

Effect of Different Periodisation Methods to Improve Performance among Runners: A Literature Review

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ABSTRACT

Introduction: Periodisation is the deliberate planning of training to minimise the risk of injury and overtraining while achieving peak performance at a certain time. Rather than training at the same level all year long, athlete can divide their program into distinct cycles, each of which has a distinct focus and entails the deliberate manipulation of food intake, particularly the distribution of macronutrients, to correspond with various stages of an athlete's training and competition cycle.

Aim: The review is to examine how various periodisation training affects the performance of endurance runners.

Materials and Methods: In accordance with PRISMA recommendations, we conducted a comprehensive data search on PubMed, Science Direct, Cochrane, and Embase using MeSH terms such as middle-aged runners, periodisation, and metabolic energy. A total of 42 articles were identified in the database, whereas, as per our inclusion and exclusion criteria, we selected three articles after manual screening and duplicate removal.

Results: Periodisation improves athletic performance through planned training cycles. The Accumulation, Transmutation, and Realisation (ATR) approach improves body composition and performance by rotating between basic abilities and sport-specific intensity. In endurance running, shifting from a pyramidal to a polarised intensity distribution in the final phases maximises running economy time trial improvements. Furthermore, if sessions are appropriately divided, concurrent training (combining strength and endurance) increases running economy without an 'interference effect'. Finally, maintaining gut microbial stability through optimal dietary periodisation is crucial, as abrupt changes, particularly to high-protein diets, can cause gut stress and impair performance.

Conclusion: As per our review for recreational and well-trained athletes, the most effective approach for peak performance involves a polarised training intensity distribution supported by concurrent strength training and a stable, carbohydrate-sufficient diet to ensure both physiological adaptation and gastrointestinal homeostasis.

Keywords: Diet, Homeostasis, Middle-aged, Physical therapist.

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