

# What's that bruise on Michael Phelps' shoulder?

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Credit: AI-generated image ([disclaimer](#))

Beyond his gold standard accomplishments in the pool, Olympic swimmer Michael Phelps has garnered widespread attention in recent days for the dark circular markings on his shoulders and back.

The result of an ancient Chinese medical practice called cupping, those

marks are just one of the visible examples of remedies, therapies, and treatments athletes in Rio are undertaking in an attempt to gain a competitive advantage and achieve peak performance.

We asked a group of professors to explain what you've been seeing, with a particular focus on the science behind it.

## **Cupping**

Alycia Markowski, associate clinical professor in the Bouvé College of Health Sciences, was part of a research team in 2012 that examined the effectiveness of cupping, which is favored by some U.S. swimmers and gymnasts.

"Chinese cupping applies suctioning cups to an area of pain or injury," Markowski explained. "This technique is believed to move stagnant fluid to the surface of the skin, hence the coloration changes we are seeing on some of the athletes, enabling it to be cleared from the body to enhance healing."

The study focused on patients with low back pain, and Markowski said the team found that cupping might be an effective treatment for acutely reducing symptoms and improving pain-free range of motion.

## **Kinesio tape**

Many Olympic athletes are sporting strips of tape of various colors on their shoulders, knees, back, and other body parts. These are so-called kinesio tapes—and they have become a popular therapy among all types of athletes, including beach volleyball players.

"Unlike typical athletic tape, kinesiology tape is made of thin, elastic,

adhesive fibers that are intended to mimic the quality of human skin," says Eric Folmar, associate clinical professor in the Department of Physical Therapy. "The theory behind such elastic tape is to provide stability to muscles and joints without limiting movement, which is one of the biggest draws for athletes. It has also been proposed to improve muscle activation, enhance joint stability and awareness, and provide a lifting effect to the tissue layers, promoting lymphatic drainage, reducing swelling, and improving circulation."

## One-armed sleeves

While professional basketball players cry foul when they are required to wear short-sleeve jerseys, many favor wearing long sleeves that cover the entirety of their arms, particularly their shooting arms.

"Shooting sleeves for basketball players have been worn for quite some time," explained Steve Clark, assistant clinical professor and rehabilitation coordinator for the Sports Performance Department.

"There really isn't any scientific research that I'm aware of that points to their effectiveness for medical use, but I've heard players enjoy the feel of slight compression on sore elbows and arm muscles and like the sweat wicking properties as well."

Provided by Northeastern University

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