

Because multiple sclerosis (MS) is a neurological disorder, you may not realize that it can affect oral health as well. People with MS are at increased risk for dental disease, including cavities, gingivitis and periodontal disease, due to the physical effects of MS, as well as patients' reduced immune response and medications they may be on. Compared to those without MS, patients with MS tend to have more extensive gingivitis and periodontal disease and an increased number of decayed, missing or filled teeth. Gingivitis and periodontal disease are caused by inflammation due to the immune system reacting to certain types of dental plaque bacteria. Systemic inflammation is a trigger for MS, and chronic periodontitis contributes to inflammation.

Certain symptoms of MS can make it difficult to properly care for your teeth and gums. Fatigue, spasticity, weakness, tremor, facial pain (including trigeminal neuralgia) and sensory changes (numbness, tingling, pain) in the hands can affect brushing and flossing.

When manual dexterity is compromised, power toothbrushes or modified toothbrush handles are helpful with brushing. If dexterity, strength or balance are concerns, a caregiver can provide physical support by holding onto the individual's elbow or hand. If lack of adequate oral hygiene is a concern, more frequent dental hygiene visits may help improve oral health.

If your MS symptoms or medications are getting in the way of your oral hygiene, the following tips can help:

- Use toothbrushes with built-up handles. One trick is to cut a small slit in the side of a tennis ball and slide it onto the handle of the toothbrush. Another is to use foam tubing to create a larger toothbrush handle. Even a cloth napkin can make a handle. (see photos at end of paper)
- Use flossing tools to help you floss.
- Consider electric toothbrushes and flossing devices. Sonic toothbrushes may be better than ones with rotating bristles.
- Sit down when you brush and floss if standing up is too tiring.
- Floss in the morning if you are too tired at night, or floss while you're in bed.
- Ask a family member or personal assistant to help you brush and floss.
- Wear a weighted glove while brushing to manage tremors.

Dry mouth has been reported as the most common dental issue for people with MS. Many medications used for the treatment of MS progression and symptoms cause dry mouth (xerostomia). These include Meclizine, Oxybutynin & other anticholinergics, Fluoxetine (& other meds for fatigue), anti-depressants, muscle relaxants and others. Lack of saliva caused by dry mouth causes a multitude of dental problems. Saliva is needed to reduce plaque, stop the growth of bacteria, and wash away food debris. Without this, tooth decay and gum disease can develop.

If your MS medication is causing you to have dry mouth, these tips can help:

- Chew sugar-free gum or suck on sugar-free hard candies to stimulate the flow of saliva. For some people, xylitol or other artificial sugars may cause diarrhea or cramps if consumed in large amounts.
- Limit your caffeine intake because caffeine can make your mouth drier.
- Don't use mouthwashes that contain alcohol
- Avoid alcoholic beverages
- Stop all tobacco use
- Limit salt intake
- Avoid sugary foods and beverages -- Decrease your fermentable carbohydrate intake, especially sticky foods such as cookies, bread, potato chips, gums, candies. Avoid the frequent intake of acidic beverages (such as most carbonated and sports replenishment drinks) and lemon products.
- Sip water or sugarless drinks regularly. Stay well hydrated.
- Suck on ice chips
- Try over-the-counter saliva substitutes — look for products containing xylitol, such as Mouth Kote or Oasis Moisturizing Mouth Spray, or ones containing carboxymethylcellulose or hydroxyethyl cellulose, such as Biotene Oral Balance.
- Try a mouthwash designed for dry mouth — especially one that contains xylitol, such as Biotene Dry Mouth Oral Rinse or ACT Total Care Dry Mouth Mouthwash, which also offer protection against tooth decay.
- Avoid using over-the-counter antihistamines and decongestants because they can make your symptoms worse.
- Breathe through your nose, not your mouth.
- Add moisture to the air at night with a room humidifier.

Besides dry mouth, medications used to treat MS also contribute significantly to the onset and symptoms of oral disease. These include corticosteroids, muscle relaxants, anticonvulsants, antidepressants, anticholinergics, and immunosuppressants. Side effects that may affect the mouth include swollen gums (gingival hyperplasia), mouth sores and ulcers (stomatitis), altered taste (dysgeusia), candidiasis (thrush), and cracking of the corners of the mouth (angular cheilitis). Side effects like oral ulcers and swollen gums, make it painful or even impossible to brush and floss properly. Furthermore, oral hygiene in patients with MS can be limited due to neurological deficits, such as motor deficits, cognitive dysfunctions, visual disorders, and pain. Thus, patients can report a good oral hygiene and not have a real cognitive perception of their efforts.

The inflammation characterizing MS can affect not only nerves but also the mouth's inner lining (mucous membranes). Painful sores in the mouth and on the tongue can result. Burning mouth syndrome is the presence of pain similar to sunburn or electric shock in oral membranes that appear normal. This pain originates in the nerves MS attacks.

Trigeminal neuralgia is some 400 times more likely to occur in MS patients, and is often managed with carbamazepine, clonazepam, gabapentin, or surgery in severe cases that do not improve with meds.

Patients with advanced MS often have trouble swallowing (dysphagia). That can occur any point in the disease's progression. Apart from interfering with normal eating and drinking, dysphagia can mean food and drink stay in the mouth longer, giving them more time to feed bacteria that cause tooth decay and gum disease.

Dysarthria is another common manifestation in MS. Dysarthria occurs when the muscles used for speech are weak or you have difficulty controlling them. Dysarthria often causes slurred or slow speech that can be difficult to understand. It also can create difficulty while eating and swallowing.

There is a high prevalence of temporomandibular joint (TMJ) disorders in MS, such as pain and difficulty opening the mouth and TMJ sounds. The temporomandibular joint (TMJ) connects the jawbone to the skull like a "sliding hinge." TMJ disorders can cause pain in the jaw, in and around the ears, and in the face; difficulty or pain while chewing; and locking of the joint. Oral appliances can often help control symptoms.

Receiving dental care depends primarily on three factors; current phase of disease, degree of motor impairment, and level of fatigue. Elective dental treatment is not advisable during the relapse phase of the disease, whereas the ideal time is during the remission phase.

People with MS typically experience maximum fatigue in the afternoon, so it is advisable to arrange short morning appointments. If you are on long-term corticosteroid therapy, supplementation of corticosteroids should be considered before stressful dental procedures, such as extractions. Discuss this with your M.D.

Overall, maintaining oral health with MS can require a team approach, involving your dentist, physician, possibly an oral medicine specialist, speech therapist and/or physical/occupational therapist.

