SSF Clinical Practice Guidelines for Caries Prevention are Here!

by Domenick T. Zero, DDS, MS, Indiana University School of Dentistry, Oral Health Research Institute, Indianapolis, Indiana; Michael T. Brennan, DDS, MHS, Department of Oral Medicine, Carolinas Medical Center, Charlotte, North Carolina; and Troy E. Daniels, DDS, MS, Department of Orofacial Sciences, UCSF Schools of Dentistry and Medicine, San Francisco, California

Sjögren’s Syndrome Foundation (SSF) Clinical Practice Guidelines for Caries Prevention in Sjögren’s have been released! The guidelines will help dentists, oral medicine specialists and Sjögren’s disease patients determine the best strategies for preventing caries due to dry mouth. These recommendations mark the first-ever set of Clinical Practice Guidelines for Oral Manifestations of Sjögren’s. The SSF Oral Working Group stresses that identification of potential Sjögren’s patients in one’s clinical practice is paramount for ensuring proper monitoring of Sjögren’s patients, timely treatment, prevention of serious complications, and referral to other specialists who can monitor and manage non-oral aspects of this disease.

Salivary dysfunction in Sjögren’s frequently leads to rampant caries, tooth erosion and loss, diminished quality of life, and costly treatment.1-7 Providing guidelines for improved and greater consistency of care across all areas of Sjögren’s is a top priority for the SSF. Ensuring that dentists and other specialists embrace and follow guidelines also is critically important, and, to this end, a highly rigorous and transparent process delineated by several leading national organizations was followed, including the American Dental Association (ADA) and its Center for Evidence-Based Medicine, which assisted the SSF in this important initiative. The Journal of the American Dental Association (JADA) published this first set of guidelines for oral management in Sjögren’s in its April 2016 issue.8

The SSF Oral Working Group (See Table 1, page 2) divided oral manifestations into three phases for guidelines development:

Identifying Viral-Mediated Triggers of Sjögren’s

by Melodie Weller, PhD, National Institute of Dental and Craniofacial Research (NIDCR), National Institutes of Health (NIH), Bethesda, Maryland

A viral infection is thought to be one of the triggers in the development and/or progression of Sjögren’s. Prior studies have identified viruses present in Sjögren’s patients, including Epstein Barr
Caries Prevention, Caries Management and Restoration, and Mucosal Management and Symptom Relief. For Caries Prevention, questions pertaining to the following topics were addressed: use of fluoride, salivary stimulants, antimicrobials, and nonfluoride remineralizing agents.

**Methods**

Guiding principles and methodology processes remain consistent across all SSF guidelines topics in Sjögren’s. Topic Review Groups (TRGs) were established for each guideline topic area. Guidelines Protocol Workshops pre-defined the methodology to be followed, including defining the clinical questions (in a PICO format that includes patient population, intervention, comparison, and outcome) and creating parameters for the literature searches and assessments for quality of studies.

Literature search terms were delineated with the help of an ADA guidelines expert and librarian, who then conducted the systematic literature search. At least two TRG members reviewed the abstracts for each topic, and determined which studies were relevant to the clinical question(s) and met pre-determined parameters. Records identified through MEDLINE, PubMed and Cochrane initially numbered 122 with a final search finding 26 additional articles for a total of 136. After thorough reviews, studies deemed acceptable for full analysis and data extraction numbered 11 for fluoride – the highest number for all topics, and lower numbers for the other topics, with zero found for salivary stimulation, 3 for antimicrobials, and 2 for nonfluoride remineralizing agents.

Data was then extracted by two or more TRG members on study characteristics, sample and disease information, evidence, and study quality. The TRG as a whole rated the strength of the evidence, developed a draft recommendation, and provided a rating for the strength of the recommendation. When insufficient evidence was available, guidelines were based on expert opinion. A modified version of GRADE was used based on the American Society of Clinical Oncology (ASCO) definitions for scoring the strength of a recommendation.10 (See Table 2)

The recommendations were then put through a Delphi-type consensus process to determine the level of agreement from practitioners and other stakeholders. In addition to the proposed recommendation and strength of that recommendation, the TRGs provided the evidence-based tables and a clinical rationale and evidence summary for review by the Consensus Expert Panel (CEP). The majority of panelists were clinicians in dental practices representing private practice as well as academia and clinicians and researchers in oral medicine. Dental hygienists and Sjögren’s patients also participated. Scoring was based on a six-point Likert scale, and comments were encouraged. A minimum of 75% agreement had to be obtained and the TRG satisfied that it had considered all comments. Two rounds on the use of fluoride were held, while one round each was held on salivary stimulation, antimicrobials, and nonfluoride remineralizing agents. CEP respondents numbered 42-45 per round. The strength of the fluoride recommendation was raised from Moderate to Strong for a second round of consensus following numerous comments from the CEP requesting this change; subsequent agreement for this revision was 96.97%.

**Table 1**

<table>
<thead>
<tr>
<th>Oral Working Group for SSF Clinical Practice Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Caries Prevention</strong> Guidelines Chair: Domenick Zito, DDS, MS</td>
</tr>
<tr>
<td>Oral Working Group Co-Chairs: Troy Daniels, DDS, MS</td>
</tr>
<tr>
<td>Mike Brennan, DDS, MHS</td>
</tr>
<tr>
<td><strong>Chair for all SSF Guidelines:</strong> Frederick B. Vivilio, MD</td>
</tr>
<tr>
<td><strong>Fluoride:</strong> Domenick Zito, DDS, MS, Chair</td>
</tr>
<tr>
<td>Mohit Singh, DDS, MS</td>
</tr>
<tr>
<td>Ava Wu, DDS</td>
</tr>
<tr>
<td><strong>Salivary Stimulation:</strong> Athena Papas, DMD, PhD, FICD, Chair</td>
</tr>
<tr>
<td>Ihsan Al-Khashim, DDS, BS, MS, PhD</td>
</tr>
<tr>
<td><strong>Antimicrobials:</strong> Carol M. Stewart, DDS, Chair</td>
</tr>
<tr>
<td>James Szulkin, DMD, PhD</td>
</tr>
<tr>
<td><strong>Nonfluoride Remineralizing Agents:</strong> Andreas Pink, DMD, MPH, MSC, Chair</td>
</tr>
<tr>
<td>Mohab Nasheed, DMD</td>
</tr>
<tr>
<td>Nelson Rhodus, DMD, MPH, FACD</td>
</tr>
<tr>
<td><strong>Additional Contributors:</strong> Phil Fox, DDS</td>
</tr>
<tr>
<td>Theresa Lawrence Ford, MD (Rheumatology)</td>
</tr>
<tr>
<td>Stephen Cohen, DD (Ocular specialist)</td>
</tr>
<tr>
<td><strong>SSF Lead Staff:</strong> Katherine M. Harnett, MA</td>
</tr>
</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th>Strength of the Recommendation Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strong</strong></td>
</tr>
<tr>
<td>There is high confidence that the recommendation reflects best practice. This is based on: a) strong evidence for a true net effect (e.g., benefits exceed harms); b) consistent results, with minor and/or few exceptions; c) minor and/or few concerns about study quality; and/or d) the extent of panelists’ agreement. Other compelling considerations (discussed in the guidelines’ literature review and analyses) may also warrant a strong recommendation.</td>
</tr>
<tr>
<td><strong>Moderate</strong></td>
</tr>
<tr>
<td>There is moderate confidence that the recommendation reflects best practice. This is based on: a) good evidence for a true net effect (e.g., benefits exceed harms); b) consistent results, with minor and/or few exceptions; c) minor and/or few concerns about study quality; and/or d) the extent of panelists’ agreement. Other compelling considerations (discussed in the guidelines’ literature review and analyses) may also warrant a moderate recommendation.</td>
</tr>
<tr>
<td><strong>Weak</strong></td>
</tr>
<tr>
<td>There is some confidence that the recommendation offers the best current guidance for practice. This is based on: a) limited evidence for a true net effect (e.g., benefits exceed harms); b) consistent results, but with important exceptions; c) concerns about study quality; and/or d) the extent of panelists’ agreement. Other considerations (discussed in the guidelines’ literature review and analyses) may also warrant a weak recommendation.</td>
</tr>
</tbody>
</table>

Guidelines

Clinical questions, Recommendations, and Strength of each Recommendation are provided in Table 3. (page 10)

**Fluoride**

The use of Fluoride received the strongest recommen-
dation as a first line of defense. While only one study looked specifically at Sjögren’s patients, the TRG ana-
yzed 12 additional studies using fluoride in xerostomia patients, the majority of whom were head and neck ra-
diation patients. Two studies were not considered in de-
veloping the recommendation because they did not meet pre-determined criteria, leaving 11 studies that were fully analyzed on fluoride. The 1977 study by Dreizen et al9 was the first to link topical fluoride with caries preven-
tion in dry mouth; further studies built on this beneficial finding and used improved clinical methods that al-
lowed for a higher level of quality and less risk of bias. As such, the TRG had a high level of confidence that using fluoride reflects best practice, and the recommendation on fluoride was rated as a strong recommendation. The TRG was unable to make a recommendation about types of fluoride or frequency of use due to the lack of studies.

**Salivary Stimulation**

Salivary stimulation is widely accepted as a basic therapeutic measure for preventing cavities in Sjögren’s patients with dry mouth.11 However, no studies were available that addressed the TRG’s clinical question, and as a result, the recommendation to use salivary stimu-
lants was rated as weak. Salivary stimulation through gustatory or masticatory stimulation and pharma-
ceutical agents such as sugar-free lozenges or chewing
myxitis, Streptococcus mutans, and Lactobacillus acidophilus. These anaerobic bacteria can grow on dental plaque, leading to the formation of biofilms that can cause oral infections. Antimicrobial Agents

After reviewing the abstracts found in the systemic literature search, nine studies were selected for further analysis. The subsequent decision to focus solely on chlorhexidine reduced the number of studies to three, none of which involved Sjögren’s patient. Because of the lack of evidence and side effects associated with chlorhexidine, a recommendation to consider use of chlorhexidine in Sjögren’s patients with dry mouth was made but was rated as weak.

Nonfluoride Remineralizing Agents

An initial selection of 23 studies was made by the TRG but reduced to two after thorough analysis. These studies found calcium phosphate rinse to be beneficial in preventing caries. A recommendation to consider use of nonfluoride remineralizing agents was made, and, while evidence was limited, expert opinion led the TRG to rate this recommendation as moderate. Xylitol was not included in the literature search and subsequent recommendation because products containing xylitol were just coming onto the market when the guidelines initiative was started. A recent systematic review confirmed that in general the evidence is weak for use of xylitol, although one study showed that fluoridated toothpaste with xylitol was more effective in preventing caries than toothpaste with fluoride alone.12

Conclusion

Therapeutic goals remain largely palliative until etiology is better elucidated by scientists and therapies developed that not only increase salivary flow but ultimately target the disease process in Sjögren’s. The recommendation on the use of fluoride in Sjögren’s patients with dry mouth clearly has the most evidence, and fluoride should be used in all such patients to prevent caries. The use of salivary stimulation, antimicrobials, and nonfluoride remineralizing agents should be considered as adjunctive treatments in these patients.

All areas under Caries Prevention need further study specifically in Sjögren’s. Because of the greater level of evidence for recommending use of fluoride in Sjögren’s patients with dry mouth, patients in a clinical trial should all receive fluoride, and the comparative group may then contain another agent plus fluoride to determine effectiveness of that other agent.

Challenges faced by the SSF Oral Working Group in developing these recommendations included finding studies that met pre-selected criteria and, as a result, needing to consider data from causes of xerostomia other than Sjögren’s. In addition, classification criteria for Sjögren’s, outcome measures, and the manner in which outcomes were assessed, varied greatly across studies making comparisons difficult.

In spite of these challenges, the SSF Clinical Practice Guidelines for Managing Caries Prevention in Sjögren’s patients with dry mouth provide a much-needed beginning for consistency and greater quality of care by practitioners, improved quality of life for patients, and better and informed insurance coverage.

References

multivariative nature of Sjögren’s can be used as a foundation to reevaluate the types of persistent viral infections that may play a role in the development of chronic autoimmune disease.

Viral Signatures in Sjögren’s

Studies were conducted to further define the viral landscape in the affected salivary gland tissue of Sjögren’s patients in comparison to the normal viral profiles present in healthy salivary gland tissue. The approach utilized a custom viral microarray that enabled detection of low-level viral transcripts from actively replicating viruses present in the affected tissue. Through these studies, multiple viral profiles were identified in the Sjögren’s patient population evaluated, including the presence of hepatitis delta virus (HDV). Due to the novel detection of HDV in salivary gland tissue and marked deviation in the behavior of this well-characterized virus, HDV was selected for further evaluation.

Understanding Hepatitis Delta Virus

Hepatitis delta virus, first identified in the mid 1970s, has been extensively studied for nearly 40 years in connection with the development of viral hepatitis. Hepatitis delta virus is a small, non-enveloped virus that replicate in the presence of hepatitis B virus (HBV) (Figure 1). The HDV genome contains a single open reading frame encoding two proteins, the small antigen (S-HDAg) and the large antigen (L-HDAg). The S-HDAg is expressed early in the infection cycle and is responsible for viral replication. The L-HDAg is expressed in later stages of infection and plays a role in ribonucleoprotein (RNP) packaging. HDV is considered to be a defective virus in that it requires a helper virus, classically defined as hepatitis B virus (HBV), for packaging and transmission. The HDV genome, S-HDAg and L-HDAg form the RNP complex and is packaged into the core membrane of HBV.

Once inside the cell, HDV utilizes the host cellular machinery for replication and has been shown to establish chronic infection in the absence of its helper virus for over a year in vitro. Chronic HDV infections are associated with viral hepatitis have been previously shown to trigger the development of autoantibodies, including anti-nuclear antibodies (ANA), liver kidney microsomal antibodies (LKM) and smooth muscle antibodies (SMA). Together, HDV biodistribution is directly regulated by the tropism of the helper virus, possess capacity to establish a low-level chronic persistent state in the absence of a helper virus and has been previously shown to trigger the development of autoimmunity.

HDV in pSS Salivary Gland Tissue

Microarray analysis identified HDV as being significantly increased in Sjögren’s patients’ salivary gland tissue compared to healthy controls. Secondary analysis of this discovery determined that not all Sjögren’s patients evaluated were positive for HDV. In fact, only 50% of the Sjögren’s patients evaluated had significantly elevated levels of HDV. Presence of HDV sequence in the initial cohort was verified by RT-PCR and confirmed in a second independent patient cohort and by an independent lab with similar results. Interestingly, HDV was also detected in individuals reporting sicca symptoms but not meeting criteria for diagnosis at time of salivary gland biopsy. It is unclear at this stage if the HDV-positive sicca patients were among the reported 36% that progress to develop Sjögren’s or if these individuals were able to clear the viral infection. HDV antigens were detected in paraffin embedded salivary gland biopsies and rendered a nuclear localization pattern in line with that reported for a chronic HDV infection. Sjögren’s patients positive for HDV were negative for evidence of a detectable current or past HBV infection. In our hands, Sjögren’s patients positive for HDV were negative for antibodies to HBV core protein and lacked detectible levels of HBV surface antigen (HBsAg). Prior studies have evaluated potential associations between HBV and Sjögren’s and have concluded similar incidence of HBV infection between Sjögren’s patient and general populations. As well, Sjögren’s patients positive for HDV in salivary gland tissue were negative for antibodies to HDV proteins. Therefore, as it currently stands, most commonly available clinical-based tests to detect HBV and/or HDV may not be viable for detection of HDV associated with Sjögren’s.

HDV triggers Sjögren’s-like disease in vivo

An in vivo murine model was developed to further define the role of HDV in the development of Sjögren’s. In developing this model, two primary challenges needed to be addressed: 1) a susceptible environment to establish persistent HDV presence in salivary gland tissue, and 2) the only known helper virus, HBV, was absent. Therefore, to bypass the currently undefined susceptibility factor(s) to delivery and establish a persistent presence of HDV antigens to the salivary gland tissue, an alternative delivery vector, recombinant Adeno-associat- ed viral (rAAV), was utilized to depict an early and a late stage chronic HDV infection models in vivo. Expression of HDV antigens representing an early HDV infection resulted in the development of autoimmune antibodies and significant decrease in stimulated salivary flow. Expression of HDV antigens depicting a late stage HDV infection resulted in a significant increase in lymphocytic focus within salivary gland tissue. Together, the identification of HDV in the affected salivary gland

Table 1

<table>
<thead>
<tr>
<th>HDV Genome</th>
<th>HDV</th>
<th>HBSAg</th>
<th>HBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small HDag</td>
<td>Large HDag</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1

Hepatitis delta virus is a viroid-like virus requiring a helper virus, classically thought to be hepatitis B virus (HBV), for packaging and transmission. The HDV genome is a produces two proteins: S-HDAg and L-HDAg. S-HDAg is expressed early in the infection cycle and L-HDAg is produces in later stages of the infection cycle after modification of the amber stop codon (red triangle). HDV ribonucleoprotein complex is packaged into the HBV outer membrane containing the HBV surface antigens (HBsAg). This outer HBV membrane then determines viral tropism and biodistribution of the HDV particle.
References

Sjögren’s. for a viral-mediated mechanism in the development of in vivo tissue of Sjögren’s patients and the demonstrated ability of HDV in a subset of Sjögren’s patients and demonstrated ability to trigger a Sjögren’s-like phenotype in vivo is a promising discovery. Studies are currently underway to further define the underlying mechanism(s) of HDV-mediated autoimmunity, development of clinically available tests for the detection of low-level HDV infections, identify how patients are being exposed to HDV in the absence of a detectable past or current HDV infection and, ultimately, translate this knowledge into the development of targeted and viable anti-viral therapeutics.

Larger scale studies are now being planned to determine the incidence of HDV in Sjögren’s patient populations and to further clarify the susceptibility factors and associated clinical parameters in HDV-positive Sjögren’s. Please contact the author if you are interested in evaluating your Sjögren’s patient cohort for HDV and collaborating in the expanded studies.

References


The Batts conference is designed to facilitate precision medicine practices in all aspects of clinical care, including patient diagnosis, prognosis, therapeutic responses, and prevention. We will emphasize presentation of basic scientific discoveries that hold promise for translation into clinically useful biomarkers to detect susceptibility, patient stratification, disease activity, and classification. Molecular and cellular targets amenable to therapeutic intervention as well as clinical trial suc- cesses and challenges will be discussed. Exchange of information and ideas at this conference will be of value to basic scientists and trainees from academia, industry partners, and clinicians.

Trainee Travel Awards: The Sjögren’s Syndrome Foundation is sponsoring five travel awards of $1,000 each to help make it possible for trainees to attend. When: September 19-22, 2016 Hosted by: Oklahoma Medical Research Foundation, Oklahoma City, Oklahoma For More Information: https://batts.omrf.org/
### Recommendations

#### Use of fluoride

**Clinical Questions:**

- In primary Sjögren’s patients, does the use of a topical fluoride compared to no topical fluoride reduce the incidence, arrest or reverse coronal or root caries?
- In primary Sjögren’s patients, is one topical fluoride agent more effective than another in reducing the incidence, or to arrest or reverse coronal or root caries?

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Strength of Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topical fluoride should be used in Sjögren’s patients with dry mouth. No information was available to answer the second question.</td>
<td>STRONG</td>
</tr>
</tbody>
</table>

#### Antimicrobials

**Clinical Questions:**

- In primary Sjögren’s patients, does the use of antimicrobial agents compared to placebo reduce the incidence, arrest or reverse coronal or root caries?

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Strength of Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorhexidine administered by varnish/gel/or rinse may be considered in Sjögren’s patients with dry mouth and a high root caries rate.</td>
<td>WEAK</td>
</tr>
</tbody>
</table>

#### Salivary Stimulation

**Clinical Questions:**

- In primary Sjögren’s patients, does salivary stimulation compared to not stimulating saliva reduce the incidence, arrest or reverse coronal or root caries?

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Strength of Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>While no studies to-date link improved salivary function in SS pts to caries prevention, it is generally understood in the oral health community that increasing saliva may contribute to decreased caries incidence. Based on its expert opinion, the Topic Review Group recommends that sjon’s patients with dry mouth increase saliva through gustatory, masticatory stimulation, and pharmaceutical agents — For example, sugar-free lozenges and/or chewing gum, xylitol, mannitol, and the prescription medications pilocarpine and cevimeline.</td>
<td>WEAK</td>
</tr>
</tbody>
</table>

#### Non-fluoride remineralizing agents

**Clinical Questions:**

- In primary Sjögren’s patients, does the use of non-fluoride remineralization agents compared to placebo reduce the incidence, arrest or reverse coronal or root caries?
- In primary Sjögren’s patients, does the use of non-fluoride remineralization agents compared to the use of fluoride reduce the incidence, arrest or reverse coronal or root caries?

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Strength of Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-fluoride remineralizing agents may be considered as an adjunct therapy in Sjögren’s patients with dry mouth and a high root caries rate. Insufficient information was available to answer the second question.</td>
<td>MODERATE</td>
</tr>
</tbody>
</table>

---

1 Due to insufficient/weak evidence, this recommendation is based on expert opinion.
Lubricate the ocular surface.

Nutrients and support the health of cells.

Access to a network of knowledgeable volunteers and awareness, educate others, and encourage research — all articles, our online product guide, and daily survival tips.

Information on Sjögren’s syndrome, practical tips for daily living, and articles, our online product guide, and daily survival tips.

Nine out of ten Sjögren’s patients are women.

What is Sjögren’s syndrome?

The hallmark symptoms of Sjögren’s syndrome are dry eyes and dry mouth, but there are many other possible symptoms and complications, such as fatigue, joint pain, and increased risk of certain cancers. The exact cause of Sjögren’s syndrome is unknown, but it is thought to be an autoimmune disorder, in which the immune system mistakenly attacks the body’s own tissues.

Diagnosing Dry Mouth

A complete medical and prescription drug history is taken. Other sites (eyes, nose, throat, skin, vagina) is documented.

Diagnosis is over six years.

From the onset of symptoms to diagnosis is over six years.

All instances of Sjögren’s syndrome occur alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women. The disease affects women three times more than men. While Sjögren’s occurs alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women.

What is Sjögren’s syndrome?

The hallmark symptoms of Sjögren’s syndrome are dry eyes and dry mouth, but there are many other possible symptoms and complications, such as fatigue, joint pain, and increased risk of certain cancers. The exact cause of Sjögren’s syndrome is unknown, but it is thought to be an autoimmune disorder, in which the immune system mistakenly attacks the body’s own tissues.

Diagnosing Dry Mouth

A complete medical and prescription drug history is taken. Other sites (eyes, nose, throat, skin, vagina) is documented.

Diagnosis is over six years.

From the onset of symptoms to diagnosis is over six years.

All instances of Sjögren’s syndrome occur alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women. The disease affects women three times more than men. While Sjögren’s occurs alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women.

What is Sjögren’s syndrome?

The hallmark symptoms of Sjögren’s syndrome are dry eyes and dry mouth, but there are many other possible symptoms and complications, such as fatigue, joint pain, and increased risk of certain cancers. The exact cause of Sjögren’s syndrome is unknown, but it is thought to be an autoimmune disorder, in which the immune system mistakenly attacks the body’s own tissues.

Diagnosing Dry Mouth

A complete medical and prescription drug history is taken. Other sites (eyes, nose, throat, skin, vagina) is documented.

Diagnosis is over six years.

From the onset of symptoms to diagnosis is over six years.

All instances of Sjögren’s syndrome occur alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women. The disease affects women three times more than men. While Sjögren’s occurs alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women.

What is Sjögren’s syndrome?

The hallmark symptoms of Sjögren’s syndrome are dry eyes and dry mouth, but there are many other possible symptoms and complications, such as fatigue, joint pain, and increased risk of certain cancers. The exact cause of Sjögren’s syndrome is unknown, but it is thought to be an autoimmune disorder, in which the immune system mistakenly attacks the body’s own tissues.

Diagnosing Dry Mouth

A complete medical and prescription drug history is taken. Other sites (eyes, nose, throat, skin, vagina) is documented.

Diagnosis is over six years.

From the onset of symptoms to diagnosis is over six years.

All instances of Sjögren’s syndrome occur alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women. The disease affects women three times more than men. While Sjögren’s occurs alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women.

What is Sjögren’s syndrome?

The hallmark symptoms of Sjögren’s syndrome are dry eyes and dry mouth, but there are many other possible symptoms and complications, such as fatigue, joint pain, and increased risk of certain cancers. The exact cause of Sjögren’s syndrome is unknown, but it is thought to be an autoimmune disorder, in which the immune system mistakenly attacks the body’s own tissues.

Diagnosing Dry Mouth

A complete medical and prescription drug history is taken. Other sites (eyes, nose, throat, skin, vagina) is documented.

Diagnosis is over six years.

From the onset of symptoms to diagnosis is over six years.

All instances of Sjögren’s syndrome occur alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women. The disease affects women three times more than men. While Sjögren’s occurs alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women.

What is Sjögren’s syndrome?

The hallmark symptoms of Sjögren’s syndrome are dry eyes and dry mouth, but there are many other possible symptoms and complications, such as fatigue, joint pain, and increased risk of certain cancers. The exact cause of Sjögren’s syndrome is unknown, but it is thought to be an autoimmune disorder, in which the immune system mistakenly attacks the body’s own tissues.

Diagnosing Dry Mouth

A complete medical and prescription drug history is taken. Other sites (eyes, nose, throat, skin, vagina) is documented.

Diagnosis is over six years.

From the onset of symptoms to diagnosis is over six years.

All instances of Sjögren’s syndrome occur alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women. The disease affects women three times more than men. While Sjögren’s occurs alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women.

What is Sjögren’s syndrome?

The hallmark symptoms of Sjögren’s syndrome are dry eyes and dry mouth, but there are many other possible symptoms and complications, such as fatigue, joint pain, and increased risk of certain cancers. The exact cause of Sjögren’s syndrome is unknown, but it is thought to be an autoimmune disorder, in which the immune system mistakenly attacks the body’s own tissues.

Diagnosing Dry Mouth

A complete medical and prescription drug history is taken. Other sites (eyes, nose, throat, skin, vagina) is documented.

Diagnosis is over six years.

From the onset of symptoms to diagnosis is over six years.

All instances of Sjögren’s syndrome occur alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women. The disease affects women three times more than men. While Sjögren’s occurs alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women.

What is Sjögren’s syndrome?

The hallmark symptoms of Sjögren’s syndrome are dry eyes and dry mouth, but there are many other possible symptoms and complications, such as fatigue, joint pain, and increased risk of certain cancers. The exact cause of Sjögren’s syndrome is unknown, but it is thought to be an autoimmune disorder, in which the immune system mistakenly attacks the body’s own tissues.

Diagnosing Dry Mouth

A complete medical and prescription drug history is taken. Other sites (eyes, nose, throat, skin, vagina) is documented.

Diagnosis is over six years.

From the onset of symptoms to diagnosis is over six years.

All instances of Sjögren’s syndrome occur alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women. The disease affects women three times more than men. While Sjögren’s occurs alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women.

What is Sjögren’s syndrome?

The hallmark symptoms of Sjögren’s syndrome are dry eyes and dry mouth, but there are many other possible symptoms and complications, such as fatigue, joint pain, and increased risk of certain cancers. The exact cause of Sjögren’s syndrome is unknown, but it is thought to be an autoimmune disorder, in which the immune system mistakenly attacks the body’s own tissues.

Diagnosing Dry Mouth

A complete medical and prescription drug history is taken. Other sites (eyes, nose, throat, skin, vagina) is documented.

Diagnosis is over six years.

From the onset of symptoms to diagnosis is over six years.

All instances of Sjögren’s syndrome occur alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women. The disease affects women three times more than men. While Sjögren’s occurs alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women.

What is Sjögren’s syndrome?

The hallmark symptoms of Sjögren’s syndrome are dry eyes and dry mouth, but there are many other possible symptoms and complications, such as fatigue, joint pain, and increased risk of certain cancers. The exact cause of Sjögren’s syndrome is unknown, but it is thought to be an autoimmune disorder, in which the immune system mistakenly attacks the body’s own tissues.

Diagnosing Dry Mouth

A complete medical and prescription drug history is taken. Other sites (eyes, nose, throat, skin, vagina) is documented.

Diagnosis is over six years.

From the onset of symptoms to diagnosis is over six years.

All instances of Sjögren’s syndrome occur alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women. The disease affects women three times more than men. While Sjögren’s occurs alone, it is referred to as primary Sjögren’s syndrome. When it occurs with another connective tissue disease, it is called secondary Sjögren’s syndrome. Nine out of ten Sjögren’s patients are women.

Sjögren’s Syndrome, he launched the Sjögren’s Syndrome Clinic and served as a Chief of Program, National Institute of Dental and Craniofacial Research. He also is a Member and Counselor, SSF Medical and Scientific Advisory Board, and past SSF President.

To brush your tongue with a toothbrush or tongue-scraper. Buy an electric toothbrush.

To use products to stimulate salivation (such as gums or candies) or to promote oral comfort but

To eat a healthful diet low in refined sugars and avoid carbohydrate-rich between-meal snacks.

To check the Sjögren’s Syndrome Foundation Product Directory – free of charge to all members –

For more information on Sjögren’s syndrome contact the Sjögren’s Syndrome Foundation at:

Email ssf@sjogrens.org or write to the Sjögren’s Syndrome Foundation, 6707 Democracy Blvd, Suite 325, Bethesda, MD 20817.

Some clinicians are already aware that using NSAIDs in late pregnancy may have adverse effects, such as potential prolongation of labor, premature closure of the fetal ductus arteriosus, and increased risk for postpartum bleeding. However, the potential for NSAIDs to unfavorably affect ovulation is much less known. The data concluded that the elimination of NSAIDs and COX-2 inhibitors should be considered in those women who are planning to conceive, and caution is advised for women with fertility concerns.

In Sjögren’s that your patients will find useful.

These sheets provide tips for coping and/or basic information about a particular problem or symptom in Sjögren’s that your patients will find useful.

To check the Sjögren’s Syndrome Foundation Product Directory – free of charge to all members –

Artificial Sweeteners & Preservatives

– These additives have no nutritional value and tend to promote artificial sweetness and bulking effects.

– Commercial safflower, corn, and canola oils have had much of their health-promoting antioxidants removed.

– Highly processed carbohydrates such as bread, pastas, cakes, and snack foods are sources of sugar and processed carbohydrates.

– These foods can lead to inflammation and weight gain.

– These foods may also cause insulin resistance or diabetes.

– These foods should be eliminated from your diet.

Once you’ve identified the foods that cause you pain, avoid them for a week or more to see if your symptoms improve.

If they do, continue avoiding these foods for another week to ensure that your symptoms are not worsening due to a lack of nutritional content in your diet.

If your symptoms do not improve or worsen, consider trying another diet.

If you’re having trouble eliminating the foods that cause you pain, try consulting a dietitian or nutritionist who can help you develop a personalized diet plan.

In Sjögren’s that your patients will find useful.

These sheets provide tips for coping and/or basic information about a particular problem or symptom in Sjögren’s that your patients will find useful.

Comparative studies have shown that Sjögren’s syndrome patients have a higher prevalence of dry eye.

Inflammation is a component of Sjögren’s syndrome and essentially all nonsteroidal anti-inflammatory drugs (NSAIDs) and infertility.

Medical News Update

NSAIDs and infertility


A supplemental poster from the 2015 EULAR meeting presented findings on the detrimental effects that can be caused by nonsteroidal anti-inflammatory drugs on female fertility. Most clinicians are already aware that using NSAIDs in late pregnancy may have adverse effects, such as potential prolongation of labor, premature closure of the fetal ductus arteriosus, and increased risk for postpartum bleeding. However, the potential for NSAIDs to unfavorably affect ovulation is much less known. The data concluded that the elimination of NSAIDs and COX-2 inhibitors should be considered in those women who are planning to conceive, and caution is advised for women with fertility concerns.

DHEA and Vaginal Dryness


Results of a study funded by EndoCeutics Inc. of Quebec, Canada suggest that a non-estrogen hormonal treatment may be an option in treating dryness and painful sex after menopause. The new potential hormone, dehydroepiandrosterone (DHEA), confines its effects, meaning that no significant amount of sex hormone is released into the bloodstream. This is a major improvement from estrogen-based vaginal formulations which cause an increase in estrogen levels in the bloodstream regardless of the dosage. While non-hormonal creams and lubricants can provide temporary relief from vaginal dryness and pain with sex, they cannot correct the root of the physical problem in the way which DHEA can.

New Targets for Reducing Nerve Pain Identified


A research team at Hiroshima University’s Institute of Biomedical and Health Sciences has identified and blocked two specific molecules in mice that are involved in maintaining pain after a nerve injury. One identified molecule, high-mobility group box-1 (HMGB1), had its activity successfully blocked after receiving multiple injections of the drug referred to as anti-HMGB1. The other molecule, matrix metalloproteinase-9 (MMP-9), could also alleviate pain from nerve injury when blocked by a single dose of a drug. The blocking of each of these molecules resulted in the mice showing less pain from injuries to their sciatic nerves. Localized injections of the drug avoid potential side effects on the digestive system that can occur when taking a drug orally. The promising research marks advancement in the search for treating neuropathic pain.

Dry Eye Review

From the 2015 International Sjögren’s Syndrome Symposium, Bergen, Norway

by Mario Rojas, MD and John D. Sheppard, MD, Eastern Virginia Medical School, Norfolk, Virginia

The 13th International Symposium on Sjögren’s (ISSS) was an exciting and informative conference presenting information on all aspects of Sjögren’s disease. The conference started with the conceptual vision of underlining the tissue-specific proteomics with a goal of identifying addressable drug proteome and cancer proteome targets from a truly formidable volume of data. This article summarizes the information presented related to dry eye in Sjögren’s.

Day One began with an invited oral presentation by Dr. Stephen Plulfigfelder entitled “Keratoconjunctivi- cies Sicca in Sjögren’s Syndrome,” in which he discussed advances in diagnosis, including methods to image tear film and measure tear composition. Recently identified novel key inflammatory mediators have and may lead to more targeted therapies and will play a major future role in management. Therapeutic advances include broader use of anti-inflammatory therapy, serum/plasma drop and therapeutic contact lenses to create a supportive corneal environment. Overall, an informative summary was delivered, focusing on the newest evaluation modalities along with current and future treatment options and set the stage for the following abstracts.

Classification and Evaluation

The abstract entitled “Sjögren’s Syndrome Foundation (SSF) Clinical Practice Guidelines for Ocular Manifestations of Sjögren’s” addressed evaluation and management of Sjögren’s patients and emphasized inclusion of both symptoms of discomfort and visual disturbance. The guidelines emphasized the importance of determining the relative contribution of aqueous production/deficiency and tear evaporation to the total tear volume. Continued use of objective parameters, such as tear film stability, tear osmolality, degree of lid margin disease, and ocular surface damage should be used to stage severity of dry eye disease in order to select appropriate individualized treatment options.

Two commonly used evaluation methods were compared in “Performance of the Ocular Staining Score (OSS) vs. the van Bijsterveld Score, in the assessment of Sjögren’s syndrome-related keratoconjunctivitis sicca.” Compared head to head, both classification systems were found to work well, with a slightly greater benefit for use of the OSS classification: The OSS provided good predictors of disease severity. Investigator results supported a cutoff of 25 for the OSS which would increase the specificity significantly without sacrificing sensi-
Sjögren’s Quarterly

Identification of Sjögren’s is surely important, but certain obstacles can complicate treatment. Ocular allergy (OA), surface inflammation, lipid deficiency and hyperosmolarity are concomitant morbidities that can potentially affect all of which can now be quantified within minutes in the office setting. The abstract, “Point of Service Antigen Hypersensitivities, MMP-9, Lipid Layer Thickness and Osmolarity: Disease Characterization for Sjögren’s Syndrome,” addressed this challenge. One hundred patients underwent diagnostic testing, MMP-9 assay, lipid layer interferometry and tear osmolarity testing, along with slit lamp examination.

Allergy testing revealed anergy in 40 patients, mild hyperreactivity in 35, and severe hypersensitivity in 25. MMP-9 test was positive bilaterally in 39 patients, positive unilaterally in 18. Lipid layer deficiency (< 75 nm) was noted in 72 patients, and tear osmolarity was abnormal (>307 mOsm) in 92. Treatment planning based upon clinical impression alone was changed in 62 patients when diagnostic testing was also included in treatment selection. The data illustrates that point of service diagnostic testing allows for more specific therapeutic recommendations for patients with moderately severe ocular surface disease. The study demonstrates how our current diagnostic techniques continue to improve and give us more information in treating the spectrum of patients which and enter the office.

Traditional treatment of dry eye in Sjögren’s has always involved moistening the ocular surface with artificial tears and now involves punctual occlusion and use of topical cyclosporine drops (Restasis®). The abstract, “Effect of punctual occlusion and topical cyclosporine on the diagnosis of Sjögren’s syndrome,” addressed the question of whether use of punctal plugs and Restasis® affects ocular surface staining (OSS) and improves the diagnosis of Sjögren’s. The authors found that use of punctal plugs and Restasis® affects OSS and may be an option for patients with moderate/severe keratoconjunctivitis sicca.

The common use of punctal plugs leads to managing the issue of plugs that tend to fall out and raise the question: What could be made available for a permanent punctual occlusion, and what are the risks and benefits of this option? The abstract “Permanent Bilateral Inferior Punctal Occlusion Surgery for Severe Dry Eye Disease: Long-Term Safety, Efficacy, Osmolarity and Recanalization Results in 844 Patients” addressed this issue. Patients in whom punctal occlusion was a possible option, those who would benefit from a more complete occlusion were selected for this study. Practical and statistical measures were used to determine the safety profile of this approach.

Topical treatment is the mainstay for patients with DED. Bioengineering has granted thechnology a specific target in mind. Clinical trial progress for Lifitegrast has a high binding affinity to the LFA (lymphocyte function antigen) on T lymphocytes, acting as an ICAM decoy, blocking signaling at the “immuno- logical gateway.” This molecule is stable in unpreserved single dose unit (SDU) aqueous solution at physiologic pH (7.0) with excellent room temperature shelf life.11 Confirmaory Phase III multicenter clinical trials support the May NDA submission, making Lifitegrast (10 in the Shin, Tokyo, Japan) for the most part have been promising.12 Liftegrast has a high binding affinity to the LFA (lymphocyte function antigen) on T lymphocytes, acting as an ICAM decoy, blocking signaling at the “immuno- logical gateway.” This molecule is stable in unpreserved single dose unit (SDU) aqueous solution at physiologic pH (7.0) with excellent room temperature shelf life.11 Confirmaory Phase III multicenter clinical trials support the May NDA submission, making Lifitegrast (10 in the Shin, Tokyo, Japan) for the most part have been promising.12 Liftegrast has a high binding affinity to the LFA (lymphocyte function antigen) on T lymphocytes, acting as an ICAM decoy, blocking signaling at the “immuno- logical gateway.” This molecule is stable in unpreserved single dose unit (SDU) aqueous solution at physiologic pH (7.0) with excellent room temperature shelf life.11 Confirmaory Phase III multicenter clinical trials support the May NDA submission, making Lifitegrast (10 in the Shin, Tokyo, Japan) for the most part have been promising.12 Liftegrast has a high binding affinity to the LFA (lymphocyte function antigen) on T lymphocytes, acting as an ICAM decoy, blocking signaling at the “immuno- logical gateway.” This molecule is stable in unpreserved single dose unit (SDU) aqueous solution at physiologic pH (7.0) with excellent room temperature shelf life.11 Confirmaory Phase III multicenter clinical trials support the May NDA submission, making Lifitegrast (10 in the Shin, Tokyo, Japan) for the most part have been promising.12 Life...
Oral Health Researchers Take Action!
NIDCR Requests for Applications have been issued on “Tailoring Dental Treatment for Individuals with Systemic Diseases that Compromise Oral Health”

The SSF is pleased to recognize the National Institute of Dental and Craniofacial Research (NIDCR) at the National Institutes of Health (NIH) for creating two funding opportunities for grants to investigate the best treatment for managing oral aspects of Sjögren’s and other diseases that compromise the oral cavity and encourages investigators to apply! Each set of SSF Clinical Practice Guidelines (see page 1 for the guidelines on caries prevention) summarizes key areas needed for future research and encourages investigators to consider studies in these areas to profoundly change the way Sjögren’s is managed and treated. The SSF has pointed out these areas to our federal government medical and scientific research institutes funding research and emphasized that evidence is severely lacking in Sjögren’s.

R21 and R01 NIH companion grants are being offered to answer critical questions about which treatments are most effective, how treatments should be initiated, and which patients will benefit most from a specific treatment. While grants are available for any disease that includes a major oral component, Sjögren’s is cited as a specific example of a disease for which evidence is clearly needed in order to develop better guidelines for clinical treatment.

Grant numbers are PAR-16-153 and PAR-16-154, and full information can be found at:

The earliest submission date for the R01 is May 5, 2016 and for the R21 is May 16, 2016. Letters of Intent are due 30 days before an application is submitted. The NIDCR announcement introduces the grant opportunities by stating the following:

**Purpose**
The purpose of this Funding Opportunity Announcement (FOA) is to stimulate research to address gaps in our knowledge of how best to treat oral diseases of patients with systemic diseases or conditions known to compromise oral health, to identify factors predictive of treatment outcomes within patient groups, and to generate evidence for more precise clinical treatment guidelines tailored to patient needs. To capture longer term oral health outcomes and ensure that analyses can be completed within the project period, it is expected that applicants propose studies using established cohorts of individuals with the disease of interest.

**Background**
Systemic diseases and syndromes such as Sjögren’s syndrome, cleft lip/palate, ectodermal dysplasias, osteogenesis imperfecta, head and neck cancer, and diabetes can compromise oral health. Oral diseases are more prevalent and severe in affected individuals, and knowledge gaps exist in dental treatment guidelines for several systemic diseases long known to impact oral health. Most treatment guidelines for managing caries, periodontal diseases and malocclusions are derived from clinical trials or studies in relatively healthy subjects, and the long term successes of different treatment and restorative approaches for oral diseases in medically complex patients are not known. Practitioners treating certain medically complex patient populations have called for more research to guide their treatment decisions, as many current recommendations are primarily based on expert opinion.

Patients with certain systemic diseases and syndromes may spend significant time and resources maintaining their oral health. For example, studies of Sjögren’s syndrome patients find out-of-pocket spending for dental care is two to three-fold higher in Sjögren’s patients as compared with controls, but there are very few clinical studies examining the success of various dental treatments in patients with Sjögren’s syndrome.

SSF Clinical Practice Guidelines for Caries Prevention in Sjögren’s delineate the need for evidence-based studies that will further elucidate:
- the value of topical fluoride (noting that use of fluoride is currently the gold standard for preventing caries and, as such, should be provided to all xerostomia patients)
- whether one topical fluoride is more effective than another
- the benefits of prescription-strength fluoride toothpaste

In addition, adjunctive therapies need to be investigated in Sjögren’s, including:
- saliva stimulation products and/or pharmaceutical agents
- chlorhexidine and other antimicrobials
- non-fluoride remineralizing agents

Finally, standardization of clinical outcome measures is needed so that clinical trial results can be properly interpreted. Future areas for SSF Clinical Practice Guidelines will address caries management and restorative and mucosal management and symptom relief in Sjögren’s patients with dry mouth. As found with studies on caries prevention in Sjögren’s, a dearth of studies for the next two phases of oral guidelines is expected. Clinical studies looking at treatment in these areas also need to be done to improve patient care.

**Tips for successful management:**

- Define your disease: The tear film is a complex part of the eye with three distinct layers. A perfect water/oil balance must occur for good vision and comfort. Two main categories of dry eye disease are aqueous (water)- and evaporative (oil)-deficiency with treatments varying for each. See the SSF Clinical Practice Guidelines for Management of Dry Eye Associated with Sjögren’s on the SSF website at http://info.sjogrens.org/clinical-practice-guidelines-forocular-management-in-sjogrens.

- Don’t self-medicate: While many options exist (OTC drops, ointments), seek a professional opinion from an eye care provider specializing in dry eye disease who can determine the best treatment.

- Be careful with generic OTC products: It can be tempting to save money on generics, but while active ingredients can be the same, generic eye products can contain harsh preservatives which can make the disease and symptoms worse.

- Aqueous Deficient Dry Eye: Treatment focuses on improving or stabilizing lacrimal gland function with artificial tear supplements, punctal occlusion and long-term treatment with cyclosporine 0.05% and often corticosteroid eye drops.

- Evaporative Dry Eye: Treatment focuses on improving quality and quantity of meibum (oil) from the Meibomian glands within the eyelids with artificial tear supplements adding natural oils, nutraceuticals, at-home heat therapy and in-office expression of glands.

- Blink: The use of digital devices exacerbates dry eye symptoms due to decreased blink rates. Use the 20-20-20 rule: For every 20 minutes of computer use, take a 20 second break focusing on something far away and blink several times.

- Hydration: Tears are made mostly of water. Be sure to stay hydrated.

**Environment:**

- Humidify your environment in cold weather. Use a bedside humidifier at night, and add a humidifier to your furnace.

- Avoid direct airflow: When traveling in a vehicle, keep air vents away from the eyes; avoid use of overhead ceiling fans, and wear protective eyewear to shield the eyes from wind.

- Eyewear: Wear wrap-around glasses or goggles when outside to provide protection and create more humidity around the eyes. Wear sunglasses and consider glare-reducing filters.

**For more information on Sjögren’s, contact the Sjögren’s Syndrome Foundation at:**
6707 Democracy Blvd, Suite 325, Bethesda, MD 20817 • 800-475-6473 • www.sjogrens.org • ssf@sjogrens.org.

Clinicians: Please make multiple copies of this Patient Education Sheet and distribute to your patients.
The American Association for Dental Research (AADR) has taken the helm in managing the Friends of the National Institute of Dental and Craniofacial Research (FNIDCR). The transition was launched at the start of 2016, with FNIDCR becoming a Standing Committee under the auspices of the AADR. SSF Vice President of Medical & Scientific Affairs Kathy Hammitt has joined the AADR Board of Directors as an ad hoc member and will continue to serve on the Transition Committee as FNIDCR is incorporated into the AADR governing structure and programs.

AADR President Paul Krebsbach stated that “AADR is excited about pursuing the activities formerly conducted by FNIDCR and supported by such key stakeholders as the ADA, ADEA, dental industry, dental schools and patient advocates. This new arrangement will enable the dental, oral and craniofacial community to speak with one voice on Capitol Hill and amplify our efforts to educate the public about the important role of the National Institute of Dental and Craniofacial Research.”

The SSF helped launch the FNIDCR Patient Advocacy Council, which is made up of nonprofit groups representing conditions and diseases affected by oral health issues such as Sjögren’s. This council will focus in 2016 on ensuring increased support for research, opportunities for professional education, and interaction with and support for the NIDCR. SSF Board member Vidya Sankar and Hammitt enjoyed serving on the FNIDCR Board of Directors before ending their tenure with the transition. For more information on AADR, visit www.aadr.org.