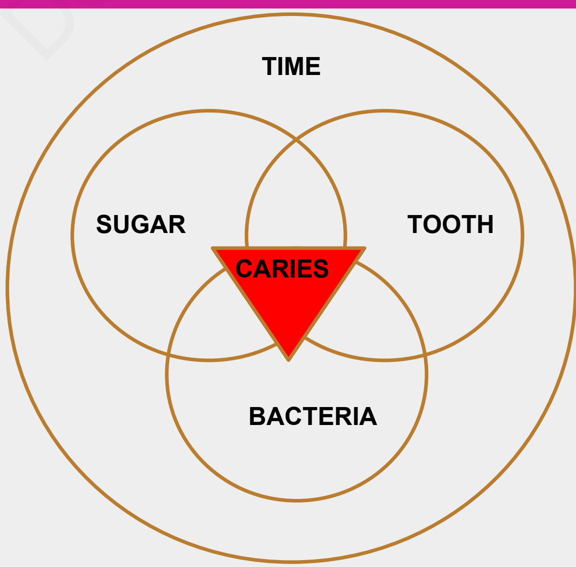
https://www.youtube.com/watch?v=qLDsTP2JCx8

Causes of Dentine exposure can include:

- Brushing
- Grinding
- Gum Recession

Caries and Sensitivity

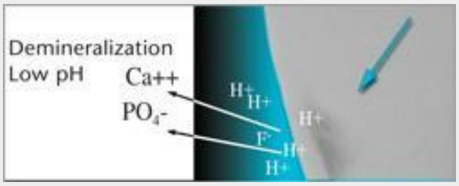
Caries:



Caries and Sensitivity

DEMINERALISATION

- Stage 1 of caries
- occurs when calcium hydroxyapatite in the enamel begins to dissolve during an acid attack in the mouth
- calcium and phosphate ions leave the tooth and pass into the saliva.

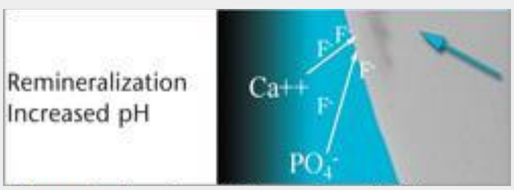


www.dimensionsofdentalhygiene.com

Caries and Sensitivity

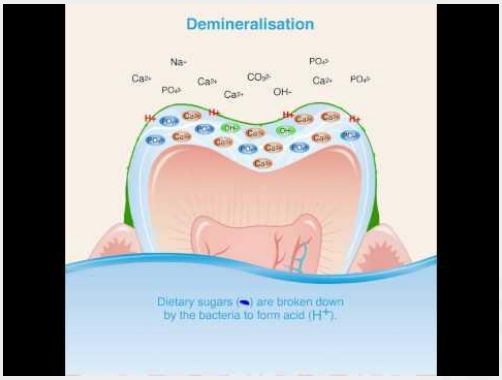
REMINERALISATION is the next stage that can occur:

- Saliva helps neutralise the acid in the mouth
- **IF** no further sugar consumed the lost calcium and phosphate ions return to the enamel!
- Mouth pH (the measure of acidity) returns to normal
- Takes between 30 -60 minutes **AFTER** eating / drinking for this to occur!



Caries and Sensitivity

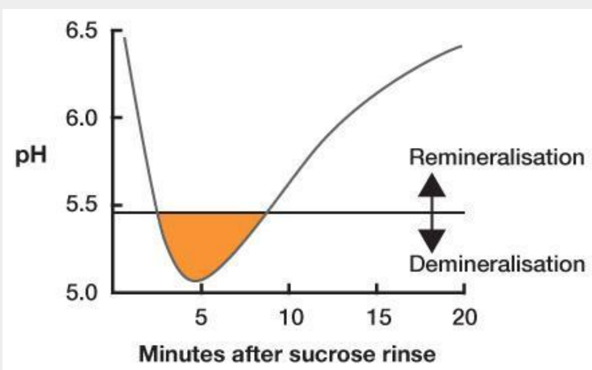
Action of demineralisation and remineralisation in the mouth



[video]

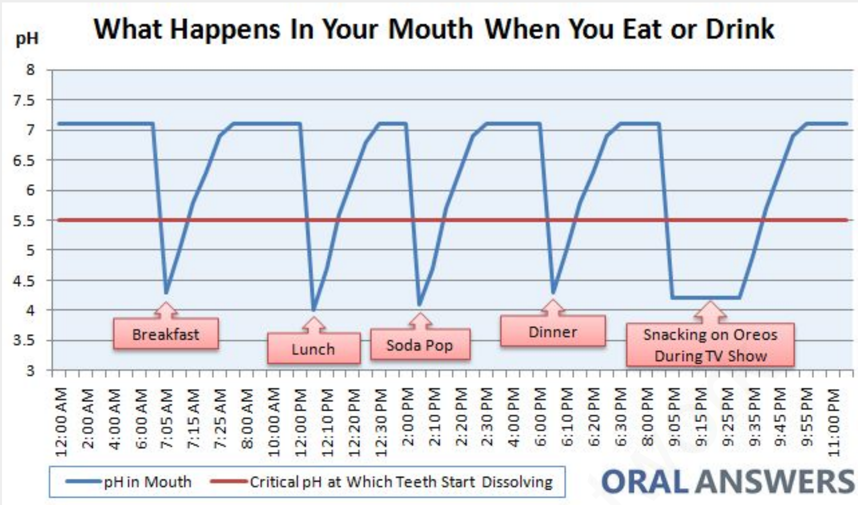
Caries and Sensitivity

Stephan's Curve is a graphical representation showing the impact of sugar consumption on the acid levels in the mouth over time:



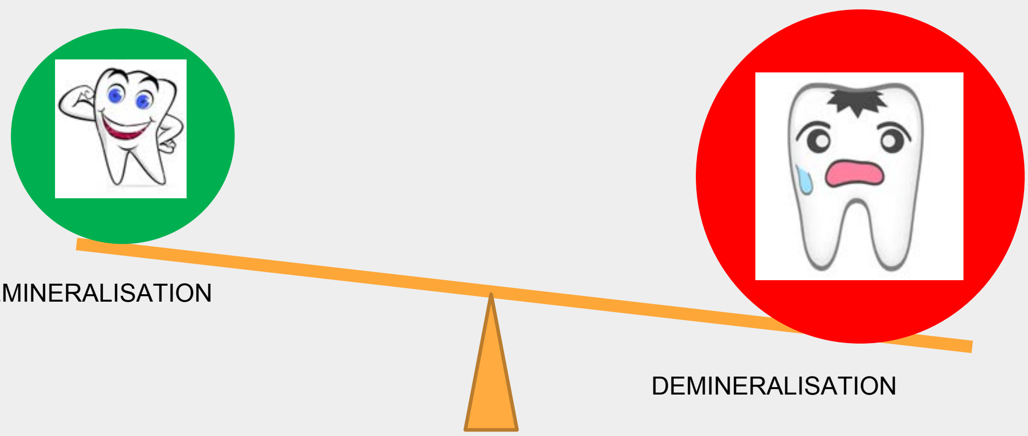
www.wrigleyoralhealthcare.co.uk

Caries and Sensitivity



Caries and Sensitivity

Caries will occur when more DEMINERALISATION occurs than REMINERALISATION



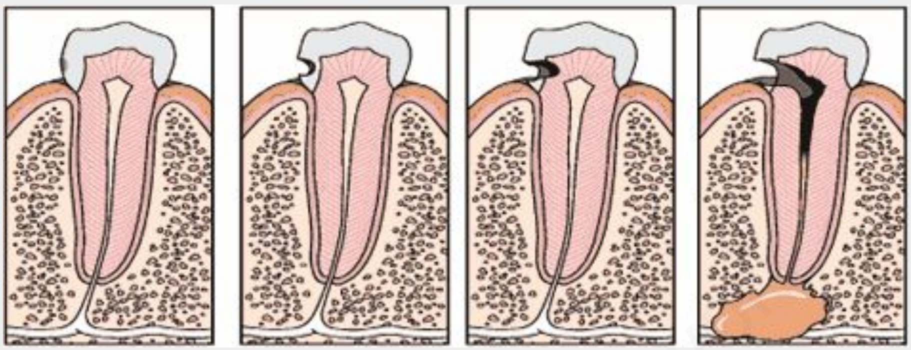
REMINERALISATION

DEMINERALISATION

CARIES BALANCE

Caries and Sensitivity

Progression of caries through enamel and dentine



www.dimensionsofdentalhygiene.com

Caries and Sensitivity

www.juniordentist.com

Fluoride

- A natural mineral found in nature and within the earth's crust
- A compound of the element Fluorine
- Found in some food and drink supplies and naturally occurs in drinking water in varying levels depending on local geology
- Added in various forms to a number of toothpastes as an active ingredient in caries prevention
- Levels measured as Parts Per Million (PPM)

Fluoride

Timeline of Fluoride in Dentistry

1892 (UK)
Sir James Crichton Browne

1914
Fluoride added to toothpastes

Fluoride

- Sodium fluoride (NaF)
- Sodium monofluorophosphate (MFP)
- Stannous Fluoride (SnF_2)

Fluoride

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McKay and Black

Fluoride

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1930's (USA)
McKay and Black

1945 (USA)
Fluoride added to water supply

1955(UK)
Kilmarnock, Watford, Anglsey

1985 (UK)
Knox Report

2000(UK)
Department of Health

Fluoride

Conclusion includes:

- Fluoride reduces the prevalence of caries
- 15 studies showed water fluoridation reduces inequalities in dental health across social classes in 5-12 year olds, using DMF index
- Prevalence of dental fluorosis increases with the fluoride concentration in the water.
- No association between fluoridated water and bone fractures / bone development problems or between fluoridated water and bone, thyroid or all other cancers.

Fluoride

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1892 (UK) Sir James Crichton Browne

1914 Fluoride added to toothpastes

1930's (USA) McKay and Black

1945 (USA) Fluoride added to water supply

1955(UK) Kilmarnock, Watford, Anglsey

1985 (UK) Knox Report

2000(UK) Department of Health

2005(UK) House of Lords

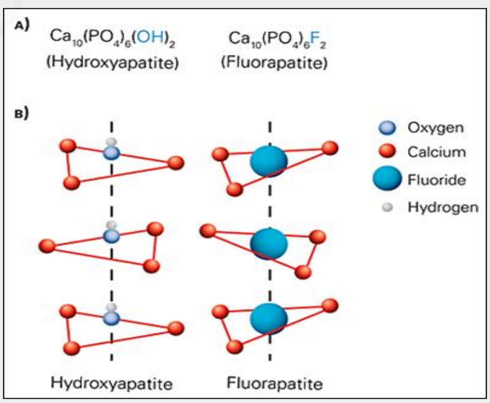
Fluoride

Water Fluoridation 2016:

> "The decision to fluoridate is not made by the water company but by the relevant Strategic Health Authorities (SHA). If a SHA decides that it would like the drinking water supplies fluoridated then it must go through a public consultation. If this is successful then the SHA will approach the water company to carry out a technical appraisal. Only after this appraisal determining if it is feasible can fluoridation be introduced and then only after the SHA has provided a financial and legal indemnity to the water company"

http://www.bournemouthwater.co.uk/about-your-water/fluoride.aspx

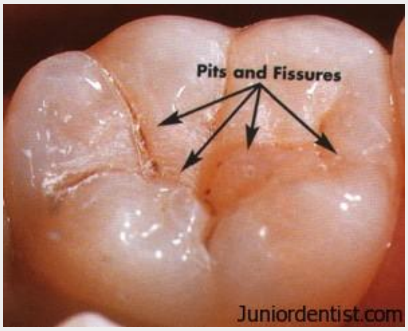
Fluoride and Caries



Fluoride and Caries

- Taken systemically during enamel development will alter enamel structure making it more resistant to acid attack.
- **Low levels of fluoride in the plaque and saliva both encourages remineralisation and ensures that the enamel crystals that are laid down are of improved quality.**
- Reduces the ability of the plaque bacteria to produce acid.

Fluoride and Caries

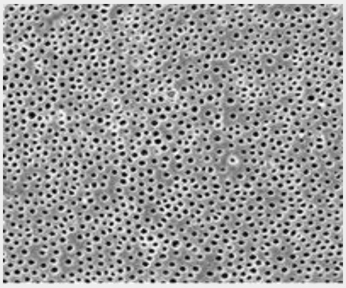


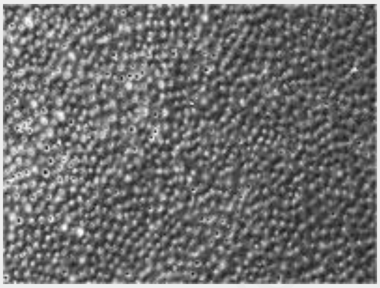
- Taken during tooth development reduces depths of fissures

Fluoride and Sensitivity

Dental tubules before application of 5 percent sodium fluoride varnish

Before





After

http://www.rdhmag.com/articles/print/volume-24/issue-1/feature/fluoride-varnish-to-the-rescue.html

Fluoride Support

Fluoride can be a controversial topic especially when discussing systemic use such as the fluoridation of public water supply.

Department of Health, Delivering Better Oral Health Toolkit, 2014

Fluoride Support

More evidence in support of systemic fluoride can be found at the British Fluoridation Society website
http://www.bfsweb.org/

Summary

- Caries occurs when demineralisation occurs more frequently than remineralisation
- Can lead to tooth loss if left untreated
- Sensitivity caused by fluid movement in dentinal tubules in response to a stimulus causing the nerve to react

Summary

- Fluoride prevents sensitivity by occluding dentinal tubules
- Fluoride has 4 known ways to help prevent caries, more research required
- Most important effect currently presence of low levels of fluoride in the oral cavity encouraging remineralisation.
- Delivering Better Oral Health toolkit evidence based and provides appropriate information for DCP’s to advise patients on topical fluoride use to prevent caries