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References

1. Aryal A. Brown bear conservation action plan in Nepal: efforts, challenges and achievements. *World J Zool.* 2012;7:75–78.
2. Silwal T, Shrestha BP, Bhatta BP, Devkota BP. Revenue distribution pattern and parkpeople conflict in Chitwan National Park, Nepal. *BankoJanakari.* 2013;23:35–41.
3. Rasool A, Wani AH, Darzi MA, et al. Incidence and pattern of bear maul injuries in Kashmir. *Injury.* 2010; 41:116–119.
4. Brown G. *Bear anatomy and physiology* In: *The Great Bear Almanac.* New York: Lyons & Burford; 1993.

In Response to Ultraendurance Athletes With Type 1 Diabetes: Leadville 100 Experience, by Khodae et al

To the Editor:

The letter by Khodae et al¹ nicely describes the performance of 19 athletes with type 1 diabetes (DM1) out of 7215 total athletes competing in the 2011–2013 Leadville 100, a 161-km mountain bike race and 161-km ultramarathon run. There was no statistical difference

between the 68.4% completion rate of the DM1 athletes and the other endurance athletes. However, concern was expressed in this letter about awareness of, or adherence to, diabetes management guidelines.

Education for DM1 patients on multiple daily injections or pumps usually (or should) include exercise instructions for reduced insulin basal needs, carbohydrate boluses, and correction boluses as well as increased use of glucose monitoring, target ranges of glucose to avoid hypoglycemia, and calorie intake. All of this is labor-intensive. Insulin adjustments are highly individualized and involve some trial and error, but are helped especially by the ever-increasing sophistication of insulin pumps, pump trainer/educators, and pump users. Guidelines by the American Diabetes Association² are expectedly generalized. More specifics are available, for example, from other sources about endurance athletes with DM1.³

In the arduous Leadville 100, perhaps the patient-provider (s) relationship, the Internet, social media, and personal experience offered detailed advice for individual insulin management. Or perhaps information was available from Team Novo Nordisk, a global all-diabetes sports team of cyclists, triathletes, and runners, spearheaded by the world's first all-diabetes professional cycling team and sponsored by the Danish insulin manufacturer Novo Nordisk.⁴

I agree with the authors that further studies are needed, but they are hard to come by in such a setting. Until that day arrives, are there any practical tips that can be gleaned from their review? For example, was there any prerace diabetes planning vs actual implementation to change doses of insulin before, during, and after the event when hypoglycemia can still strike? As most were probably pump users, were pump basal infusions reduced and by how much, or temporarily suspended? Were carb boluses cut, say, in half? Were square-wave profiles used rather than simple boluses? Were insertion site set failures common? Were continuous glucose-monitoring systems that measure interstitial glucose levels accurate or useful in this dynamic setting? This was a retrospective study with limitations, and such information may not be available from the entire group, but even individual or anecdotal information would be helpful for both providers and athletes with DM1. Thank you.

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References

1. Khodae M, Riederer M, VanBaak K, Hill JC. Ultraendurance athletes with type 1 diabetes: Leadville 100 experience. *Wilderness Environ Med.* 2015;26:273–275.

2. American Diabetes Association. Standards of medical care in diabetes—2014. *Diabetes Care*. 2014;37(Suppl 1):S14–S80.
3. Devadoss M, Kennedy L, Herbold N. Endurance athletes and type 1 diabetes. *Diabetes Educ*. 2011;37:193–207.
4. Team Novo Nordisk. Racing with diabetes. Available at: <http://www.teamnovonordisk.com/>. Accessed July 13, 2015.

In Reply to Dr Lankford

To the Editor:

We read with enthusiasm the letter from Dr Lankford¹ in response to our recently published letter to the editor “Ultraendurance athletes with type 1 diabetes: Leadville 100 experience.”² We are pleased that our findings have started to generate discussion among clinicians and researchers. As Dr Lankford mentioned in his letter, there is a lack of specific guidelines for endurance athletes with type 1 diabetes mellitus (DM1).¹ Anecdotally, most of our athletes with DM1 did not use insulin pumps. Although we had glucose monitoring capabilities at our medical aid stations, most of our athletes with DM1 used their own glucose monitors. Unfortunately, we are unable to answer any other specific questions raised by Dr Lankford owing to the retrospective nature of our study.

We hope this reply has made it clear that until we have large-scale prospective studies, an individualized and well-thought-out plan designed and reviewed by the athletes with DM1, the athletes’ physicians, and the race medical team should be used to achieve optimal glyce-mic control during these long races. In addition to the

standard medical alert bracelets, we recommend using medical wristbands for each athlete highlighting the information about pertinent medical conditions, medications, and allergies.³

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References

1. Lankford HV. In response to Ultraendurance athletes with type 1 diabetes: Leadville 100 experience, by Khodaei et al. *Wilderness Environ Med*. 2015;26:588.
2. Khodaei M, Riederer M, VanBaak K, Hill JC. Ultraendurance athletes with type 1 diabetes: Leadville 100 experience. *Wilderness Environ Med*. 2015;26:273–275.
3. Hoffman MD, Pasternak A, Rogers I, et al. Medical services at ultra-endurance foot races in remote environments: medical issues and consensus guidelines. *Sports Med*. 2014;44:1055–1069.