



Orthotist Jeremy Murray explains the process of making protective facial shields for athletes. “You only have to be injured once,” says Murray, “to appreciate the need for protective gear.” He has fitted masks like these to athletes including former Detroit Piston Rip Hamilton.

Photos by Mark Parker

Saving Face

By Rita Brown | MSEM

It's not vanity that has athletes' world wide wearing custom fitted facial protective shields.

Warren-based Orthotist, Jeremy Murray CO, OTR (Certified Orthotist, Registered Occupational Therapist) with Michigan Hand Surgeries, knows that it's a real concern about minimizing potential injuries, that has people donning his safety tested masks.

“You only have to be injured once,” says Murray, “to appreciate the need for protective gear.”

His office in Warren is stacked high with plaster heads, hands and legs – resembling an artist studio at times with a touch of mad scientist peppering the atmosphere.

Murray has fitted his face masks to

professional and amateur sports enthusiasts across a variety of sports. Whether it's former Detroit Piston Rip Hamilton, UK soccer stand-outs Steven Taylor or Shola Ameobi, beer league baller, coed spiker or a youth league participant, Murray makes his masks custom fit to enhance the protections that the natural bony structure of the face already has in place.

Facial injuries account for 18% to 40% of sports-related injuries.

Wearing a mask that follows the natural contour of the face and the bony structure in the most affected area, the T zone (begins above the eye brow and down the nasal plane), optimizes protection.

“The design really defrays the impact of trauma to the face,” says Murray. “The

masks have been tested by Wayne State University and have withstood significant impact.”

The Process

Half science, half craft, making the actual mask can usually be completed in two sessions.

First, a plaster cast is created of the athlete's face. This can be cast in office, or mailed in, following pre-set guidelines. After the cast has been allowed to harden, it is filed, sanded and cleaned. Mounting the prepped plaster cast on a vice-like mechanical arm, Murray usually prepares a sheet of precut polymer for the apparatus, or “oven.”

Murray stays close to his laboratory oven when it bakes the actual polymer sheet. Using a specific timing protocol, the softened polymer is removed from the oven and laid over the plaster cast. There's a small window of opportunity to assess optimal pliability. Miscalculation is not an option.

The polymer is molded to the contour of the cast and fashioned into the almost final version. Once the plastic has cooled, the piece is close to completion. Any specific external design elements are incorporated, final adjustments and attachment mechanisms are placed in place and the mask is ready for a final live fitting.

What is typical may be the sense of satisfaction that Murray derives from the product of his macabre workspace. Fewer broken bones.

“It's very satisfying,” says Murray.

Similar to orthodontic mouth guards, insurance does sometimes pay for the gear, but not always. Check with your provider for more information. [MSEM](#)

Rita Brown is the publisher of MSEM.