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Textile Science and Reserach Centre (TSRC) and AMCA TTF

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SCIENTIFIC LECTURE

entitled

Can Rain Umbrellas Reduce Solar Heat Stress?

by

Professor, Uwe Reischl, M.D., Ph.D.
Boise State University, USA

on Thursday, the 13th of December 2018 at 12:00 PM
lecture hall „Kotka“ B-316, Prilaz baruna Filipovića 28a, Zagreb

Abstract::

Urban heat stress has been shown to create health problems for residents during the summer months in many parts of the world. This is the result of elevated ambient air temperatures and simultaneous exposure to intense infrared (IR) heat radiation from the sun. This heat radiation exposure can increase body heat loading by more than 50%. It is known that personal rain umbrellas can protect against harmful solar ultraviolet UV radiation. However, no studies have been reported that evaluated the effectiveness of umbrellas in reducing solar infrared (IR) radiation. A series of commercially available umbrellas were tested during exposure to intense outdoor sunlight conditions. IR heat radiation and air temperature were measured using a WBGT black globe temperature monitor. The tests revealed that the standard umbrellas reduced infrared heat Radiation (IR) by 20%. Adding an ultra-thin Mylar foil to the umbrellas reduced the infrared heat radiation exposure by 80%. The new information provides evidence that Mylar-foil modified umbrellas can be used to protect the health and safety when persons are exposed to intense solar IR radiation during the summer months.

Biography:



Uwe Reischl is a Professor in the Department of Community and Environmental Health in the College of Health Sciences at Boise State University. Dr. Reischl is a public health physician with a focus on international health. His research includes ergonomics, human factors and occupational health. He has 30 years of University research, teaching, and administration experience. Dr. Reischl received his undergraduate and graduate training at the University of California at Berkeley where he obtained the Ph.D. degree in Environmental Health Sciences from the School of Public Health. Dr. Reischl received his medical training at the University of Ulm in Germany where he obtained the M.D - Ph.D. degrees in medicine.