

Progressive Extra-Oral Static/Dynamic Splint

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Progressive Extra-Oral Static/Dynamic Splint

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Learning Objectives:

- Understand the fabrication of the splint
- To understand how to utilize the splint for burn patient population in the acute and rehabilitative phase of care.
- To understand how to modify the oral splint to accommodate patient's individual needs in a progressive manner.

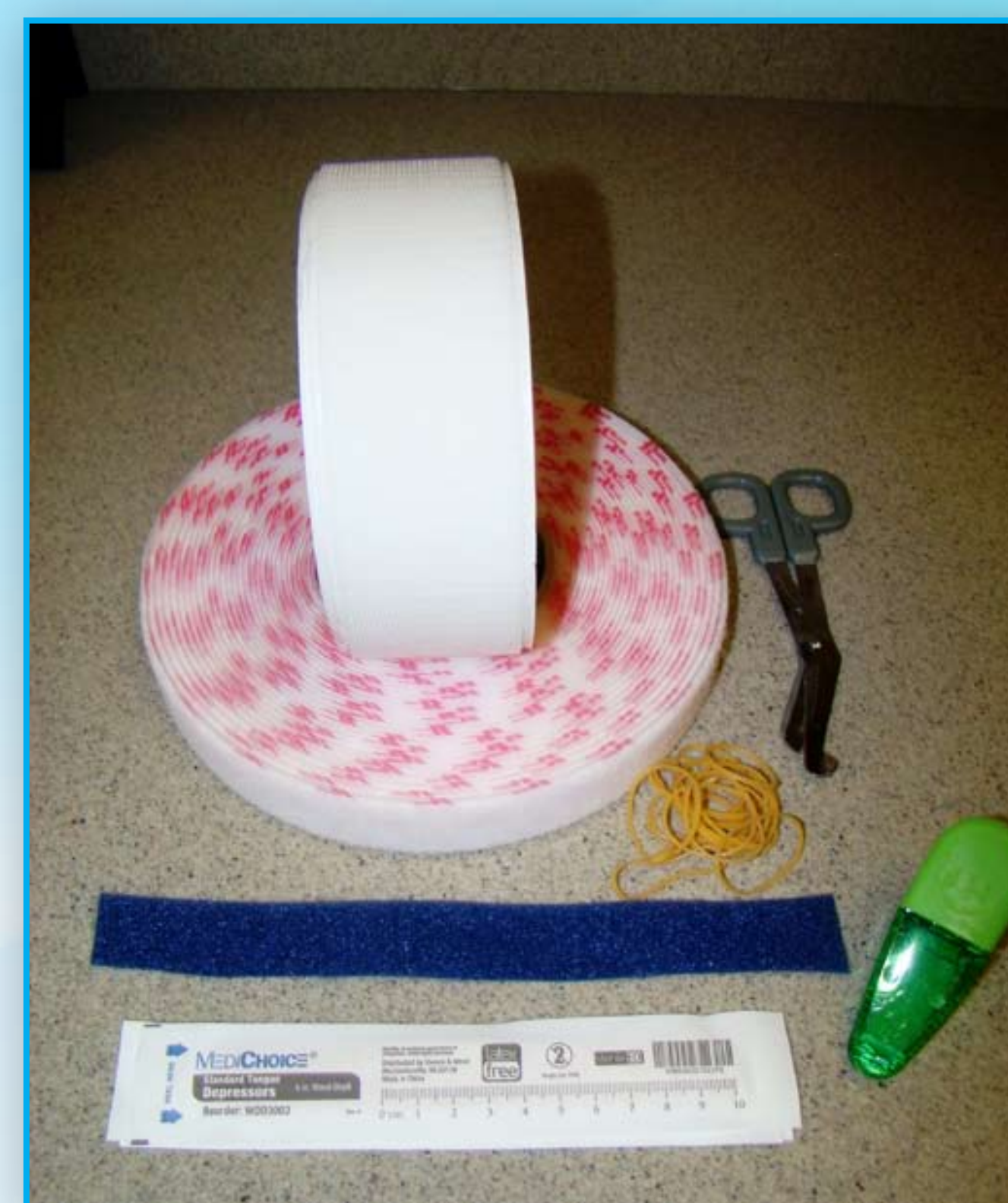
Introduction/Background:

Oral commissure contractures are especially challenging to address in an acute and rehabilitative phase of care. An extra-oral splinting device was created to address static and dynamic aspects of prevention and improvement of commissure contractures. The idea was to utilize common items that would be readily available for use with the option to add progressive components as the patient's progress would demand.

Methods/Design:

Materials used/needed:

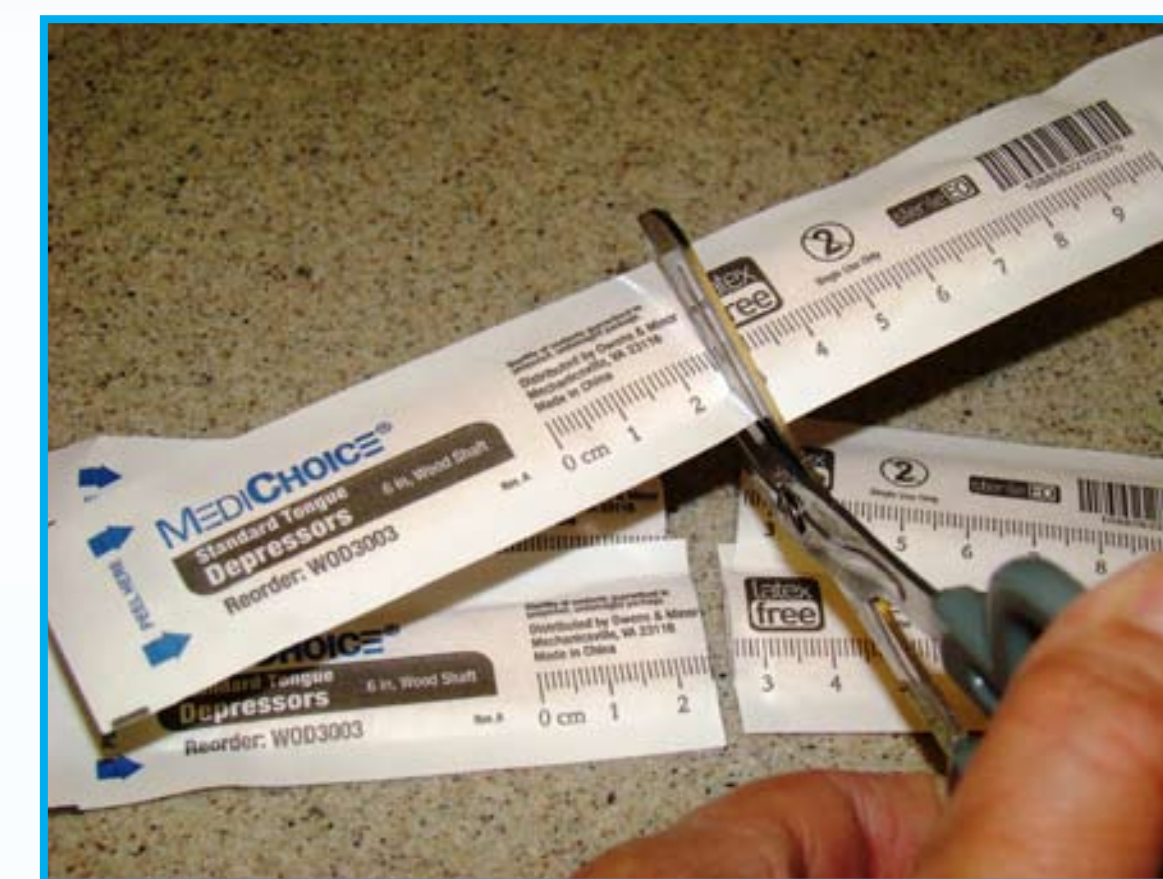
- sterile tongue depressors
- hook/loop adhesive Velcro
- scissors
- heat gun
- all-purpose spring-loaded clips
- foam strapping
- rubber band x2
- 2 pieces of non-adhesive loop velcro



Fabrication Instructions

Step 1

Cut tongue depressors in half (at least 5).



Step 2

Cut adhesive hook/loop velcro to fit tongue depressor width to 3/4 length as well as the width and length of the spring loaded clip.



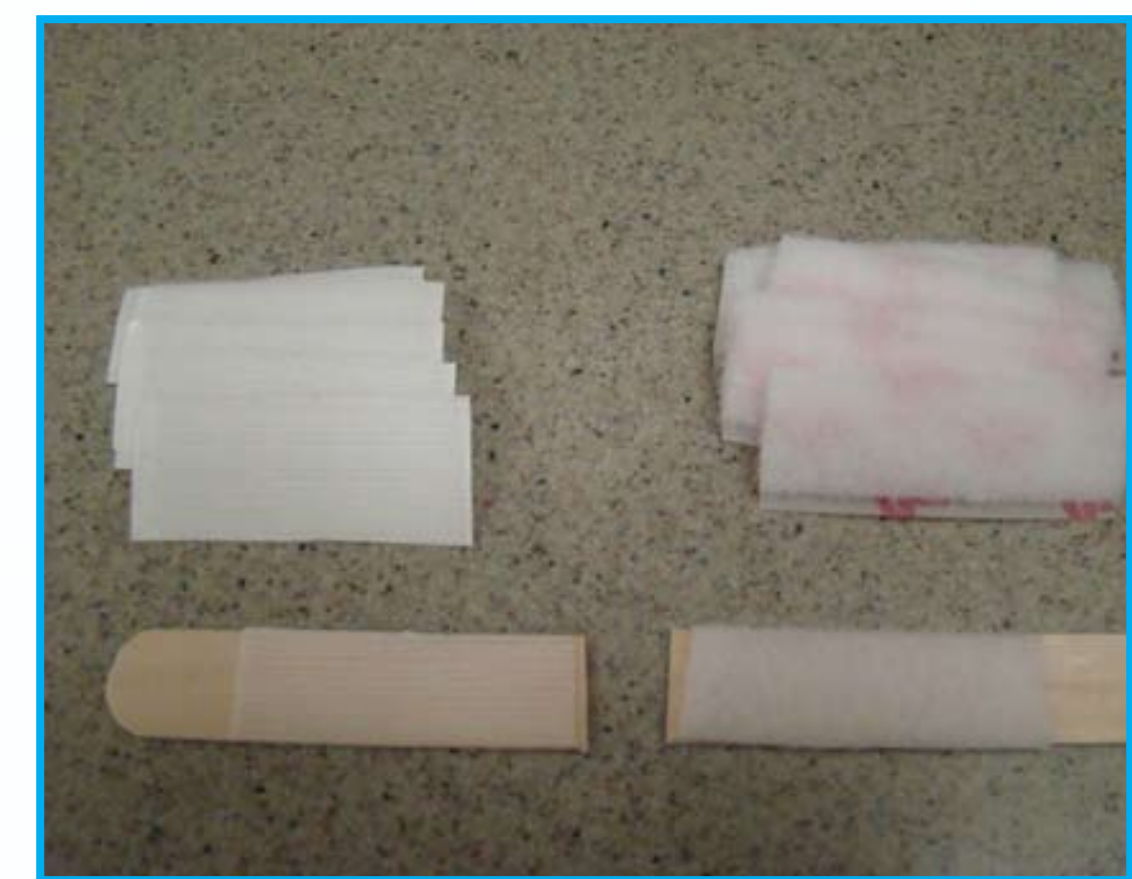
Step 3

Secure heated adhesive velcro to spring loaded clip on top and bottom handle.



Step 4

Secure velcro on both sides of tongue depressors that were cut in half; one side with loop and the other with hook. Heating the adhesive prior to application will increase the security of the velcro.



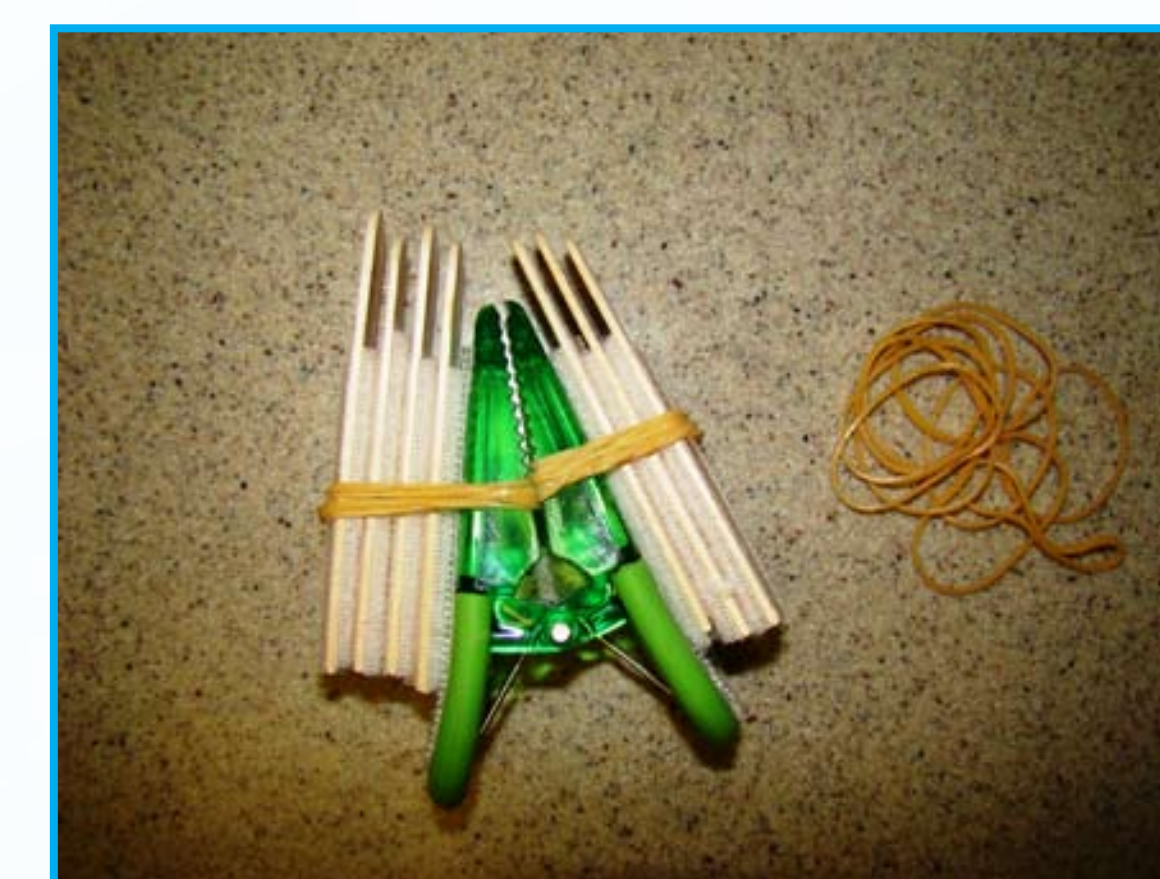
Step 5

Choose the correct number of tongue depressor pieces to stack on either side of spring loaded clip to achieve desired height and width. This will depend on the ability/needs of each individual patient to achieve appropriate oral stretch.



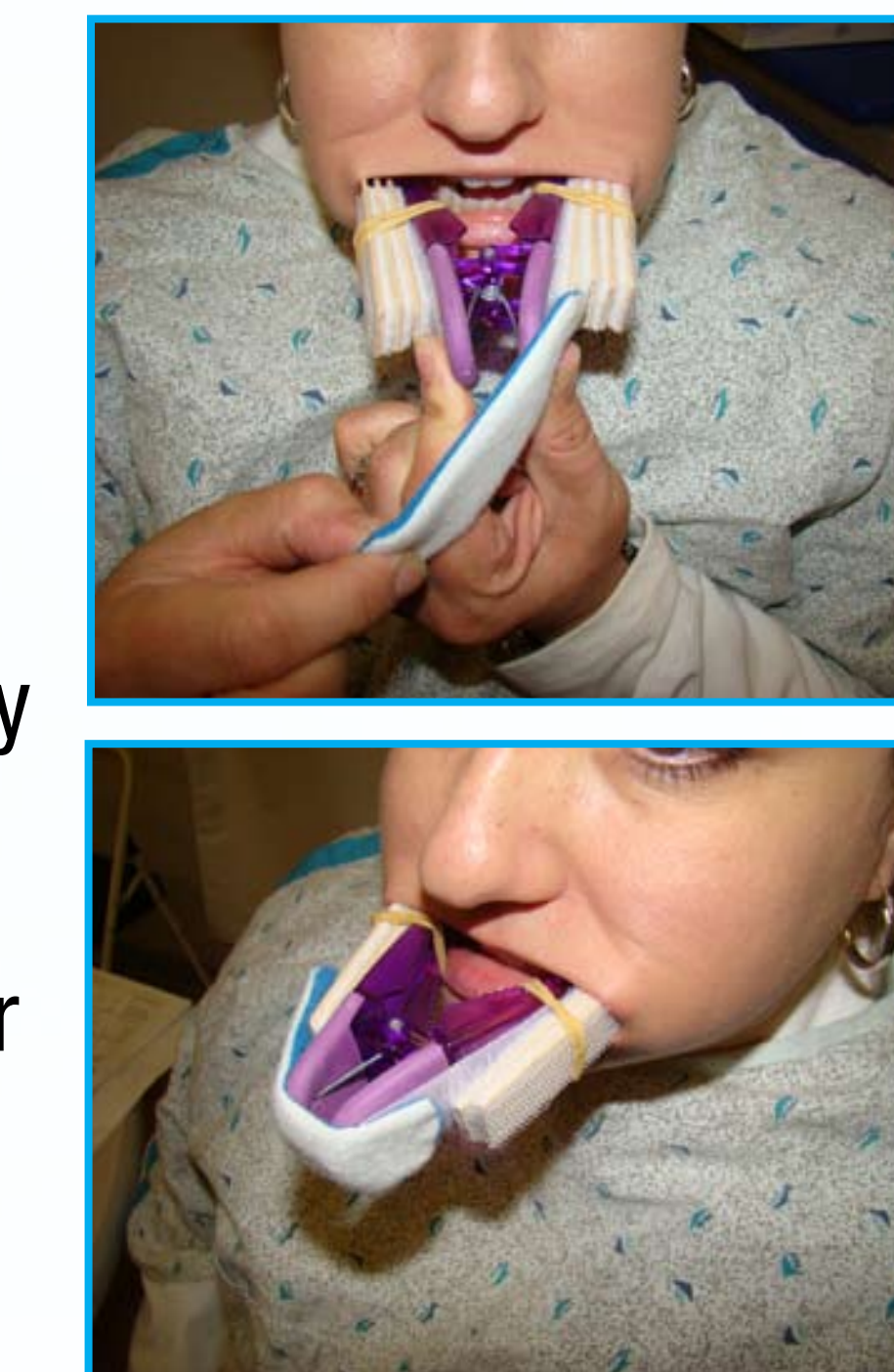
Step 6

Secure stacked tongue depressors with rubber bands onto clip distal from the spring loaded portion or handle of the clip. On the final tongue depressor there will be a hook piece of velcro; place a piece of non-adhesive loop in order to prevent hook side of tongue depressor coming in contact with the patient's mouth or lip.



Step 7

Insert splint into mouth and squeeze handle together gently until patient feels a tolerable stretch. Secure position by placing velfoam strap on either handle.



Step 8

Establish wearing time depending on the patient's initial wearing tolerance and progress as able with wearing time and/or number of tongue depressors stacked.

Results/Findings:

This splint may be used for vertical or horizontal extra-oral stretch. If using vertically, the length of the tongue depressors must be decreased placing the chosen number more proximal to the handle. If using horizontally, increase length by placing tongue depressors more distal. This splint may be used in a static progressive manner as well as dynamically utilized for therapeutic exercise.



Conclusions/Implications:

The fabrication of this splint requires common objects that are easily accessible. The fact that it may be utilized statically, dynamically, horizontally and vertically enables it to globally address extra-oral tightening which may be functionally limiting patients from progressing with ADL's.

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