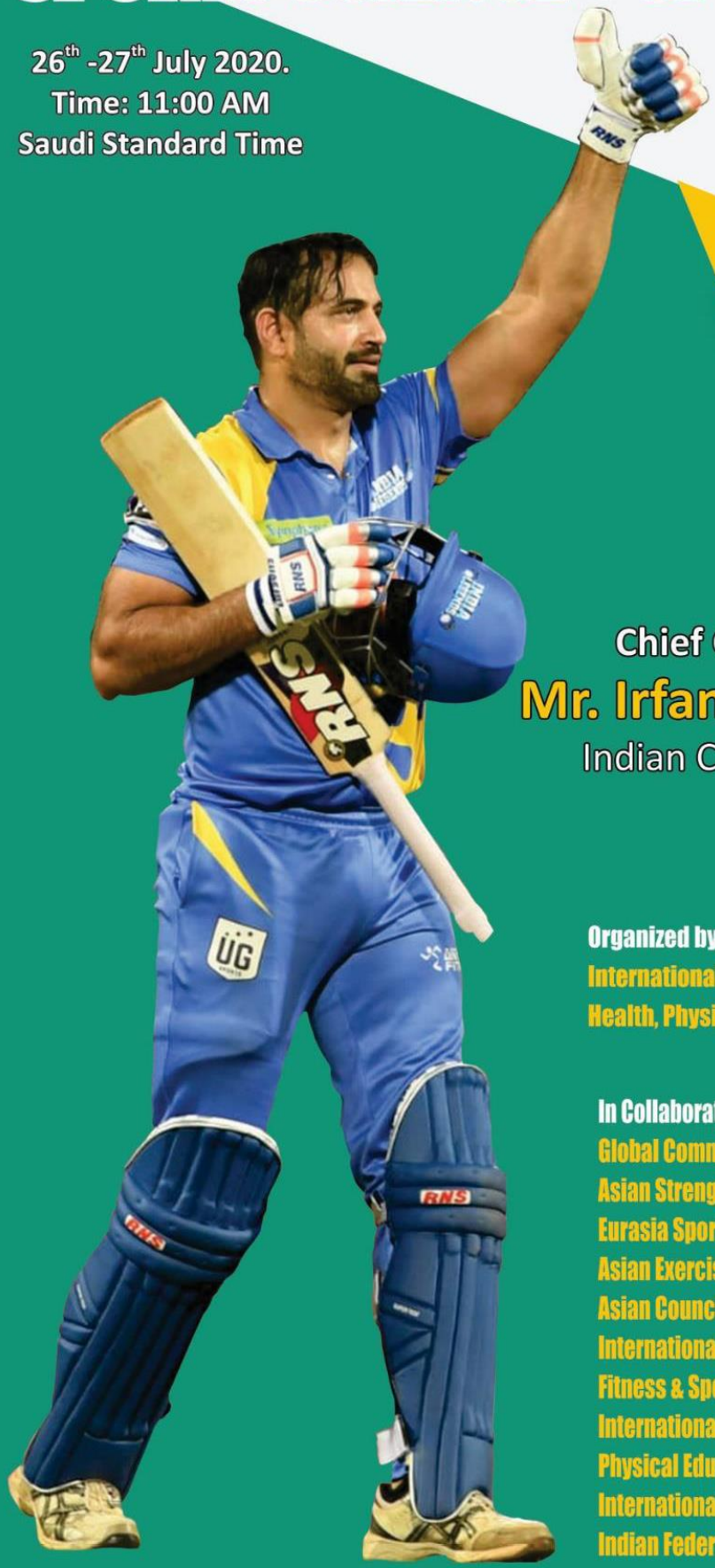
WORLD WEBINAR
ON
SPORTS SCIENCE + SPORTS MEDICINE

26th -27th July 2020.
Time: 11:00 AM
Saudi Standard Time



Dr. Kaukab AZEEM
President, International Federation
Saudi Arabia

BOOK OF ABSTRACTS

Chief Guest
Mr. Irfan Pathan
Indian Cricketer

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International Federation for Fitness,
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Global Community Health (GCH), USA
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International Fed of Physical Education,
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International Science, Culture, & Sport Association,
Indian Federation of Computer Science in Sports

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Invited Speaker

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Erika Zemková, Ph.D. is a professor in the Department of Biological and Medical Sciences, Faculty of Physical Education and Sport, Comenius University in Bratislava. She also works as a researcher at the Technological Institute of Sport, Faculty of Electrical Engineering and Information Technology, Slovak University of Technology. She completed her Masters Degree in Professional Coaching in 1994, and Doctoral Degree in Sports Kinanthropology in 1999. In 2004, Slovak Academy of Sciences awarded her the Scientific Qualification Degree IIa – Independent Scientist. In 2007, she became Associate Professor and in 2013 Full Professor of Sports Kinanthropology. In 2008, she graduated at the Institute of International Relations and Law Approximation, Faculty of Law, Comenius University in Bratislava. She has received fellowships for conducting research at foreign universities, including the Ronald and Eileen Weiser Professional Development Award (University of Michigan, 2009), Fulbright Award (Neuro-muscular Research Center at Boston University, 2005–2006), Aktion Österreich–Slowakei Stipendium (University of Vienna, 2005), NATO Expert Visit Award (University of Aberdeen, 2005), CIMO Fellowship (Research Institute for Olympic Sports in Jyväskylä, 2003), and for teaching activities through the Erasmus Program and bilateral agreements between Universities (2004–2013). She was awarded by Coventry University Research Committee to be a Visiting Professor in Physical Education and Sport at the Faculty of Health and Life Sciences, Coventry University (2012–2015). Her scientific and academic work was noted for merit by her home Faculty of Physical Education and Sport in 2011, 2012 and 2019, and also by Comenius University in Bratislava in 2018.

Assessing Core Stability and Strength Related to Sport Performance

By

Prof. Erika ZEMKOVÁ

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Abstract

Recently widely promoted core stabilization and core strengthening exercises have been seen to improve spinal stability and the strength of back muscles. While these exercises seem to be efficient in the prevention of back pain and the rehabilitation of lumbar spine and musculoskeletal injuries, there is limited and conflicting scientific evidence regarding their effectiveness for the enhancement of athletic performance. This is mainly due to the lack of a standard evaluation system of core stability and strength. Most current testing methods are not sensitive enough in discriminating between and within group differences in these measures, and in revealing their slight changes after exercise programs. Given also a lack of sport-specific tests, research to date has only marginally addressed to what extent core stability and strength are associated with athletic performance. The external validity of frequently used isokinetic trunk strength and isometric trunk endurance tests for sport-specific tasks is ambiguous. While some authors have shown that these measures and athletic performance are related, others have not. Given that muscle power is a more specific measure, the tests that assess this component of the core would be more appropriate because they better mimic the demands imposed by many sporting activities. Nevertheless, maximal strength of back muscles and their endurance is usually measured, whereas muscle power is often neglected. However, these measurements underestimate the loads on the spine during dynamic movements. Therefore, tests simulating the task being assessed may be more appropriate for athletes with demands to generate high force over short time periods.

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