

## Dental Health and Parkinson's Disease

If you or a loved one is living with Parkinson's disease (PD), you are surely aware of its complexities. Among these, one that is often overlooked by both neurologists and people with Parkinson's disease is dental health.

Why is it so important to address dental health issues? Poor dental hygiene can affect nutrition and increase risk for stroke, cognitive impairment and weight loss. Parkinson's disease often poses unique challenges in establishing and maintaining an effective dental treatment strategy. People of all ages with PD face similar challenges, but for those who are older, the problems can be especially serious.

### Barriers to Dental Health in PD

The factors accounting for diminished dental care in PD are both physical and behavioral.

#### *Physical Barriers*

The physical symptoms of Parkinson's present challenges both for daily home dental hygiene and periodic office examinations. In 2000, David Kaplan, D.D.S., a retired Columbia University dentist, noted that in people with Parkinson's, "major components of oral hygiene and home care programs...require muscle-eye-coordination, digital dexterity and tongue-cheek-lip control. Tremor and the associated loss and/or lessening of the above faculties mitigate against effective oral hygiene procedures."

Indeed, because of poor motor function, nearly half of all people with PD have difficulty with their daily oral hygiene regimen. For example, people with Parkinson's are less likely than others in their age group to clean their dentures daily.

Parkinson's symptoms — such as tremor, rigid-

ity and abnormal posture — may make a dentist's examination more difficult. Weakened swallowing ability can increase the risk of aspiration (choking) from some treatments typically used by dentists. Additionally, people with PD who have been on medications like levodopa for several years may begin to develop dyskinesias, which can affect the jaw (where they are called oro-buccal dyskinesias) as well as teeth grinding — both of which may create problems during dental exams and at home.

People with PD may also experience dry mouth, which can contribute to or worsen already-existing chewing difficulties or denture discomfort.

#### *Behavioral Barriers*

In addition to the motor-related difficulties associated with Parkinson's, there are behavioral changes that may negatively impact dental care. These include apathy, depression, and forgetfulness, all of which may lead a person with Parkinson's to pay less attention to his or her daily dental health. Other behavior changes can affect nutrition. For example, people with PD require greater caloric intake than those without PD, but some individuals will actually experience decreased appetite. This problem, combined with poor dental

hygiene, often leads to a tendency to avoid nutrient-rich foods, like vegetables, which require the ability to chew well. It can also lead some people to develop a "sweet tooth" which may put them at greater risk for cavities.

People with PD may also experience some level of cognitive impairment, ranging from mild to severe. This sometimes leads to a decline in the prac-

### Tips for Maintaining and Improving Dental Health

- **Use an electric toothbrush**
- **Try "one-handed strategies," which allow you to use the stronger side of your body**
- **Apply stannous fluoride gel treatments, as directed by your dentist**
- **Try non-alcohol based mouthwashes using chlorhexidine or baking soda**
- **Visit your dentist in the morning**
- **Take levodopa (Sinemet) 60-90 minutes before your visit**
- **Plan several, shorter dentist visits, rather than fewer, longer ones**

*(over please)*

tice and effectiveness of many daily self-care routines, including dental hygiene. People who experience cognitive changes may also be *more* likely to miss dental appointments and *less* likely to report dental pain to their caregivers or dentist, meaning problems may go unaddressed for too long.

There are early signs to look for if you are worried that your own dental care, or that of a loved one, is declining. These include infrequent tooth-brushing, difficulties rinsing during daily dental care, poor denture care and trouble sitting through meals.

### **Strategies for Improving Dental Care**

Clearly, the sooner that attention is given to preventive dental care, the better. So what can a person with PD or a caregiver do to ensure that Parkinson's disease does not stand in the way of good dental hygiene? Here are a few tips:

#### *Maintaining Dental Care at Home*

Perhaps the simplest intervention is an electric toothbrush, which provides the fine and repetitive motions that protect teeth most effectively. In some people with Parkinson's disease, "one-handed preventive strategies," which allow a person to use the stronger side of his or her body, can also be helpful. For instance, some find that caring for dentures is made easier by attaching a nailbrush to a household surface with a suction cup and then moving the denture back and forth across the brush.

Additionally, people with Parkinson's may find prescription strength, topical stannous fluoride gel treatments a good preventive strategy, both on a daily basis at home and during periodic visits to the dentist. Stannous fluoride is often used in toothpastes to protect tooth enamel from cavities, but it is also available as a gel that can be directly applied to the mouth. Since this is a much stronger treatment than that found in toothpaste, your dentist should be consulted to recommend the dosage and frequency of use.

Mouthwashes are generally discouraged for people with PD because they present the risk of choking, but in cases where they are still an option, it is best to look for those that are non-alcohol based and that use either chlorhexidine (an antiseptic) or baking soda. A good alternative is a chlorhexidine brush, which is a swab laden with chlorhexidine that you

can apply to your teeth. They are available only by prescription, so you will need to consult your dentist.

#### *Improving Dental Visits*

There are several ways in which people with Parkinson's and their caregivers can improve the value of their visits to the dentist, beginning with timing them strategically. For example, it is wise to plan for early morning visits, when waiting times tend to be shorter. Additionally, it's best to take levodopa 60-90 minutes prior to the office visit to take advantage of a peak response period, which may improve the patient's ability to meet the demands of a dental examination. Finally, it may be helpful to plan a series of several, brief office visits rather than fewer, longer visits. As PD progresses, the amount of time during which a person responds optimally to PD medications will become less and less, so shorter visits may be more realistic and more productive.

#### *Considering Medications and Surgery*

As PD progresses, motor symptoms worsen and anxiety may increase, making home dental care and routine dental work more difficult. A neurologist will often be able to help in such situations, weighing the risks of medications with the potential benefit of a dental intervention. If invasive procedures, such as tooth restoration, are indicated, these should be undertaken as early as possible in the progression of PD, to minimize risk. If general anesthesia is required for a procedure, the patient should be warned that the recovery period for a person with Parkinson's may be prolonged.

### **Conclusion**

This informal list of suggestions to improve oral health is not comprehensive, but it offers a framework for intervention based on the best available (albeit limited) data. Thankfully, researchers with multidisciplinary interests are actively investigating links between neurologic and oral health. We hope that their findings will ultimately result in interventions that improve oral health in people living with Parkinson's disease.

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If you have or believe you have Parkinson's disease, then promptly consult a physician and follow your physician's advice. This publication is not a substitute for a physician's diagnosis of Parkinson's disease or for a physician's prescription of drugs, treatment or operations for Parkinson's disease.