Medication - Medications may include

- H2 blockers, such as Tagamet HB or Pepcid AC, may provide temporary relief.
- proton pump inhibitors (PPI), namely Losec, Prevacid, Pantoloc, and Pariet are probably the best agents for GERD related to scleroderma.
- prokinetics, namely Maxeran (metaclopramide) and Domperidone, help strengthen the sphincter and assist in emptying the stomach faster.

Endoscopy – Endoscopy is a diagnostic procedure that is sometimes administered to GERD patients who have swallowing difficulties or to those who do not respond to other therapies. A thin flexible tube is swallowed by the patient allowing the physician to directly inspect the lining of the upper gastrointestinal tract. This procedure can be used to identify complications of GERD and to take small samples (biopsies) for further analysis.

In most cases, GERD is a chronic condition that can be effectively managed with medications and lifestyle modifications. Patients should review their symptoms with their doctor and establish an appropriate treatment plan.



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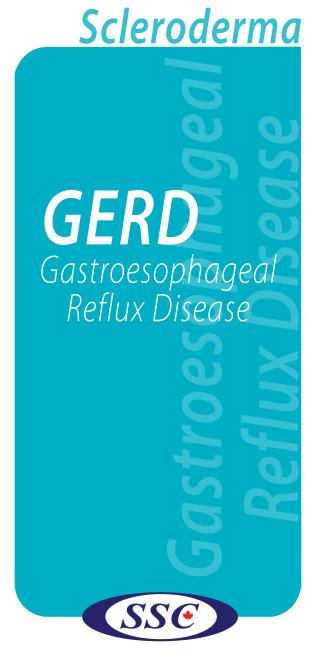
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We thank **Dr. Janet Pope MPH, FRCPC** for her assistance with this information pamphlet.

DISCLAIMER: THIS PAMPHLET IS MEANT TO PROVIDE INFORMATION ON SCLERODERMA AND IS NOT MEANT TO BE USED AS A DIAGNOSTIC TOOL OR TO SUGGEST TREATMENT OR MEDICATIONS. ALWAYS CONSULT YOUR PHYSICIAN REGARDING DETAILS OF SYMPTOMS, DIAGNOSIS, AND TREATMENT.

Your Local Scleroderma Group



Scleroderma Society of Canada

What is GERD?

GERD is an acronym that stands for gastroesophageal reflux disease. Gastroesophageal reflux is the term used to describe the blackflow of acid from the stomach into the esophagus when the lower esophageal sphincter does not close properly. When the reflux touches the lining of the esophagus, a burning sensation is experienced which is normally referred to as heartburn or acid indigestion. Nearly everyone has an attack of heartburn at some point in his/her life, and in the vast majority of cases, the condition is temporary and mild, causing only transient discomfort. Patients develop gastroesophageal reflux disease (GERD) when there is a persistent and frequent incidence of heartburn. If it remains untreated, serious problems can develop.

GERD and Scleroderma

GERD is very common in systemic sclerosis (scleroderma). All gastrointestinal segments may be affected by scleroderma. One of the abnormalities is the dysmotility (muscles do not work properly) of the gastrointestinal tract. Scleroderma patients often have poor sphincter control, leaving it open and allowing more acid to wash into the esophagus.

Causes

The esophageal sphincter is normally closed when a person is not swallowing. Transient relaxations of the sphincter do occur a few times each day with most people. However. this occurs more frequently in patients with GERD, resulting in the reflux associated with this disease. Many lifestyle factors such as overeating, eating certain foods, and consuming caffeine may have an adverse effect on GERD.

Food in general can exacerbate GERD symptoms. This is because

- food fills the stomach and induces more transient relaxations of the lower esophageal sphincter.
- food stimulates acid production in the stomach to aid digestion which causes an increase of reflux into the esophagus.

Symptoms

Persistent heartburn and acid regurgitation are the main symptoms of GERD but there may be other effects:

- Esophageal patients may experience pain on swallowing or at least have difficulty swallowing (dysphagia). The esophagus may become severely injured resulting in narrowed regions (strictures) that impair swallowing. Stretching procedures or surgery may be required. Paradoxically, strictures may actually improve other GERD symptoms by helping to prevent acid reflux.
- Pulmonary conditions such as asthma, interstitial fibrosis (scarring in the lungs), chest pain, and a dry cough may result from repeated aspiration.
- Oral patients may experience an increase in tooth decay, gingivitis or halitosis.
- Throat patients may damage vocal cords, experience hoarseness or develop laryngitis.

Long Term Complications

GERD can cause some serious long term complications:

• **Ulcers of the Esophagus** – Reflux can result in ulcers, which lead to bleeding. Persistent bleeding can result in iron deficiency anemia, and in some cases, may even require emergency transfusions.

- **Asthma** GERD may cause asthma attacks in patients who have no allergies or history of lung disease. In such cases, some physicians believe that the acid reflux stimulates the vagus nerves, triggering the airways in the lung to constrict, resulting in asthmatic symptoms.
- **Respiratory Disorders** Patients with GERD appear to have a heightened risk for a number of respiratory disorders, such as chronic bronchitis, emphysema, pulmonary fibrosis and pneumonia.
- Barrett's Esophagus and Cancer of the Esophagus A condition called Barrett's esophagus is thought to result from long-standing GERD in some patients. The normal esophageal lining (epithelium) may be replaced with abnormal (Barrett's) epithelium. Barrett's esophagus is a risk factor for the development of esophageal cancer.
- **Sleep Apnea** Acid reflux can cause spasms of the vocal cords (larynx), which block the flow of air to the lungs. Such spasms may cause sleep apnea.

Treatment

Lifestyle Changes - Treatment usually begins with lifestyle changes.

- Avoid trigger foods such as acidic foods, chocolate and peppermints.
- Eat smaller and more frequent meals.
- Lose weight if needed.
- Reduce alcohol consumption.
- Quit smoking.
- Avoid lying down for at least 3 hours after a meal.
- Raise the head of the bed 6 inches.

Note: A journal is a useful tool to use to more accurately identify foods and activities that may trigger GERD symptoms so that lifestyle is not restricted unnecessarily.

