

S.A.F.E. Protocol

The **S.A.F.E. Protocol** is a pre-treatment protocol to help dental professionals prevent and minimize Jaw Joint and Muscle Sprain/Strain (JAMSS) injuries that can result from dental treatment.

S– Set-up for Safety

Educate your team about the risk of Jaw Joint and Muscle Sprain/Strain (JAMSS) injuries. Make sure everyone in your office, from the person answering the phone, who might take the post-op call, to your clinical staff of hygienists and assistants, need to know what JAMSS is and why speed-to-treat is important to prevent JAMSS injuries from progressing to a chronic pain condition. Demonstrate how you will screen for risk on a pre- and post-op basis, and how acute JAMSS should be treated.

- a. Create patient education information on JAMSS to include in your digital signage, patient education materials in your waiting room, informed consent, and post-op instructions. Patients understand sprain/strain conditions for other joints and will relate to this concept as distinguished from other more chronic or complex orofacial conditions.
- b. Educate the patient prior to the procedure so that any post-op symptoms are not ignored and are identified and responded to promptly. Patient education about JAMSS should become a part of all pre-op and post-op patient instructions.

A – Assess Risk Associated with Patient and Procedure

Complete the *JAMSS Risk Assessment Questionnaire* prior to the scheduled dental procedure. Signs and symptoms indicated in the JAMSS Risk Assessment Questionnaire can help identify a patient predisposed to jaw strain, delayed recovery, or chronic pain. Document any “yes” answers and specific information that will help with treatment planning or follow-up care.

- a. Perform an initial patient examination to check for acute JAMSS symptoms. The examination to diagnose and assess JAMSS risk should take no longer than 2-3 minutes and includes the following:
 - i. Range of motion (document pre-op and post-op)
 - ii. Joint sounds
 - iii. Signs of bruxism
 - iv. Joint and muscle tenderness
- b. Consult the *S.A.F.E. Protocol – Dental Procedure Risk Assessment Table* which delineates the severity of risk for trauma or acute JAMSS injury from common dental procedures. Determine if the procedure to be performed is Low, Medium or High risk. This understanding can be used in treatment planning, informed consent, staff training, and patient education.
- c. If you identify a specific risk for JAMSS such as limited range of motion or prior history during your assessment, it is recommended that you fit the patient with a QuickSplint interim oral appliance for overnight wear and schedule a follow-up appointment in 2-4 weeks for an Extensive Evaluation. Use either the JAMSS Speed-to-Treat Protocol, or the Parafunction Risk Rating Protocol to help alleviate symptoms and gain diagnostic insight. The follow-up appointment should be documented and billed under D0160, as an Extensive Evaluation.

S.A.F.E. Protocol Dental Procedure Risk Assessment Table* for Jaw Joint and Muscle Strain/Sprain (JAMSS)

Use this table prior to dental treatment to assess patient risk factors for Jaw Joint and Muscle Strain/Sprain, (JAMSS.) This table takes into consideration: site of procedure; anesthesia type; pain profile and duration of procedure; along with patient range of motion and prior history. Manage higher risk patients and procedures using prescribed JAMSS injury prevention measures.

LOW RISK	
<i>Prior History</i>	No prior history of acute jaw pain or injury
<i>Range of Motion</i>	Normal to 40 mm before procedure
<i>Site of Procedure</i>	Upper anterior(s)
<i>Anesthesia type</i>	Topical anesthesia and infiltration
<i>Pain Profile</i>	Type of care is not expected to cause pain
<i>Length of Procedure</i>	Short procedure with breaks
MEDIUM RISK	
<i>Prior History</i>	History of acute jaw pain or injury
<i>Range of Motion</i>	Less than (<) 40mm or hypermobility over (>) 50 mm before procedure
<i>Site of Procedure</i>	Mandible: anterior to 1st molar/premolar Maxillary: bilateral posterior
<i>Pain Profile</i>	Procedure may create mild to moderate pain without bleeding
<i>Anesthesia type</i>	Mandible: analgesia infiltration Maxillary: nerve block
<i>Length of Procedure</i>	Long procedure with breaks
HIGH RISK	
<i>Prior History</i>	History of acute jaw pain or injury. Signs of significant parafunctional behavior
<i>Range of Motion</i>	Less than (<) 25mm or hypermobility over (>) 60mm before procedure
<i>Site of Procedure</i>	Posterior lower molars, bilateral lower premolar/molars, bilateral upper molars
<i>Pain Profile</i>	Moderate to severe pain or bleeding with post-operative measures required
<i>Anesthesia type</i>	Multiple mandibular anesthetic injections
<i>Length of Procedure</i>	Long procedure with breaks

*The S.A.F.E Dental Procedure Table is designed for use with the S.A.F.E. Protocol for prevention of jaw joint and muscle sprain/strain injuries during dental treatment.

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JAMSS Risk Assessment Questionnaire*

Use this questionnaire to evaluate patients for risk factors associated with Jaw Joint and Muscle Sprain/Strain (JAMSS)

1. Do you often have jaw or facial pain?	No	Yes
2. Do you often have headaches?	No	Yes
3. Do you have difficulty opening your mouth wide?	No	Yes
4. Does it hurt to open your mouth wide?	No	Yes
5. Does it hurt to chew hard or chewy foods?	No	Yes
6. Does it hurt after dental work is done?	No	Yes
7. Are your jaw and temple muscles tender when you press on them?	No	Yes
8. Do you often have aches and pain in your body?	No	Yes
9. Do you often notice yourself clenching or holding your teeth together?	No	Yes
10. Do you often feel depressed, downhearted, or blue due to pain?	No	Yes
11. Do you often feel anxiety or nervousness?	No	Yes
12. Do you often feel like you have had a lot of stress?	No	Yes

PATIENT NAME: _____

DATE: _____

PRIOR HISTORY: _____ No Yes

NOTES: _____

- A** Any "yes" answers suggest there is some risk of jaw joint and muscle sprain/strain (JAMSS).
- B** If the patient exhibits symptoms of JAMSS, implement the JAMSS Speed2Treat Protocol to reduce the chance of chronic jaw pain and dysfunction. The protocol manages and evaluates acute jaw joint and muscle sprain/strain over a 2 to 4-week period; it stratifies results and provides the practitioner with a clearly defined path for next steps in care.
- C** Even if you refer the patient to a specialist, you should initiate treatment of the acute pain symptoms with a QuickSplint® interim oral appliance and self-care measures.

*The JAMSS Risk Assessment Questionnaire is designed for use with the JAMSS Speed2Treat Protocol for treatment of jaw joint and muscle sprain/strain injuries, and the S.A.F.E. Protocol for prevention of jaw joint and muscle sprain/strain injuries during dental treatment.

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F – Follow Protective Measures

The extent to which protective measures are followed should be customized according to the reasons for which the patient is in a specific risk category. For example, the use of certain dental technologies, materials and techniques may result in longer treatment times and the need for staged treatment. The more comprehensive the restoration plan, the more likely the patient could experience some level of JAMSS due to frequency of care. Special consideration must be made for appointment lengths and the frequency of breaks for jaw relaxation.

For high risk patients and/or special needs patients, the following measures can be implemented on the day of a dental procedure to decrease the risk of JAMSS injury:

- a. Schedule intentional time for breaks during the procedure
- b. Avoid opening the patient's mouth too wide or for too long a period
- c. Minimize fulcrum pressure during operative work
- d. Never force the jaw open
- e. Limit the use of bite blocks that keep the mouth open for longer periods of time
- f. Make a QuickSplint for use by the patient during breaks
- g. Avoid multiple injections to achieve anesthesia. If multiple injections are used, the use of the JAMSS Protocol (providing a QuickSplint post-operatively) could be used to prevent trismus and acute strain.

E – Evaluate the Patient Post-Procedure

Perform a patient examination to check for acute JAMSS symptoms. The examination should include documenting range of motion (compare to pre-op measurement) and joint and muscle tenderness.

There are three situations where you should consider providing the patient with a QuickSplint for post-operative care and follow the JAMSS Speed-to-Treat Protocol:

1. If the patient presents with pain and/or tenderness in the muscles or joints and/or limited range of motion (a decrease from the pre-treatment ROM measurement).
2. If the patient has a prior history of complications, or showed signs of jaw fatigue during surgery.
3. For a patient with parafunction, some clinicians provide a QuickSplint to keep the teeth out of occlusion and protect the restoration or procedure.

After the appointment, it is helpful to call and ask the patient if they have any pain in the jaw, temples, or joint, documenting symptoms that might indicate the presence of JAMSS. Consider scheduling a follow-up appointment and conduct a post-treatment assessment for Medium and High-Risk patients using the same patient evaluation steps described previously.

Reference

1. Brady LA, Friction J, Eli B, Postoperative Jaw and Muscle Pain, a guide to risk assessment, prevention, and treatment. *Inside Dentistry*. April 2017 69-76
2. Friction, James et al. Preventing chronic pain after acute jaw sprain or strain. *The Journal of the American Dental Association*, Volume 147 , Issue 12 , 979 – 986
3. Friction J, Kroening R, Haley D, Siegert R. Myofacial pain and dysfunction of the head and neck: a review of clinical characteristics of 164 patients. *Oral Surg Oral Med Oral Pathol*. 1985;60(6):615-623
4. Gatchel,RJ, Stowell AW, Wildenstein L, Riggs R, Ellis III E, Efficacy of an early intervention for patients with acute temporomandibular disorder-related pain, a one-year outcome study. *JADA*, vol.137 March 2006 pp 339-347
5. QuickSplint is not a mandibular advancing device. The disclusion of posterior teeth provided by the Quicksplint allows for lateral pterygoid muscles to be in a seated condylar position.

TO LEARN MORE ABOUT
JAW JOINT AND MUSCLE SPRAIN/STRAIN (JAMSS)

READ THE MOST RELEVANT CURRENT INFORMATION

Journal of the American Dental Association: Dec 2016
Preventing chronic pain after acute jaw sprain or strain
[http://jada.ada.org/article/S0002-8177\(16\)30569-4/pdf](http://jada.ada.org/article/S0002-8177(16)30569-4/pdf)

TAKE A CE COURSE ONLINE

Earn 2 CE units of peer-reviewed continuing education
via the online course, *Postoperative Jaw and Muscle Pain,
A guide to risk assessment, prevention, and treatment*
by Lee Ann Brady, DMD; James Friction, DDS, MS: and Brad Eli,
DMD, MS
Cost is \$16.
https://cdeworld.com/courses/5065-Postoperative_Jaw_and_Muscle_Pain

ACCESS MORE INFORMATION

Visit QuickSplint.com for more information on JAMSS, including
helpful educational materials and other treatment protocols
that are available free of charge to dental practitioners.
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