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Ergogenic Aids and Sport Performance



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Abstract. This presentation will examine several types of ergogenic aid for sport performance enhancement. It is known that the use of NaHCO_3 can increase the pH levels in human body and also to increase the bicarbonate (HCO_3^-) concentrations in blood to enhance the blood buffering effects in the body to control the acid-base balance which greatly contribute to the fatigue (Burke and Pyne, 2007). The first part of presentation will explore the usage of sodium bicarbonate supplementation in terms of dosage and time of ingestion in both anaerobic and aerobic sports. High ambient temperatures generally have a negative impact on exercise performance. Evidence showed that nitric oxide derived from exogenous nitrate supplementation possesses vasodilation properties and aid in blood flow (Lidder and Webb, 2013; Braakhuis and Hopkins, 2015). However, to our knowledge, no study has investigated the effects of nitrate supplementation on cycling performance in heat condition. Therefore, in the second part of this presentation, single and combined effects nitrate supplementation during prolonged exercise in the heat will be explored. Over the past years, music has evolved and there has been an increased participation in activities to promote fitness with music. Music has been said to elicit physiological and psychological changes during exercise Music may contribute to an overall sense of enjoyment and motivation while exercising. The last part of the presentation will discover the usage of music as an ergogenic aid to improve exercise performance.

Biography. Dr Ler Hui Yin is the Associate Dean of Department of Sport Science at Tunku Abdul Rahmman University College (TAR UC). She teaches Exercise Physiology, Applied Exercise Physiology, Health & Wellness and Gymnastics at TAR UC. She graduated with a Bachelor of Science (Hons) with Education (Sports Science) from Universiti Teknologi Malaysia in 2004, and went to complete a Master of Science (Sports Science) in Universiti Sains Malaysia in 2006 and a dual-PhD from University of Sydney and University of Malaya in 2014. She was the recipient of Young Investigator Award (YIA) Travel Grant 2011 and 2012 from European College of Sport Science (ECSS), Winner of the Victoria University Outreach Scholarship 2014 from Exercise & Sports Science Australia (ESSA), and most recently she won the “Best Poster Award” in the 6th ISN International Sport Medicine and Sports Science Conference 2015. Her main research interest are: Hydration and Thermoregulation in the

Heat; Music and Sport Performance; Nutritional Supplementation for Health and Sport Performance.