saliva testing

GOOD PRACTICE
GOOD SENSE

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Saliva is nature's miracle in your mouth.

Saliva is nature's primary defence system for the oral environment, and is particularly important for protecting exposed tooth surfaces. While internal protection for dentine comes from odontoblasts and the dental pulp, the body's external protection for enamel comes from saliva.

Saliva protects teeth by:

- Neutralising acid challenges
- Flushing food and bacteria from the oral cavity
- Acting as a lubricant
- Forming pellicle on the tooth surface
- Delivering calcium, phosphate and fluoride to the tooth surface

Saliva plays a vital role in dental health as patients strive to maintain a healthy dentition throughout their lives.

What happens when saliva stops protecting your teeth

There is reduced clearance of bacteria and food from the mouth, reduced buffering of acid challenges, and diminished remineralizing potential. The oral cavity becomes more acidic.

When the pH of the mouth lowers, the balance between remineralization and demineralization moves to favour demineralization. Softening of external tooth surfaces in these acidic conditions leads to:

a) increased occlusal and incisal attrition, or

b) labial wear with toothbrush abrasion, or

c) erosion of teeth from either internal (e.g. gastric reflux) or external (i.e. acidic drinks) acid sources.

An acidic environment favours the proliferation of more aciduric and cariogenic bacteria, leading to loss of tooth structure from dental caries.

Other signs of a more acidic oral environment include infections with candida albicans, halitosis and tooth sensitivity involving several teeth. We can describe these changes as a `loss of oral balance'.

Prof. L Walsh

What is oral balance?

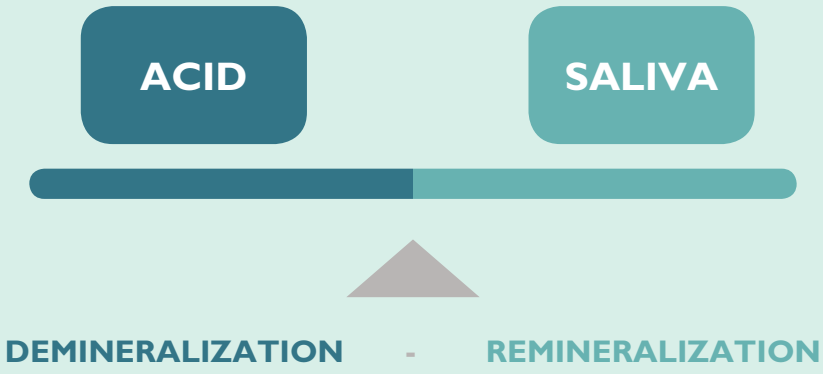
Oral balance is the equilibrium that exists between the demineralizing effect on tooth surfaces caused by acids, balanced by saliva, with buffering and remineralizing benefits.

The source of acid can be:

- bacterial breakdown of fermentable carbohydrates (organic acids)
- ingested acidic foods and drinks (e.g. fruit and carbonated soft drinks)
- internal sources (e.g. gastric reflux)

Saliva's effectiveness is influenced by several properties of both stimulated and unstimulated saliva, including flow rates, viscosity, pH and buffering capacity.

While oral balance is influenced by other factors such as oral hygiene and fluoride exposure, the dominant influence is the daily battle between saliva and acid.



Why dental professionals should use saliva as a diagnostic tool

When a patient presents with sensitivity, or loss of tooth structure from dental caries or dental erosion, the first question should be 'Why is the oral balance now favouring demineralization?' The answer means considering:

- Why has this mouth become more acidic?
- Why is the saliva not protecting the teeth?

Measuring the important salivary parameters offers the answer to why the saliva
is not protecting the teeth.

The results then help to diagnose the cause of the problem. Monitoring the results over time will quickly identify any changes to saliva quality.

With an understanding and recognition of the problem, you can design an appropriate prevention/ remineralization program in cooperation with the patient to move the oral environment back into balance.

Evaluating the saliva is also an integral part of caries risk assessment.

In what clinical situations would it be important to test a patient's saliva?

Diagnosing new clinical problems

When a patient arrives with new oral health problems, the saliva is tested to help determine the reason why the oral balance is now favouring demineralization. Once diagnosed a long-term solution can be found to correct or control these problems.

Prior to extensive restorative treatment

What has caused the loss of tooth structure in the first instance? Will the same problem, or another currently un-diagnosed oral balance problem, compromise the success of any new restorative treatment?

#24, #25 already crowned
#26 awaiting preparation

Same patient 2 years
later with new lesions

As part of risk assessment for all patients

Throughout their lives your patients will experience many changes in habits, lifestyle, diet and health status. All these changes can unknowingly impact on their oral balance (e.g. medication side effects can reduce saliva flow).

Risk assessment measures can identify the current oral balance situation before irreversible loss of tooth structure has occurred. Periodic risk assessment should be regarded as routine for all dental patients.

Saliva testing

A simple in-office test is now available for evaluating how well saliva is protecting teeth.

Saliva testing involves both the stimulated and unstimulated saliva. The functions and characteristics of these two forms of saliva are different. By evaluating both, the test results become very useful diagnostic and powerful communication tools.

The saliva test consists of 5 steps:

Step 1	Resting saliva	Hydration
Step 2	Resting saliva	Viscosity
Step 3	Resting saliva	pH
Step 4	Stimulated saliva	Quantity
Step 5	Stimulated saliva	Buffering capacity (quality)

N.B. - Prior to any visit where a saliva diagnostic test is planned, instruct the patient not to smoke, consume food or drink, brush their teeth or use a mouthwash for at least one hour prior to the scheduled appointment time.

Testing resting (unstimulated) saliva

Step 1. Visual examination - hydration

Resting saliva is derived mainly from the submandibular glands and it can be measured by allowing a patient to drool saliva into a collection cup (typical resting flow rate is around 0.4ml/min). However a simpler technique is to visually assess salivary production from the small salivary glands in the lips. The lower lip glands can be seen easily by turning the lip over to expose the inner (wet) side. Timing the production of droplets of saliva by these glands is a simple method to assess how hydrated the mouth is.

Evert the lower lip, gently blot the labial mucosa with a small piece of gauze, and observe the mucosa under good light. Droplets of saliva will form at the orifices of the minor glands. If the time taken for this to occur is more than 60 seconds, the resting flow is below normal.

Greater than 60 seconds	resting flow rate	Low	
Between 30-60 seconds	resting flow rate	Normal	
Less than 30 seconds	resting flow rate	High	

Step 2. Visual examination- viscosity

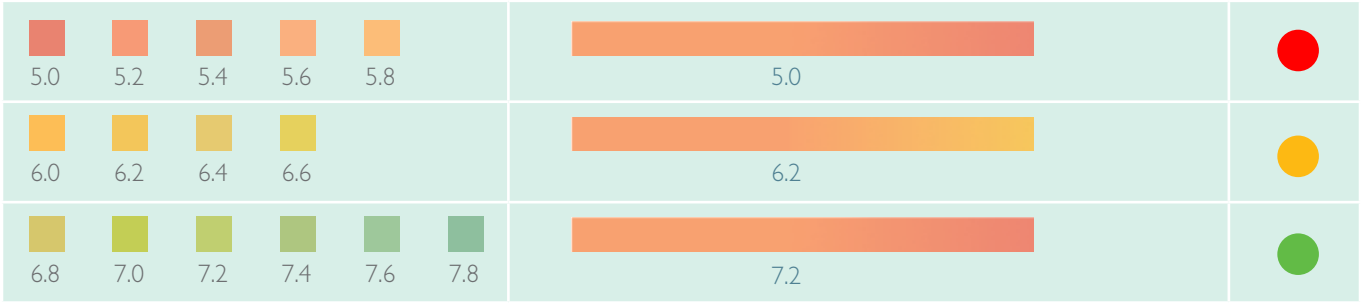
Visually assess the resting viscosity - healthy unstimulated saliva is clear in colour, and watery in consistency. If it looks stringy, frothy or bubbly, or is very sticky then it may mean the content of water is low because the rate of production is low.

N.B. - It is important that the visual examination is performed prior to a stimulated saliva sample being taken.

Sticky, frothy saliva residues	
Frothy, bubbly saliva: Increased viscosity	
Watery, clear saliva: Normal viscosity	

Step 3. Resting pH of unstimulated saliva

Test the resting pH of unstimulated saliva - a low pH indicates the environment of the mouth is much more acidic than normal. When this occurs, acid challenges result in demineralization and mineral loss at a level that the saliva cannot repair.

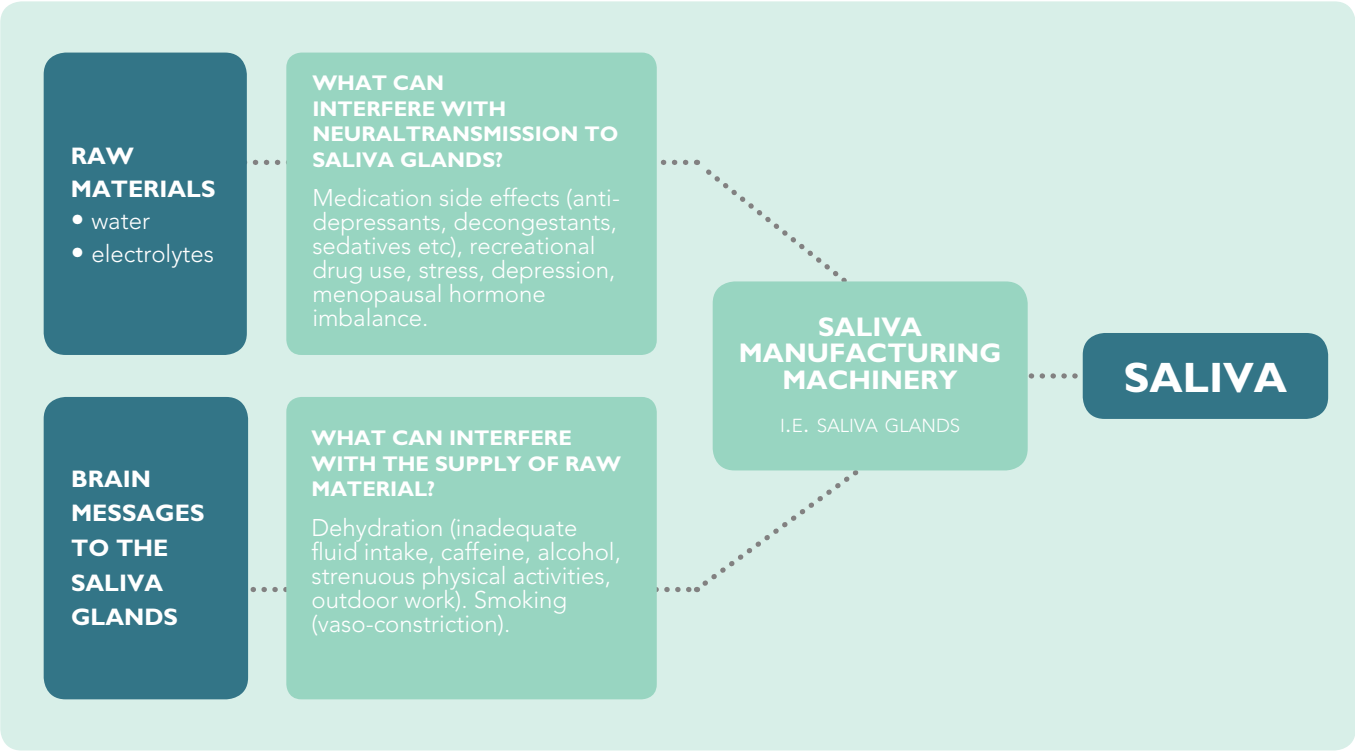


Instruct the patient to expectorate any pooled saliva into the collection cup. Take a pH test strip, place this into the sample of resting saliva for 10 seconds, and then check the colour of the strip. This should be compared with the testing chart above. Highly acidic resting saliva will be in the red section, pH 5.0-5.8. Moderately acidic saliva will be found in the yellow section, pH 6.0-6.6. Healthy saliva will be in the green section as shown above, pH 6.8-7.8.

How to interpret low test results for resting (unstimulated) saliva.

If unstimulated saliva testing reveals 'red or yellow lights' this means the saliva is not functioning to its full potential and the oral health is at risk. The saliva may not flow and protect surfaces effectively and the general acidity in the mouth will be favouring demineralization and/or increasing colonisation of aciduric bacteria.

When the stimulated saliva test results are normal, this indicates that there is either a lack of raw materials (e.g. water) or a lack of stimulus to the salivary glands (or both). Lifestyle profiling and a medical history will identify the causative factors which have reduced resting saliva activity.



Testing stimulated saliva

Step 4. Stimulated flow - quantity

Stimulated saliva comes mostly from the parotid gland, as a result of a variety of stimuli (masticatory stimulus, taste stimulus, esophageal stimulus). Stimulated flow is important to help flush away acids from the diet, from dental plaque, or from internal sources (such as gastric reflux). Testing the stimulated flow involves obtaining a saliva sample over a period of 5 minutes.

Instruct the patient to chew on the piece of wax (to stimulate salivary flow). After 30 seconds, expectorate into the spittoon. Continue chewing for a further 5 minutes, collecting the saliva into the collection cup at regular intervals.

Quantity of saliva at 5 minutes

< 3.5 mL	Very Low	
3.5 - 5.0 mL	Low	
> 5.0 mL	Normal	

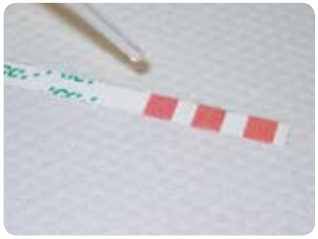
Step 5. Stimulated flow - buffering capacity (quality)

Testing the buffering capacity indicates the effectiveness of the saliva in neutralizing acids in the mouth, which may come from the diet, from dental plaque, or from internal sources (such as gastric reflux). Bicarbonate is the most important buffering system in saliva. While unstimulated saliva has very low levels of bicarbonate, stimulated saliva has levels of bicarbonate more than 60 times higher. The GC Saliva Check Buffer Test is designed to correlate with results obtained by titration techniques as specified in Ericsson's method (1959).

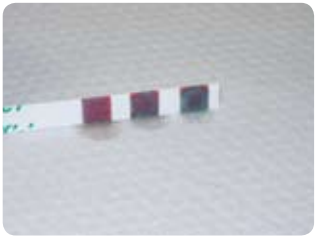
Remove a buffer test strip from the foil sealed package and place onto an absorbent tissue with the test side up.

Using a pipette, draw sufficient saliva from the collection cup, and dispense one drop onto each of the test pads. Immediately turn the strip 90 degrees to soak up any excess on the absorbent tissue. This will prevent excess saliva from swelling on the test pad and possibly affecting the accuracy of the test result.

The test pads will begin to change colour immediately and after 2 minutes the final results will be available.



Dispense one drop of saliva onto each pad.



#24, #25 already crowned
#26 awaiting preparation

Results at 2 minutes

Green	4 points
Green/Blue3 points*	Very Low
Blue	2 points
Blue/Red	1 point*
Red	0 points

** Where a colour combination provides an unclear result use intermediate scores as indicated.*

Interpreting the results

Combined total	Buffering ability of saliva	
0 - 5	Very Low	
6 - 9	Low	
10 - 12	Normal	

How to interpret low test results for stimulated saliva

If these results are low, there is a problem (unless the patient is severely dehydrated) with the salivary gland function. In severe cases the unstimulated saliva results will also be low, giving a clear indication of a greatly increased level of caries risk.

Causes of such dysfunction could be related to:

- Salivary gland pathology
- Head and neck, or total body radiation
- HIV infection
- Sjogren's syndrome
- Diabetes mellitus

The buffer test allows you to quantify and then communicate to the patient either an all clear validation, or any concerns with the test result.

Prevention - designing a program to suit the individual patient

The buffer and stimulated saliva tests indicate whether the saliva glands can respond to an external stimulus (chewing). Patients producing normal stimulated saliva are called 'responders' (the saliva glands respond to stimulus) and those with a low response are called 'non-responders'.

Prevention and protection strategies for both groups can be formulated in four areas:

1. Supplementing diminished salivary protection with external prevention products and providing comfort
2. Lifestyle change
3. Increasing saliva production
4. Altered oral hygiene

The treatment of 'responders' (a normal stimulated saliva response but low results in some or all of the unstimulated saliva tests) might include:

1. Additional external protection

a. Introduce supplements containing RECALDENT™ (CPP-ACP)
b. Increase fluoride exposure
c. Introduce chlorhexidine (if an anti-bacterial strategy is required)

2. Lifestyle change

a. Increased water intake
b. Decreased intake of diuretics - caffeine, alcohol
c. Decreased frequency of intake of acids and fermentable carbohydrates
d. Reduced smoking

3. Increase saliva stimulation by:

a. Masticatory stimuli (sugar-free gum, food that requires chewing)
b. Taste stimuli (acid flavour - but only if there is no caries or erosion potential with the acidic stimuli!)

4. Altered oral hygiene

a. Different cleaning times
b. Improved cleaning and flossing skills

The treatment of 'non-responders' (poor stimulated saliva response) is more intense reflecting an increased risk and an oral balance strongly favouring demineralization. Utilize the same strategies as for 'responders' but also provide:

1. High levels of additional external protection

a. Frequent use of supplements containing RECALDENT™ (CPP-ACP)

b. Increased fluoride exposure (neutral NaF, fluoride varnish)

c. Surface protection (i.e. glass ionomer coatings to protect exposed root surfaces)

d. Chlorhexidine (0.2% gel)

2. Comfort

a. Moistening of oral tissues

What is RECALDENT™ (CPP-ACP)?

Casein phosphopeptide - amorphous calcium phosphate (CPP-ACP) is an important source of minerals (calcium and phosphate) for the tooth.

Healthy saliva is supersaturated with these dental minerals, and in conjunction with certain salivary phosphoproteins (e.g. statherin, which inhibits precipitation of calcium and phosphate salts), is able to deliver bio-available calcium and phosphate to the tooth surface for remineralization. It is important to note that without the action of the salivary phosphoprotein, these minerals would simply precipitate, (i.e. form calculus and/or saliva duct stones) and offer minimal benefit in the remineralization process of tooth surfaces.

Until recently there has been no other source of these dental minerals in a system that compares to nature's model for remineralization. Consequently, patients with poor salivary flow lacked sufficient levels of the 'building blocks' (calcium and phosphate) needed for remineralization of tooth surfaces.

Supplementing poor saliva with fluoride is a useful strategy, but the effectiveness is diminished by a lack of available calcium and phosphate. The ideal strategy for patients with poor saliva flow is to provide additional calcium and phosphate, together with an elevated level of fluoride. These two preventive measures can work together in synergy.

Researchers from the University of Melbourne have identified Casein phosphopeptide as an anti-caries component of milk. Casein phosphopeptide is a sticky protein which binds calcium and phosphate ions and stabilizes amorphous calcium phosphate thereby preventing precipitation. It adheres easily to soft tissue, pellicle, plaque, and even hydroxyapatite, and acts in a similar way to the mineral/statherin relationship in saliva. In this way, it can supply bio-available calcium and phosphate that is required for remineralization to take place.

Several products containing RECALDENT™ (CPP-ACP) are available to the dental profession including:

Recaldent® chewing gum - a sugar-free chewing gum*.

GC Tooth Mousse - a concentrated CPP-ACP creme applied via a vacuum-formed tray, micro brush, interproximal brush or cotton pellet.

GC Tooth Mousse Plus - a modified version of GC Tooth Mousse that contains 900ppm flouride.

** Remineralization of enamel subsurface lesions by sugar-free chewing gum containing casein phosphopeptide-amorphous calcium phosphate by P Shen, F Cai, A Nowicki, J Vincent, EC Reynolds. J Dent Res 80(12):2066-2070, 2001*

Prof. E. Reynolds

Saliva testing case studies and treatment possibilities

1. Martin - age 28

Saliva diagnostics completed as part of a routine risk assessment for new patients.

Result

Resting flow:	Normal	
Consistency:	Normal	
Resting pH:	7.2. Normal	
Stimulated flow:	8.0 ml. Normal	
Buffering:	10. Normal	

Comment

Martin has good oral balance. His diet is relatively healthy with minimal snacking and good water intake. He does consume 1 to 2 black cola drinks per day, however this is usually during meal times and is well balanced by healthy saliva, good oral hygiene and regular use of a fluoridated dentifrice. Martin is a low caries risk patient.

Outcome

No additional protection or prevention strategies are required. Martin's saliva will be re-tested every 2 to 3 years to ensure his good oral balance is being maintained.

2. Jody - age 22

Saliva diagnostics completed when trying to uncover the reason for an unusually high caries rate.

Result

Resting flow:	Low	
Consistency:	Bubbly, frothy	
Resting pH:	6.0. Moderately acidic	
Stimulated flow:	3.0 ml. Very low	
Buffering:	4. Very low	

Comment

Jody has a problem with her saliva. In particular the low quantity and quality of stimulated saliva points to an inability to buffer and quickly flush away acid attacks from food and acidic drinks. Although the diet is healthy, with a low frequency of carbohydrate and good water consumption, Jody has had 2 new interproximal lesions in the last 12 months. The saliva test confirms her oral balance is strongly favouring demineralization and greatest in those areas where she does not floss regularly.

Outcome

Jody's problem appears to be systemic so her stimulated flow characteristics are unlikely to improve and it is necessary to explain the importance of extra prevention as the only long term option to avoid further restorative work. Her new preventive strategy includes: chewing a RecaldentTM (CPP-ACP) containing sugar-free gum (Recaldent®) after every snack or meal, regular flossing, use of a high fluoride containing dentifrice, a weekly application of a CHX varnish and at least three visits per year to her dental hygienist. On each subsequent visit, Jody's resting saliva will be tested and it is expected her resting pH will improve as a result of increased salivary stimulation (via routine use of chewing gum). At each annual recall, her stimulated saliva will be tested to monitor for any deterioration in flow quantity or quality.

3. John - age 33

Saliva diagnostics completed to help determine the cause of tooth sensitivity and early signs of wear.

Result

Resting flow:	Low	
Consistency:	Bubbly, frothy	
Resting pH:	6.2. Moderately acidic	
Stimulated flow	6.0 ml. Normal	
Buffering:	11. Normal	

Comment

John is a cyclist actively training for a mountain bike riding competition. While his stimulated salivary function is normal, the low resting flow and moderately acidic pH are indicators of dehydration and/or reduced salivary stimulus (possible interference with neural transmission to the salivary glands). John is not on medication but does appear to be dehydrated. Additionally his rehydration fluids when training are acidic sports drinks sipped on a regular basis. He describes his current job as 'stressful' but has good oral hygiene and an otherwise healthy diet. John's tooth sensitivity and increased wear is almost certainly multifactorial. The high frequency of acid challenges and reduced resting saliva protection mean the oral balance is currently favouring demineralization, and tooth loss through a combination of erosion and attrition is being accelerated.

Outcome

John will change his source of rehydration fluid to a neutral pH water with essential minerals/electrolytes added and will focus on ensuring he is fully hydrated before exercising. To reduce the sensitivity, GC Tooth Mousse which contains 10% RecaldentTM (CPP-ACP), will be applied twice daily after tooth brushing with a fluoridated dentifrice. A purpose-designed splint will be constructed to minimise the effects of tooth wear. Saliva testing will be undertaken on subsequent visits to monitor improvements in the levels of hydration and saliva viscosity, and to confirm an increase in resting pH.

4. Mary - age 72

Saliva diagnostics completed to help determine the reason for root surface caries developing below the margins of existing crown restored teeth.

Result

Resting flow:	Low	
Consistency:	Sticky	
Resting pH:	6.4. Moderately acidic	
Stimulated flow:	4.0 ml. Low	
Buffering:	8. Low	

Comment

Mary had extensive crown and bridge restorative treatment fifteen years ago and no new lesions until the last 12 months. Her diet has changed recently because she now eats more convenience foods and her frequency of
fermentable carbohydrate has increased (Mary's husband died recently and she has now moved into a retirement village). In the past she maintained good oral hygiene, however arthritis is reducing the effectiveness of her brushing. The test results confirm the negative side-effects of the medication she started 9 months ago. Mary now has reduced salivary protection and increased acid challenges so that the oral balance is now favouring demineralization.

Outcome

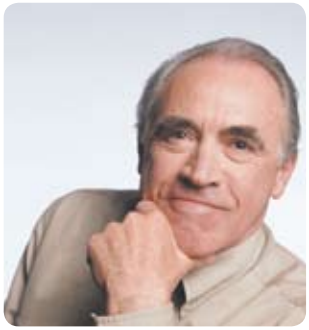
As Mary ages and more of her root surfaces have become exposed, the risk of developing caries is greatly increased due to reduced salivary flow. As no alternative medication was acceptable, Mary has been encouraged to avoid snacks between meals, start routine use of a high fluoride containing dentifrice and to apply GC Tooth Mousse every evening before retiring. Reduced manual dexterity raised compliance concerns with oral hygiene so a decision was made to coat all exposed root surfaces with a low viscosity glass ionomer protection material (Fuji VII). The glass ionomer coating hypermineralizes underlying root surfaces, provides continuous low level fluoride release and creates a protective barrier between plaque and tooth.

5. David - age 56

Saliva diagnostics completed prior to the start of extensive rehabilitation of his worn dentition and replacement of existing restorations.

Result

Resting flow:	Normal	
Consistency:	Normal	
Resting pH:	6.6. Moderately acidic	
Stimulated flow:	4.0 ml. Low	
Buffering:	5. Very low	



Comment

David is a senior manager who has experienced problems with tooth wear for many years. He has good oral hygiene, a reasonably healthy diet with low frequency of carbohydrate, but a taste for red wine. He appears to have reduced saliva flow and the buffering capacity of the stimulated saliva is unusually low. His saliva is not providing sufficient protection, which is probably a significant factor influencing the rate of wear of his dentition.

Outcome

David was shown the results of the saliva test and the relevance of the poor buffering capacity - and advised why his teeth have worn excessively in the past - and informed he will need to take extra care if the planned prosthodontic rehabilitation is to be successful long term. He agrees to take ownership of an ongoing preventative program in conjunction with the restorative treatment and commences chewing of a sugar-free gum containing CPP-ACP (RecaldentTM) daily. He agrees to eat several pieces of cheese after drinking red wine and to wait at least an hour after wine consumption before brushing his teeth. Future visits will include a regular saliva test to monitor for any changes in salivary function.

6. Barbara - age 49

Saliva diagnostics completed to help determine the cause of tooth sensitivity.

Result

Resting flow:	Low	
Consistency:	Frothy, bubbly	
Resting pH:	6.4. Moderately acidic	
Stimulated flow:	6.0 ml. Normal	
Buffering:	10. Normal	

Comment

Although Barbara's stimulated salivary function is normal, her reduced hydration, low resting flow and moderately acidic pH are indicators of dehydration and/or reduced salivary stimulus (possible interference with neural transmission to the salivary glands). Barbara has been on HRT medication for the past year. This may be a reason for her low resting saliva flow. She consumes above average amounts of fruit and fruit drinks and her oral balance is favouring demineralization.

Outcome

Barbara agrees to increase her consumption of water. However she is unwilling to modify her diet or chew a sugar-free gum to increase salivary function. Instead she has agreed to apply a CPP-ACP supplement (GC Tooth Mousse) immediately following consumption of acidic foods and drinks, and also after tooth brushing with a high fluoride containing dentrifice. This will be effective at reducing her tooth sensitivity. Barbara describes herself as a 'busy' person and, whilst not a regular attendee at her dentist, she is now motivated to ensure good health outcomes. Barbara decides she would like to monitor her own saliva at home to ensure she can reach and maintain the desired changes in her resting hydration and pH.

Implementing saliva diagnostics into your practice.

Many benefits exist for both patients and dentist by introducing saliva testing as part of the practice philosophy. The practice can benefit from enhanced diagnostics, earlier detection of problems, improved patient communication and motivation, and an increased dental awareness for patients. It takes only a little time to perform saliva testing procedures, and one of the important keys to the profitable integration of testing routinely is to utilise auxiliary staff. Experience indicates that patients prefer to provide the saliva sample when left alone in a room. Instructions for providing the sample are easily explained using the special optional laminated instruction chart (see illustration p.8) and a preliminary talk by your dental auxiliary.

It is therefore important to:

- decide how the test will be implemented as part of your examination protocol
- train auxiliary staff on the testing procedure so that they can confidently guide patients through the test
- consider how to advise patients the reason for testing saliva and explain that they should not eat, drink, rinse or clean their teeth for 1 hour prior to the test
- consider the fee you wish to charge for this diagnostic service

Recognising salivary dysfunction

Symptoms of salivary dysfunction

- Difficulty in eating, swallowing, talking
- Taste dysfunction
- Dentinal hypersensitivity
- Trauma to soft tissues from sharp areas
- Inadequate retention of full upper dentures

Signs of salivary dysfunction

- Frothy mucinous saliva
- Increased salivary viscosity
- Pooling of saliva in the sublingual area
- Dry mucinous strands (and squames) coating the tongue
- Epithelial atrophy
- Poorly mineralised calculus or no calculus on the lingual aspects of the lower anterior teeth despite the presence of plaque
- Poor output from the labial minor salivary glands (lip eversion test)
- Coincident soft and hard pathology
  - candidal infection
  - high levels of cervical plaque
  - coronal and root surface caries
  - accelerated tooth wear and dental erosion
  - multiple teeth with cervical dentinal hypersensitivity

Analysis of salivary function

Factors to be considered in assessing the resting flow:

- Position - the patient must be sitting, not supine
- Proximity to meals - avoid testing immediately after eating
- Time of day - resting flow normally peaks in the mid afternoon because of diurnal variation
- Medication intake - consider the time of day when medications have been taken

Common aetiologic factors in salivary dysfunction

- Dehydration
  - Inadequate fluid intake
  - Caffeine (black cola soft drinks, energy drinks, coffee, tea, chocolate, caffeine stimulant tablets, some anti-asthma medications)
  - Alcohol and other diuretics
  - Strenuous physical activity, work or recreation outdoors
  - Swimming
- Stress
- Smoking
- Diabetes mellitus (Type I or Type II)
- Salivary gland pathology
  - Head and neck radiation or total body irradiation
  - HIV disease
  - Sjogren's syndrome (primary or secondary)
  - Graft-vs-host disease in bone marrow transplant recipients
  - Connective tissue diseases (sarcoidosis, SLE, scleroderma, etc)
- Chronic renal failure
- Alcoholism and alcoholic cirrhosis
- Hepatitis C infection and liver cirrhosis
- Abuse of cannabis, heroin or amphetamines Methadone or naltrexone therapy for recovering drug addicts
- Menopausal hormone imbalance
- Medication side effect:
  - Narcotic analgesics
  - Anti-convulsants
  - Anti-emetics
  - Anti-nauseants
  - Anti-Parkinsonian agents
  - Anti-psychotics
  - Anti-depressants
  - Diuretics
  - Monoamine oxidase inhibitors
  - Anti-pruritics
  - Anti-histamines
  - Anti-hypertensives
  - Anti-spasmodics
  - Systemic bronchodilators
  - Skeletal muscle relaxants
  - Cardiac antiarrhythmics
  - Anxiolytics
  - Expectorants
  - Decongestants
  - Tranquillizers
  - Sedatives
  - Anti-neoplastic agents

Home care program

- Increase fluid intake if there is dehydration with consequential salivary dysfunction
- Ensure an adequate intake of water, with increased water intake during work or recreation.
- Substitute water for other fluids (alcohol, soft-drinks, coffee, etc)
- Reduce the frequency of smoking
- Use a sugarless chewing gum (Recaldent®)
- Use a Recaldent™ (CPP-ACP) containing paste (GC Tooth Mousse) to increase the oral reservoir's capacity for calcium and phosphate, and promote remineralization
- Follow a strict preventive program and use home care products as recommended by a dental professional.

Saliva - Check BUFFER

Contents:

- pH test strips (20)
- Saliva collection cup (20)
- Paraffin gum (20)
- Pipette (20)
- Buffer test strip (20)

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