



THE AMERICAN PARKINSON DISEASE ASSOCIATION, INC.

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EDUCATIONAL SUPPLEMENT #7

PARKINSON'S DISEASE AND ORAL HEALTH

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Parkinson's disease (PD) is a progressive neurological disorder. While every patient experiences symptoms unique to him or her, complaints concerning the mouth are common. Recommendations on how to best manage these problems are provided here.

Oral cavity problems can be grouped as issues of oral motor and sensorimotor impairment; dysphagia; salivary dysfunction; burning mouth; and taste and smell. However, one must bear in mind that these problems are often interrelated both in terms of cause and effect.

Oral Motor & Sensorimotor Impairment

A well-established phenomenon of PD is decreased facial expression (masking). However, PD may directly or indirectly contribute to the development of other motor problems such as abnormal chewing patterns, temporomandibular dysfunction (TMD), and impaired vocalization. PD patients may experience excessive grinding of the teeth, biting of the tongue and cheek, and tooth

fracture. They may experience difficulty wearing removable dentures and suffer increased oral facial pain. The voice may become less intelligible (slurred), hesitant, and soft. The loss of fine muscle control and stamina affecting both the oral cavity and the upper extremities may impair the patient's ability to perform oral hygiene. Inadequate oral hygiene leads to increased oral infection risk.

Dysphagia

Like many subconscious physiologic functions, swallowing is something we do not normally think about. However, for the PD patient, dysphagia (difficulty in swallowing) is a major concern, both in terms of quality of life and disease progression. Dysphagia affects up to 75 per-cent of PD patients and not only affects one's ability to eat and drink, but it also interferes with the ability to relax. Perhaps the greatest risk associated with dysphagia is "silent aspiration." When this condition exists the patient aspirates small amounts of saliva or food, without activating the normal protective reflexive mechanisms such as coughing. Such

occurrences may eventually lead to the development of pneumonia.

Salivary Dysfunction

Saliva serves several critical functions such as lubricating and protecting the delicate oral tissues, solubilizing foods for delivery to the taste buds, assisting in chewing and swallowing, providing antibodies to fight infection, and providing buffering capacity to help prevent tooth demineralization. In health, all of these activities go largely unnoticed. In PD, conditions of both excess salivation (sialorrhea) and inadequate salivation (dry mouth) may occur. Up to 78 percent of PD patients may experience sialorrhea, which may manifest as excessive drooling and increased problems with dysphagia. Indeed, the inability to swallow oral secretions likely contributes to sialorrhea. In contrast, many PD patients experience varying degrees of dry mouth (xerostomia), which in turn also complicates dysphagia and contributes to increased oral

infections. It is likely that many of the dry mouth cases observed in PD patients occur as a side effect of the medications prescribed to treat PD (see Table).

Burning Mouth

Some patients with PD complain of a burning mouth sensation. This complaint may occur by itself, but other factors such as medications, nutritional deficiencies, dry mouth, infections, and functional habits may all contribute to and influence the process.

Taste & Smell Changes

Problems with taste and smell appear to affect the PD population to a greater extent than the non-PD population. Attempts to quantify the problem have been frustrating. Indeed, one published study of 30 PD patients revealed no taste impairment. As in burning mouth, other factors such as medications and dry mouth likely contribute to the problem.

Common Side Effects of PD Medications

<i>Drug Name</i>	<i>Dry mouth</i>	<i>Sialorrhea</i>	<i>Altered Taste</i>
Levodopa / carbidopa <i>Sinemet</i>	X	X	X
Ropinirole <i>Requip</i>	X	X	
Pramipexole <i>Mirapex</i>	X		
Bromocriptine <i>Parlodel</i>	X		
Apomorphine <i>Apokyn</i>			
Benzotropine <i>Cogentin</i>	X		
Trihexyphenidyl <i>Artane</i>	X		
Biperiden <i>Akineton</i>	X		
Procyclidine <i>Kemadrin</i>	X		
Amantadine <i>Symmetrel</i>	X		
Entacapone <i>Comtan</i>	X		
Levodopa / carbidopa / entacapone <i>Stalevo</i>	X	X	X
Tolcapone <i>Tasmar</i>	X		

QUESTIONS ABOUT PARKINSON'S DISEASE

Q: I was recently diagnosed with PD, and my mouth feels fine. When should I see my dentist?

A: It is highly recommended that you see your dentist as routinely scheduled and do not hesitate to discuss your diagnosis of Parkinson's disease. By maintaining your oral health, you may be able to prevent or dampen to some degree many of the oral problems associated with PD.

Q: My mouth is dry, what can I do?

A: As previously noted, dry mouth is a very common complaint and increases one's risk of developing oral infections and discomfort. It is often related to the drugs used to medically manage PD or other medical conditions you may have. In some cases, your physician may be able to change or adjust your medication to reduce dry mouth. However, this is often not the case, and strategies to manage dry mouth should be undertaken. There are several simple steps you can accomplish yourself, such as avoiding irritating products like alcohol, tobacco, and spicy or acidic foods. Using sugar free candies containing xylitol (a non-cariogenic sweetener) helps reduce your oral cavity risks while

stimulating salivary flow. Sipping water throughout the day is helpful. Many moisturizing and saliva substitute products are currently being marketed to relieve dry mouth (see list in box). These products are usually available over-the-counter and may prove beneficial for you. However, there are some proprietary differences among these products and one product may work better for you than another. Your dentist will likely place you on a prescription-based fluoride regimen, which is intended to counter the increased cavity risk associated with a dry mouth. An increase in oral discomfort associated with your dry mouth may indicate the presence of a fungal infection for which your dentist may prescribe appropriate therapy.

Q: I am experiencing excessive salivation. What should I do?

A: You are likely suffering from sialorrhea and should discuss this problem with your physician. A variety of pharmacologic therapies has been proposed to reduce excess salivation, but studies addressing the issue are limited. Some authorities report that the injection of botulinum toxin into the major salivary glands can reduce excess salivation.

A Few Products for Dry Mouth

TheraSpray®
Omni Pharmaceuticals

Mouth-Kote
Parnell Pharmaceuticals

Salivart® Oral Moisturizer
Gebauer Company

Oralube
Orion Laboratories

OralBalance®
Laclede Research Labs

Oasis® Mouth Moisturizer
GlaxoSmithKline

Q: I am having difficulty brushing my teeth. Is there anything I can do?

A: Yes. Simple aids such as enlarged toothbrush grips, flossing devices, and electric toothbrushes are available. While there are many electric toothbrushes to choose from, all are acceptable for use. When using an electric toothbrush, make sure you follow the manufacturer's instructions to avoid damaging your gums and teeth. Your dentist may recommend you have more frequent check-ups and cleanings than the average patient. The dental team may be able to offer you specific advice on how to better perform dental hygiene. While it is understood that self-

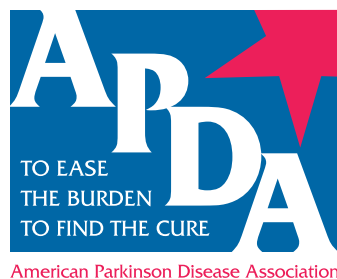
sufficiency is an important aspect of one's quality of life, there may come a time when you may need assistance in performing daily oral hygiene measures.

Q: My Parkinson's disease makes speaking and swallowing difficult. What can I do?

A: It is essential that you discuss these important problems with your physician. He or she may refer you to a speech therapist and nutritionist for further assistance and guidance. Good dental health is important here, as it contributes to your ability to both speak and swallow.

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The information contained in this supplement is solely for the information of the reader. It should not be used for treatment purposes, but rather for discussion with the patient's own physician.



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