



Do you have a drink problem?



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Joss Harding on how to treat xerostomia

When I ask patients if they have a drink problem, they initially think I am suggesting they are drinking a little too much. But it's the reverse. For me, a drink problem in my patients is an unwillingness to drink enough fluids. Dry mouth, xerostomia, is a more common problem than patients and health care professionals realise. Many patients do not believe they have a dry mouth. As dental professionals we should be looking at the whole oral environment, not just at teeth and gums. Saliva flow should always be checked and we should be asking the patient how much they are drinking throughout the day. Our advice should be to drink 6-8 glasses of water per day.¹

Why do we need saliva?

- Saliva lubricates by helping to wet food and create a bolus which can then be swallowed.
- Saliva protects the mouth lining from desiccation.
- Saliva is the start of digestion of starches and fats and amylase and lipase enzymes.

- Saliva contains ions which help to buffer the mouth and maintain the pH of 6.2 to 7.4
- A healthy person produces up to 0.5 litres of saliva per day and can vary greatly over 24 hours.

What causes xerostomia?

Dry mouth can be caused by medications treating depression, anxiety, pain, allergies, and colds, acne, epilepsy, hypertension (diuretics), diarrhoea, nausea, psychotic disorders, urinary incontinence, asthma and Parkinson's disease. According to Porter, Scully and Hegarty over 500+ medications cause xerostomia.² In this study xerostomia was ranked the third most distressing symptom. How many of our patients are prescribed at least one?

Dry mouth can also be a side effect of medical conditions, including Sjögren's syndrome, HIV/AIDS, Alzheimer's disease, diabetes, anaemia, cystic fibrosis, rheumatoid arthritis, hypertension, Parkinson's disease and stroke.

Certain treatments can cause dry mouth. Chemotherapy for cancer treatment and radiotherapy to the head and neck will affect the salivary glands.

How to check at what stage or how severe the dry mouth is and what to do if it becomes worse?

Many clinicians use a simple scale of +/++/+++ or use descriptive words, which is useful, but

not reproducible. The Challacombe Scale was devised by Professor Stephen Challacombe from Kings College London Dental Institute and released in 2011.³ This scale has been developed using an additive score from 1-10 and then categorising the severity of the dryness and what treatment is suggested. A downloadable wall mounted surgery poster is available.

The question is, how do we manage patients with xerostomia?

Public Health England (PHE) recommend high fluoride toothpastes. Duraphat 5000 toothpaste, for patients over 16, Duraphat 2800 toothpaste for patients over 10 years old. These are prescription high fluoride toothpastes which only require a pea size amount on the toothbrush ideally twice per day. Cancer patients with a lack of saliva are categorised as high risk of coronal caries and root caries because of the lack of saliva. For head and neck cancer patients, fluoride toothpastes can also be applied to the teeth overnight in custom-made dental trays to increase the efficacy.

For high risk patients PHE recommend a high fluoride varnish to be applied professionally to the teeth and any exposed root surfaces at six monthly intervals. There are a few choices of varnishes available but currently PHE recommend Duraphat varnish containing sodium fluoride 22,600ppm. Contraindications should be observed. This is a simple treatment

which can be carried out by appropriately trained staff.

If a patient is not able to tolerate a toothbrush or toothpaste, then another option is a fluoride containing mouthwash. PHE recommend using a fluoride mouthwash (0.05%) at a different time to brushing as rinsing straight after brushing reduces the beneficial effect of the toothpaste.

If a patient is not able to tolerate mint or sls then try Oranurse, a flavour free toothpaste. This toothpaste was developed initially for autistic patients who find mint toothpaste feels hot or gives them a burning sensation.

Other brands available are:

- Biomin toothpaste is remineralising toothpaste developed by a London university available in fluoride and fluoride free versions and is low RDA
- Enamelon is a preventive treatment gel from Premier which contains calcium phosphate, stannous fluoride and spilanthes which is a herb to aid moisture and is also low RDA.
- Enzycal is a mild toothpaste from Curaprox which contains enzymes is sls free, sodium fluoride and is low RDA.

Other options for dry mouth products

There are many options available, and we are well placed to suggest these to patients appropriately. Always check for instructions for the use of a product to help them work as effectively as possible. Check for pH and check for contraindications or contents which may not be suitable for vegetarians or vegans or people from certain religious groups.

Check the Specialist Pharmacy Service, a resource prepared by UK Medicines Information (UKMI) pharmacists for NHS healthcare professionals, for the current updated list of saliva substitutes available. pH7 is considered as neutral and pH less than 7 as acidic. However, many products are above the critical pH of 5.5.⁴

1. Dry mouth products

- I. Bioxtra have a range of products for dry mouth: mouthwash, toothpaste, gel and spray. These contain xylitol, enzymes, are sls free and alcohol free. Some of the range contain fluoride and aloe vera. Check for pH and contraindications.
- II. Gelclair is a mouthwash and is available on prescription or online and can be used either in dilution or straight onto the tissues to help lubrication and protection of the mucosa by producing a protective barrier.
- III. Benzzydamine (Difflam) mouthwash or spray are available to purchase or on prescription and act as an analgesic, anaesthetic and anti-inflammatory. Check for contraindications.

- IV. Gengigel is a product in a gel and mouthwash and has no contraindications. Gengigel contains the active ingredient hyaluronan and some patients find this very soothing especially for oral ulceration.
- V. OraCoat's XyliMelts lozenges are all natural available in mint or mint free and are made from xylitol and a gum lubricant. With their oral adhering and fully dissolving disc technology they are able to stay in situ and promote saliva, day or night.
- VI. GC Dry mouth gel is a clear pH neutral gel available in 5 flavours. Check for contraindications
- VII. Oralieve have a range of mild flavoured pH neutral products for dry mouth: mouthwash, toothpaste, gel and spray. These contain enzymes, xylitol and are free of SLS – the foaming agent Sodium Laurel Sulphate – as well as alcohol free. Toothpaste and mouthwash contain fluoride. Check for contraindications.
- VIII. Salivix and Salivix plus are saliva stimulant pastilles. These contain malic acid, xylitol and fluoride. Check for pH and contraindications.
- IX. Saliveze is available in a pH neutral sugar free spray.
- X. Xerostom have a range of lemon flavoured neutral pH products: toothpaste, gel, spray, pastilles and gum. This range of products contains salivactive which contains vitamin B5 and vitamin E.
- XI. Mugard is an oral mucoadhesive oral rinse available on prescription. Check for contraindications.
- XII. Biotene have a range of pH neutral products. Gel is available on prescription and contains xylitol and sorbitol.
- XIII. AS Saliva Orthana is available as a pH neutral spray contain xylitol ingredient and lozenges contain sorbitol ingredient.
- XIV. Glandosane is a saliva stimulant spray available in mint, lemon and neutral, this contains sorbitol. Check for pH and contraindications.
- XV. Xerotin is available as a pH neutral sugar free spray, this contains sorbitol.

2. Chewing gum and sweets.

It has been found that saliva production can be stimulated when chewing gum, so encouraging the use of sugar free gum containing xylitol (an anti-cariogenic natural sugar) can help with lubrication and reducing decay.

Peppersmith's produce a range of xylitol sweets and gum in a variety of flavours to help with a change in taste and reducing decay.

Dr Heffs have produced a xylitol mint that contains green tea and calcium phosphate.

3. Calcium repair mousse.

GC produce two calcium repair products - tooth mousse and MI paste available in a choice of flavours. Tooth mousse is safe for babies and pregnant women and can be used with Duraphat 2800/5000 toothpaste. MI paste contains 900ppm fluoride so is safe for children from 6 years upwards and can only be used in combination with Duraphat 2800 toothpaste. Please check correct age use for these high fluoride toothpastes as mentioned previously. This calcium repair product has the benefit of pushing calcium and phosphate ions back into the tooth surface. Teach the patient how to apply a small pea size amount on the end of the tongue and then lick it around teeth or use the end of a clean finger and wipe around. Contraindications – sensitivity to milk.

What else is helpful for these patients?

Acupuncture has been suggested as a helpful treatment for dry mouth patients. Drs Simcock, Fallowfield and Jenkins use acupuncture to relieve radiation induced xerostomia and have published a feasibility study.⁵ This is an interesting study and certainly something to suggest directly to patients or via a specialist. Your local Oral and Maxillofacial department may have a dry mouth (xerostomia) clinic where acupuncture may be available.

Dry mouth is going to be a growing problem as life expectancy lengthens. So, as a dental team we play an important and integral role in our patients' journeys. It is important we remain vigilant and are knowledgeable about the products available to help and provide relief.

References

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