

Nutrition & Hydration for Competitive Elite Tenpin Bowling

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In preparation for an upcoming article in *Bowling This Month*, I prepared the following section on nutrition and hydration for bowling. This short article includes specific pre-event, during event and post-event nutrition guidelines to ensure competitive bowlers maintain peak human performance.

Nutrition & Hydration for Competitive Elite Tenpin Bowling Joe Slowinski, ABD, M.Ed.

Bowling has been reported as burning as many as 300 to 450 calories an hour. When bowlers are participating in competition play or training, coaches should help to ensure their bowlers are hydrated and prepared for pre-event, during and post-event consumption needs to maintain appropriate glycogen levels with sufficient and appropriate food in-take.

When preparing for a tournament or effective lengthy practice, it is recommended that you understand how certain types of food will effect performance. One way to do this is to know the glycemic index (GI). The Glycemic Index was invented in 1981 by David Jenkins and Thomas Wolever of the University of Toronto. For more information on this system, visit <http://www.glycemicindex.com/>

Most importantly, this site includes a glycemic index web site to search food by GI level. The GI is a scale based on how quickly food elevated blood sugar (glucose) levels in the body. High GI foods are listed as 70+, medium (55 – 69) and low < 54.

Low GI foods include: fruit (apple, orange, pear, etc.), yogurt, low fat milk, cookies/biscuits (oat, vegetable), pasta, noodles, basmati rice or a muesli bar. Low GI foods also include breads with stone-ground flour, whole grain kernels, or sourdough. High GI foods include: watermelon, tune sandwich, banana, cereal bar, bread. Recent research has also shown that chocolate milk is an outstanding recovery drink. And, of course, this would be a favorite for many.

The National Sports Institute of Malaysia (ISN-M) has a competition plan for nutritional consumption during tournament play. For the Asian Games, the nutritional guidelines for the 8-day tournament included before, during and post-tournament play guidelines. These guidelines talk about hydration and glycemic index (GI) to maintain appropriate glucemia levels.

Specifically, these guidelines for the Asian Games included:

Pre-Event (30 minutes prior to competition)

Eat a low GI snack.

During the Event (every 15 to 20 minutes)

Consume an intermediate to high GI food with an electrolyte drink, such as Gatorade.

Post-Event (Within 30 minutes of completion)

Consume a high GI food with water and an electrolyte, such as Gatorade. In addition, as a coach or player, you should understand the digestion process times for various meals. Obviously, digestion should be close to completion for optimum performance. Specifically, a large meal will take 3 to 4 hours to digest with a medium meal 2 to 3 hours. Liquid meals or small snack will require 1 to 2 hours of digestion. References National Sports Institute Malaysia (2007). Top Performance Team Report for Final Phase 2006 Project Doha. Bukit Jalil, Malaysia. The Official Home of the Glycemic Index and GI Database. [Online. Available at: <http://www.glycemicindex.com/>].

Note: Special thanks to Dr. Robert Morford, acting Director of the National Sports Institute of Malaysia, for permission to use the recovery guide prepared for the national tenpin bowling team for the Asian Games 2006.