



What's the Beat About Diabetes in Sports?

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Diabetes Mellitus (DM) affects 7% (23.6 million) of Americans which was recorded by the Centers for Disease Control and Prevention in 2005. The increase in diagnosis of DM is linked to the nation's obesity epidemic. Individuals with Type I DM are diagnosed at a younger age and are generally slender in physique. This disease is caused by an autoimmune process that destroys insulin-producing beta cells in the pancreas. Athletes with Type I DM manage their disease with insulin dosing and glycemic control. These athletes can be seen playing at many levels-recreational to elite. Individuals with Type II DM are generally overweight adults. However, there is an ever increasing number in children being diagnosed. This disease is caused by insulin resistance and deficiency. Type II DM can be controlled through diet, exercise and sometimes oral or injection medications. These athletes are more often seen playing at the recreational level.

Exercise Guidelines

Frequency: It is recommended that individuals with DM perform aerobic exercise 5 days per week and perform resistance training 3 days per week.

Intensity: Sedentary individual should start exercising at 50-70% of their VO_2 max or at a level where they can carry on a conversation with a workout partner. For individuals with moderate control of their diabetes and performing at higher workout intensities, it's important to check blood glucose levels one hour prior to exercise and post-exercise. For Type I DM it will be important to include a pre-exercise snack and post-exercise snack to ensure proper glucose levels. For Type II DM, as exercise intensity and duration increases, adjusting insulin dosage with your physician will be important.

*It's important if you are an athlete with DM and take medications that you know your medication's peak activation, duration of dosage and side effects.

Risks: With athletes it's important to watch for signs and symptoms of hyperglycemia (increase in blood glucose, more than 240mg/dl) and hypoglycemia (decrease in blood glucose, less than 70mg/dl). Hyperglycemia is caused by not enough insulin or eating too much and common symptoms are thirst, decrease in appetite, fatigue and increase in urine output. Hypoglycemia occurs with too much exercise or insulin and common symptoms are anxiety, confusion, abnormal behavior, headache and blurry vision.