Diet, body composition and training overview of a top level female mountain biker

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We present dietary and training characteristics of a former female world cup champion in mountain biking (XCO). All data represented was gathered in 2017.

Methods: Diet was assessed with 4-day dietary logs using Food works Professional Edition version 9. Day-to-day training data and personal notes were used to determine training load. Body composition was measured with In body 720.

Results: Her training volume was 9.9 h per week. The majority represented XCO training (79.4 %). She mostly trained in endurance level (defined as 69-84 % of her maximum heart rate) which was 49.8 % of all time. She controlled her weight only with changing training load and intensity. Her body composition was stable (body weight at 57.4 kg ± 1.1 kg, skeletal muscle mass at 26.5 ± 0.5 kg and fat mass 9.7 ± 0.65 kg). Her daily energy intake was 8752.2 kJ (45 % from carbohydrate, 32.9 % fat, 17.4 % protein). Her calcium and iron daily intakes were insufficient. Vitamin D deficiency was found at the end of the season.

Conclusions: Athlete's energy intake was insufficient with energy demands from heavy training loads. A surprisingly big part of energy intake was ingested with snacks (38.4 %). Her carbohydrate intakes were adequate and protein intake was on the low end of her daily requirements. In order to promote long-term health and performance this athlete should increase energy input focusing on whole foods and ensure good bone health with sufficient calcium and vitamin D. In future, measuring energy availability would be beneficial.

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