A zygomatic arch protector was designed and fabricated by members of the Occupational Therapy Department, Medical College of Virginia, for patients recovering from surgical repairs of the zygomatic arch. The purpose of this splint is to serve as a protective barrier against further injuries and abuse, as well as to prevent disturbances of sutures while the facial bone is setting. It is fabricated after surgery, often while the patient is still in the recovery room.

Materials
The zygomatic arch protector is fabricated from the following materials: 2.5 cm (1-inch) wide webbing (length will vary); Velcro hook and loop, approximately 7.6 cm (3 inches) of each; two medium rivets; Orthoplast (or Polyform) 15.27 x 7.65 cm (6 x 3 inches); and two pieces of T-foam, 2.5 x 2.5 cm. (1 x 1 inch), and 1.25 cm (½ inch) thick.

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Construction
To construct the headband, cut cotton webbing the circumference of the patient’s head, measured approximately 2.5 cm (1 inch) above the eye and ear level. Add 7.65 cm (3 inches) to allow for the needed overlap. Sew the hook-and-pile Velcro at opposite ends of the headband. Next, cut two strips of Orthoplast (or Polyform) 2.5 x 15.27 cm (1 x 6 inches) and attach them to the headband with the rivets, leaving 2.5 cm between them to provide an opening for vision. Spot heat the strips and arch them over the zygomatic bone (without touching it) so that the ends rest gently on the maxilla. Allow to harden at room temperature. Then cut two 7.65 x 2.5 cm (3 x 1 inch) pieces of Orthoplast and attach them to the two Orthoplast strips to bridge them together at the upper and lower ends. Last, glue a piece of T-foam on each end of the strips where they rest on the maxilla.

Since 1978 the zygomatic arch protector has been used successfully with ten patients all of whom found it to be comfortable. It does not slip out of place and is not bulky, both important features since it must be worn full time for about three weeks. This splint can be adapted as an eye or ear protector with minor modifications.

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