

Arm Brace for Sonographers to Reduce Wrist Injuries



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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a spiral splint that transfers some of the force required for medical ultrasound imaging from the hand and wrist to the arm and forearm to minimize wrist injuries.

OVERVIEW

As use of real-time diagnostic ultrasound scanning has increased, work-related injury has become epidemic among medical sonographers and echocardiographers. Approximately 80 percent of sonographers report some type of musculoskeletal ailment of the hand and wrist, and career-ending injuries due to the daily stresses of sonography affect roughly 20 percent of the workforce.

During an ultrasound imaging procedure, sonographers are required to grasp the ultrasonic transducer (probe) tightly with their fingers, and then exert considerable force from the wrist against the body wall of the patient. Most injuries result from this combined “pinch and push” effort.

THE INVENTION

UW-Madison researchers have developed a spiral splint that acts as a kind of lever to transfer at least some of the force required for medical ultrasound imaging from the hand and wrist to the arm and forearm. The padded splint is fixed to the forearm with two Velcro straps. An ultrasound probe can be flexibly connected to the splint via a lockable, universal ball and socket joint mounted above the sonographer’s hand.

APPLICATIONS

- Reducing work-related injuries among medical sonographers and echocardiographers

KEY BENEFITS

- Reduces occupational wrist injuries by minimizing prolonged “pinch and push” activity

THE WARF ADVANTAGE

Since its founding in 1925 as the patenting and licensing organization for the University of Wisconsin-Madison, WARF has been working with business and industry to transform university research into products that benefit society. WARF intellectual property managers and licensing staff members are leaders in the field of university-based technology transfer. They are familiar with the intricacies of patenting, have worked with researchers in relevant disciplines, understand industries and markets, and have negotiated innovative licensing strategies to meet the individual needs of business clients.



- Alleviates the need for the sonographer to tightly and continuously grip the probe
- Lessens the force on the sonographer's wrist
- Allows the sonographer to use his or her hand and wrist for minor angle and position adjustments
- Readily adaptable to a variety of sonographers and ultrasound probes
- Does not unduly interfere with the sonographer's freedom of motion
- Easy to put on and take off

ADDITIONAL INFORMATION

Tech Fields

Medical Devices - Adaptive design

Medical Imaging - Ultrasound

CONTACT INFORMATION

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846.

