

ASK THE EXPERT

A Resource for Active People with Diabetes



Sheri Colberg, PhD

My Expertise: All aspects of diabetes management related to exercise, physical activity, and sports participation

My Link: www.SheriColberg.com

A world-renowned expert on diabetes and exercise, Sheri R. Colberg, PhD, FACSM, is an exercise physiologist, college professor (Old Dominion University), exercise researcher, and author of numerous articles and eight books, including *Diabetic Athlete's Handbook*, *The 7 Step Diabetes Fitness Plan*, and *50 Secrets of the Longest Living People with Diabetes*. She continues to conduct extensive clinical research with funding from the American Diabetes Association and the NIH. A frequent lecturer on diabetes and exercise, she is also member of the Board of Directors of DESA. She has been interviewed about topics relating to diabetes, exercise, fitness, and nutrition in articles in USA Today, Newsweek, Forbes, Health, and by other major media outlets. An avid recreational exerciser and type 1 diabetic athlete herself for over four decades, she lives with her husband and three sons in Virginia Beach.

My FAQs	My Response
1. Why does my blood sugar drop so much when I exercise?	Glucose can get from your bloodstream into your active muscle cells via muscle contractions themselves, which stimulate blood glucose (BG) uptake. Insulin also causes uptake of glucose both at rest and during exercise. During any activity, both mechanisms work, so blood sugar levels can fall much more dramatically during exercise compared to just sitting around.
2. Is there any difference on blood glucose levels between exercising first thing in the morning and other times of day?	When you exercise first thing in the morning before eating (or taking any insulin), your BG may go up instead of down with exercise. Your body releases hormones overnight that make you insulin resistant. If you have problems with early morning exercise raising your BG, make sure to eat a little something to "break your fast" before exercising. If you do take insulin, take some to cover the carbs, but way less than usual.
3. How long can I get hypoglycemic after I exercise?	You're more likely to experience lows following exercise until your muscles have replaced all their carbs (glycogen), which can take 24-48 hours depending on what you did and for how long. You may have a dip in BG 3-12 hours after exercise and right afterwards. Prevent late-onset low BG with adjustments in food intake and insulin dosing after exercise.
4. What is the best post-exercise recovery drink (or food)?	Anything with a balance of carbs, protein, and fat will help you recover more quickly (i.e., replace glycogen) and prevent post-exercise lows. Chocolate milk, yogurt, ice cream, and peanut butter sandwiches work equally well. Carbs are absorbed most rapidly (1-2 hours), but 3-4 hours later some protein is turned into BG, and fat prevents lows 5-6 hours later.
5. What is the key to keeping blood sugar levels normal during exercise?	The real key to BG balance during exercise is lower insulin levels. Insulin drops BG additively with muscle contractions. If you take insulin, you have to try to lower yours like a normal pancreas would by lowering basal and bolus amounts if you use a pump, rapid-acting insulin taken within two hours of starting exercise, or basal doses of Lantus or Levemir taken either pre- or post-exercise. You don't need much insulin in your system during exercise.

BE ACTIVE! BE FIT! BE HEALTHY!

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