Trained athletes typically consume well above 1.2 g dietary protein per day

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BACKGROUND
Habitual dietary protein intake should be optimized in all athletes to ensure proper recovery, enhance the skeletal muscle adaptive response to training and improve muscle reconditioning. Besides daily protein intake, the use of specific protein sources as well as the distribution of protein intake over the day are of relevance to optimize dietary protein intake in athletes.

PURPOSE
To assess daily protein intake, dietary protein sources consumed, and protein intake distribution throughout the day in a large cohort of athletes.

METHODS
553 well-trained (competitive) athletes (327 men and 226 women) completed multiple web-based 24-h dietary recalls and questionnaires within a 2-4 week period. Total energy consumed (MJ) and the contribution of animal and plant based protein sources to daily protein intake (g) were determined and expressed as a percentage of total protein intake. Daily protein intake was categorized into six eating moments.

RESULTS
Daily protein intake averaged 108±33 g (1.6±0.5 g/kg) in men and 90±24 g (1.4±0.5 g/kg) in women. Daily protein intake correlated highly with energy intake for strength (r=0.72, P<0.001), team (r=0.77, P<0.001) as well as endurance athletes (r=0.78, P<0.001). Dietary protein intake averaged 19±8 g at breakfast, 25±13 g at lunch and 38±15 g at dinner, contributing together 81% of daily protein intake. The amount of protein per main meal was below the recommended 20 g for 58% of the athletes at breakfast, 36% at lunch and 8% at dinner. Of the total dietary protein intake, 57% originated from animal sources, with meat and dairy as dominant sources. Thus, as much as 43% of the protein intake originated from plant based protein sources, with bread as the principle source.

CONCLUSIONS
Athletes typically consume well above 1.2 g protein/kg/d with their normal diet. Daily protein intake is mainly (>80%) provided by the three meals, with breakfast and dinner providing 19±8 and 38±15 g protein, respectively. Plant based proteins provide more than 40% of daily protein consumption.

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