

People living with scleroderma face unique challenges while trying to maintain good oral health. They are more likely to be affected by dental conditions such as small mouth, dry mouth, jaw pain, gum disease, and dietary issues. Many people living with scleroderma also have hand involvement, making it difficult to perform proper oral hygiene at home. It is prudent to talk with your dentist about adaptive devices and tools that can help with brushing and flossing.

This brochure will touch on these and other aspects of oral health as they relate to scleroderma. We hope you find this information helpful.

EFFECTS OF SCLERODERMA ON ORAL HEALTH

Microstomia (small mouth)

Often, scleroderma will cause the lips and the face to tighten, making the mouth smaller. In some cases, lips may no longer touch together. Microstomia, or small mouth, may make home dental care, such as brushing and flossing, more difficult. Professional oral health care may become complicated and uncomfortable.

Your dentist, dental hygienist or physical therapist may recommend exercises to combat this condition. In one popular exercise, the patient crosses his/her wrists at chest level. Then, the patient inserts the thumbs into the mouth and works the thumbs up and down against lubricated lips.

Another exercise uses several tongue depressor blades to prop open the mouth between the upper and lower incisors. The patient should stack as many tongue blades between the teeth as is comfortable. Wrap a rubber band around the stack. Then, with the stack inserted, slide another blade into the stack. The patient will feel the muscles, skin and ligaments stretching. Leave the stack in place for several minutes.

Both of these exercises are useful immediately prior to any dental appointment. In extreme cases of microstomia, surgery may be required to allow the dental professional to provide treatment.

Xerostomia (dry mouth)

Scleroderma may cause salivary and other exocrine

glands to function less efficiently. Dry mouth causes staining, tooth decay, gum disease, bad breath, and yeast infection or thrush.

Testing for xerostomia, or dry mouth, is simple.

Chewing on a small piece of paraffin for five minutes should produce at least 5 ml of saliva. This test will help the doctor determine whether you have dry mouth and the proper course of treatment for it.

While there is no cure for xerostomia, treatment options range from drinking more water, using artificial saliva or having a dental professional prescribe artificial medicine such as pilocarpine, a drug that increases the flow of exocrine glands.

Temporomandibular Joint Dysfunction

Scleroderma may affect the smooth function of the TMJ (Temporomandibular joint) and the muscles of mastication (which move the mandible) by tightening the skin of the face and neck, as well as the ligaments and muscles.

It is easy to throw off the balance of the TMJ, the ligaments and the muscles that support it. Patients may notice severe pain when the TMJ and the muscles of mastication are not operating smoothly. Dentists call this condition Myofascial Pain Syndrome.

Dentists begin the treatment of myofascial pain by prescribing rest. Often, a week of soft diet (nothing crunchy or chewy) and limited opening (no wider than the width of two of your fingers) may allow the muscles of mastication to heal and feel better.

Additionally, dentists may ask patients to take medications to speed recovery. Common medications include non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen and diflusal (Dolobid) and naproxen sodium (Aleve), and muscle relaxants such as carisoprodol (Soma) and cyclobenzaprine (Flexeril).

In many cases, myofascial pain is triggered by a malocclusion (misaligned bite). Dentists can change the scleroderma patient's occlusion in one of three ways: The first method is to adjust limited high spots by gently smoothing select parts of teeth with a dental drill and a finishing tip. Often, patients notice immediate improve-

ment after this procedure.

Another common technique is for the dentist to create a mouth guard, called a bite plane, which changes the patient's bite.

Finally, a more permanent solution than a bite plane is for the dentist to rebuild the patient's occlusion with permanent crowns or onlays. This last treatment is effective, but it requires long appointments and may not be an appropriate treatment for many people with scleroderma.

Periodontal disease

Gingival health, which relates to the gums and bone that support the teeth, is affected by scleroderma in several key ways. Tightness of the tongue, lining of the mouth, the lips, and impaired salivary function decreases the ability of the tongue and lips to keep the teeth and mouth clean. Tightness in the mucosa lining the mouth may pull the gingiva (the gums) away from the teeth.

To minimize periodontal disease, it's important to remember the following:

- Maintain a balanced diet.
- Practice good oral hygiene by brushing and flossing. This is often made more difficult due to sclerodactyly and microstomia, but a dental professional can help you with appropriate assistive devices and regular professional cleanings.

Hygienists, general dentists and periodontists (gum specialists) can work with patients to improve home care. Periodontists may surgically alter the gingiva and mucosa to improve oral health.

Idiopathic resorption

Some people with scleroderma may find that one or more of their teeth dissolve from the inside out (internal resorption) or from the outside in (external resorption). This creates a conundrum for the dentist. Treatment may be time consuming and expensive, and may not save the tooth. As in most health conditions, early intervention is important and may save teeth. Frequent dental examinations help dentists diagnose

resorption early. Fortunately, idiopathic resorption is a relatively uncommon problem.

ORAL EFFECTS OF MEDICATIONS

Living with scleroderma often means taking a variety of medications. Many medications carry side effects that impact oral health.

Oral health effects of medications include oral irritations (stomatitis and aphthous ulcers), dry mouth (xerostomia), taste changes (dysguesia), infection, and osteonecrosis of the jaw.

Question dentists, physicians and pharmacists to learn what to expect. Often, negative effects of medications are outweighed by their therapeutic effects. When a medication's side effects cause serious problems, speak with your medical doctor to learn if there are alternative treatments available.

When you must use a medication that causes negative oral health effects, ask your dentist and your dental hygienist for suggestions on how to treat or mitigate those side effects.

DEPRESSION

Many people with scleroderma may also be dealing with depression. Dentists know that people who are depressed do not attend to activities of daily living, including oral health, as well as others.

Counseling and medication are common and helpful treatments for depression. Some medications that treat depression often have oral health effects and may interact with medications that dentists prescribe or administer. Talk with your physician about this.

MAINTAINING ORAL HEALTH

Home care

Microstomia and sclerodactyly complicate home care. Fortunately, there are toothbrushes on the market that are easier to hold for people with limited hand function. The Dex T Brush, for example, is a manual toothbrush with a very wide handle made especially

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When you become a member of the Scleroderma Foundation, you are supporting the organization's mission of support, education and research. Your donation helps pay for programs in each of those three areas, including:



- funding up to \$1 million in original research grants awarded to investigators annually
- helping patients and their families cope with scleroderma through mutual support groups and physician referrals
- promoting public education of the disease through patient literature, health professional seminars and publicity campaigns

Your membership gives you the following benefits:

- a subscription to our quarterly magazine, the *Scleroderma Voice*. The magazine includes updates on the latest scleroderma research and treatments, profiles of patients who are overcoming their condition to live productive lives; tips on how to manage your disease
- newsletters and informational and educational offerings from your local chapter
- discounted registration fees to the Foundation's annual National Conference

Please consider joining the Foundation today. A membership form is attached on the reverse side of this panel.

To become a member of the Scleroderma Foundation, fill out this form, tear at perforation, and send with your check or credit card information to:

Scleroderma Foundation
 Attn: Donations
 300 Rosewood Drive, Suite 105
 Danvers, MA 01923

I would like to become a member and help support the Scleroderma Foundation's efforts to improve the lives of those with scleroderma, and to assist in the search for a cause and cure. Enclosed please find my check (or credit card information) in the amount of \$_____.

Donations of \$25 or more can be acknowledged as members.

- I am not interested in members benefits.
- However, I would like to make a contribution in the amount of \$_____.

Name: _____

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Telephone: _____

E-mail: _____

Credit Card: _____

Credit Card #: _____

Exp. Date: _____

Name on Card: _____

for people with poor dexterity. Another toothbrush, the Benefit Plus, has a thick handle and three heads. The three heads brush the three exposed sides of teeth simultaneously.

Many may find that an electric toothbrush is their best option. Electric toothbrushes provide a large, easy to hold handle and move the bristles more effectively than is otherwise possible for people with sclerodactyly.

Sclerodactyly and microstomia may also make flossing difficult. Using a floss fork, which stretches dental floss across a handle, may allow many people with scleroderma to clean between their teeth more easily. Reach makes the Access Flosser that uses detachable floss bows. The long handle and angulation make interdental cleaning easier. Other options include the Waterpik Flosser and Oral B Hummingbird electric flossers. Ask your dentist or hygienist which may be the best for your particular situation and how to best use these aids.

Fluoride

Today, most people drink fluoridated water and brush with fluoride toothpaste. Dentists may prescribe or recommend additional fluoride for those with scleroderma.

Topical fluoride strengthens teeth by replacing calcium on the surface of teeth. There are fluoride rinses available and prescription strength fluoride gels and toothpastes that make teeth even more resistant to decay. Regular professional applications of fluoride varnish are a relatively convenient and inexpensive way to ensure better dental health. Ask your dentist whether or not a prescription fluoride regimen is appropriate for you.

PROFESSIONAL CARE

Living with scleroderma can be overwhelming. Even so, it is very important to maintain oral health and to minimize oral health care problems.

Not all dentists are familiar with scleroderma. Search for a dentist who will meet your needs by

asking your medical doctor, calling the state or local dental society, calling the local chapter of the Scleroderma Foundation, and asking others who live with scleroderma for the name of their dentist.

If you have a dentist who knows little about scleroderma, refer them to the Scleroderma Foundation at www.scleroderma.org for information.

When you visit your dentist or dental hygienist, follow these simple recommendations:

- Tell the dentist you have scleroderma. Discuss the extent of your condition, how it affects you and how it affects your oral health.
- Schedule short exam and care appointments for one area at a time or one tooth at a time, or long appointments with breaks.
- Schedule appointments for the best time of day for you.
- Wear gloves and bring a blanket in case the office is cold.
- Ask your dentist to try using a mouth prop, rubber dam and shorter burs.

Working cooperatively with your dental care professionals and, if necessary, having your dentist speak with your physician about your overall condition as it relates to your oral health, will help to ensure that your dental care will be the best possible for your unique situation.

Please note that this brochure is provided for educational purposes only. It is not intended to substitute for informed medical advice.

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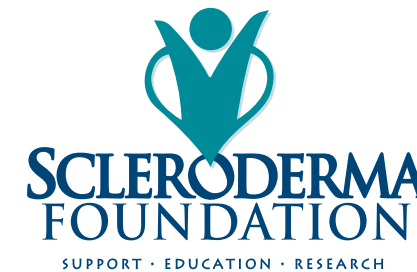
OUR THREE-FOLD MISSION IS SUPPORT, EDUCATION AND RESEARCH

DENTAL CARE IN SCLERODERMA

Support: To help patients and their families cope with scleroderma through mutual support programs, peer counseling, physician referrals, and educational information.

Education: To promote public awareness and education through patient and health professional seminars, literature, and publicity campaigns.

Research: To stimulate and support research to improve treatment and ultimately find the cause of and cure for scleroderma and related diseases.



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