

Wearable radiation safety devices offer some protection

March 15 2017



(HealthDay)—Leaded glasses can offer some radiation protection of the

ocular lenses, while a radioabsorbent surgical cap offers minimal protection of the brain, according to a study published in the March 13 issue of *JACC: Cardiovascular Interventions*.

Kenneth Fetterly, Ph.D., from the Mayo Clinic in Rochester, Minn., and colleagues measured scatter radiation dose to a humanoid phantom using radiochromic film with a single representative geometry and normalized the radiation dose to the left collar of the radioprotective thorax apron. They measured protection offered by leaded glasses and a radioabsorbent surgical cap.

The researchers found that in the test geometry, the average [radiation](#) doses to the unprotected brain, carotid arteries, and ocular lenses were 8.4, 17, and 50 percent, respectively, of the dose measured at the left collar. The dose to the ocular lens on the side of the physician from which the scatter originates was reduced by 27 to 62 percent with two representative types of leaded glasses; no protection was offered to the contralateral eye. The brain dose was reduced by 3.3 percent with a radioabsorbent surgical cap.

"A method by which interventional physicians can estimate dose to head and neck tissues on the basis of their personal dosimeter readings is described," the authors write. "Radiation protection of the ocular lenses by leaded glasses may be incomplete, and [protection](#) of the brain by a radioabsorbent surgical cap was minimal."

More information: [Abstract/Full Text \(subscription or payment may be required\)](#)

Copyright © 2017 [HealthDay](#). All rights reserved.

Citation: Wearable radiation safety devices offer some protection (2017, March 15) retrieved 25

April 2024 from <https://medicalxpress.com/news/2017-03-wearable-safety-devices.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.