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**A New Burn Mouth Splinting Option  
for Oral Scarring after Burn Injury**

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# A New Burn Mouth Splinting Option for Oral Scarring after Burn Injury.<sup>1</sup>

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Microstomia is a deformity of the mouth that is an unfortunate consequence of burn scar contracture and skin tightening of and around the oral orifice. The use of devices and splinting to prevent and /or minimize the effects of microstomia is a widely accepted intervention. The applications of “low load prolonged stress” (LLPS) and “total end range time” (TERT) are the guiding principals by which the utilization of microstomia prevention appliances are implemented. Depending on the specific needs of the patient, different types of splints have to be evaluated throughout the recovery process to meet the challenging demands of this difficult orifice.

As such, a new mouth splinting option has initially proven beneficial. The splint is borrowed from a dental design that is utilized during prolonged dental cleanings and surgeries called the spandex lip expander. A low temperature, silicone lined thermoplastic material (Silon-LTS<sup>®</sup>) is bonded to the device to enhance fit, contour and support for a graduated stretch. The changes and design type have been dubbed the “Jet Lip Splint”(JLS) in honor of the first patient whom inspired this new and more aggressive design. Of the 4 patients that utilized the JLS, all achieved AROM of both vertical and horizontal measures that are within functional limits and increased their Vertical Mouth Opening at least double (100%) from their initial measure (See Table 1).

Overall assessment found that this device was easy to fabricate; provided both a vertical and horizontal stretch and allowed for dynamic active stretch. Additionally, the Silon-LTS<sup>®</sup> material provided increased patient comfort and therefore increased patient tolerance and compliance with the device. This combination provides for an effective alternative for the burn therapist to employ when treating this difficult burn contracture or to use in conjunction with other splinting choices.

Table 1 Splint Treatment Application and Wear Schedule.

Patient	Initial Vertical Measure	MPA		CMS Custom Molded Splint		JLSp Pediatric		JLSa Adult		Final Vertical Measure
		4+ hours 2+ weeks	8+ hours 2+ weeks	4+ hours 2+ weeks	8+ hours 2+ weeks	4+ hours 2+ weeks	8+ hours 2+ weeks	4+ hours 2+ weeks	8+ hours 2+ weeks	
1	4.5 mm	7.0mm		8mm	10mm	11.5mm	13.5mm	15.5mm	17.5mm	19.5mm*
2	9.5mm	11mm	13.5mm			15mm	17mm			18.5mm*
3	7.0mm	8.0mm	9.0mm	10.5mm		12.5mm	15.5mm	16.5mm	18.5mm	20.5mm*
4	6.5mm	7.5mm	9.0mm			13.5mm	16.5mm	17mm		19.5mm*

\* increased 100% from initial measure

<sup>1</sup> [abstract] In: Proceedings of the 26th Annual Mid-Atlantic Region Burn Conference 2003; Nov 2-3; Philadelphia, PA, p.22.