

## **Periodization**

The concept of periodization is used with many fitness enthusiasts who want to set long-term goals using a variety of sub-goals. They divide a six-month period into cycles involving different fitness programs to achieve training for a specific goal or performance. Periodization is a training principle used to prevent overtraining and optimize peak performance. It is a method of joining physiological conditioning with technique-learning .

The fitness enthusiast first has to set a goal for six months. The goal may be centered on performance tasks or a loss in weight or percentage of body fat. After the goal has been set, the periodization schedule can be set.

**Periodization involves different cycles.** A macrocycle is the largest segment of a training year and generally encompasses four to six months. Within the macrocycle are smaller divisions called mesocycles, which are always one to three months. The mesocycle workout begins with relatively low-intensity, long-duration exercise and moves on to high-intensity, short-duration exercise as the body adapts to training. Within each mesocycle are microcycles which may last one day or one week. Microcycles vary in duration, intensity, and workload on a short-term basis.

**Duration** defines the time spent doing aerobic activity. It may also refer to volume, which would be the load of weight lifted.

**Intensity** is defined as quality of work. In aerobic training, working out at a certain percentage of heartrate or perceived exertion on the intensity scale. In weight lifting, intensity can be judged as working at a certain percentage of a one-repetition maximum. It can also be judged as maximum load for a certain number of repetitions.

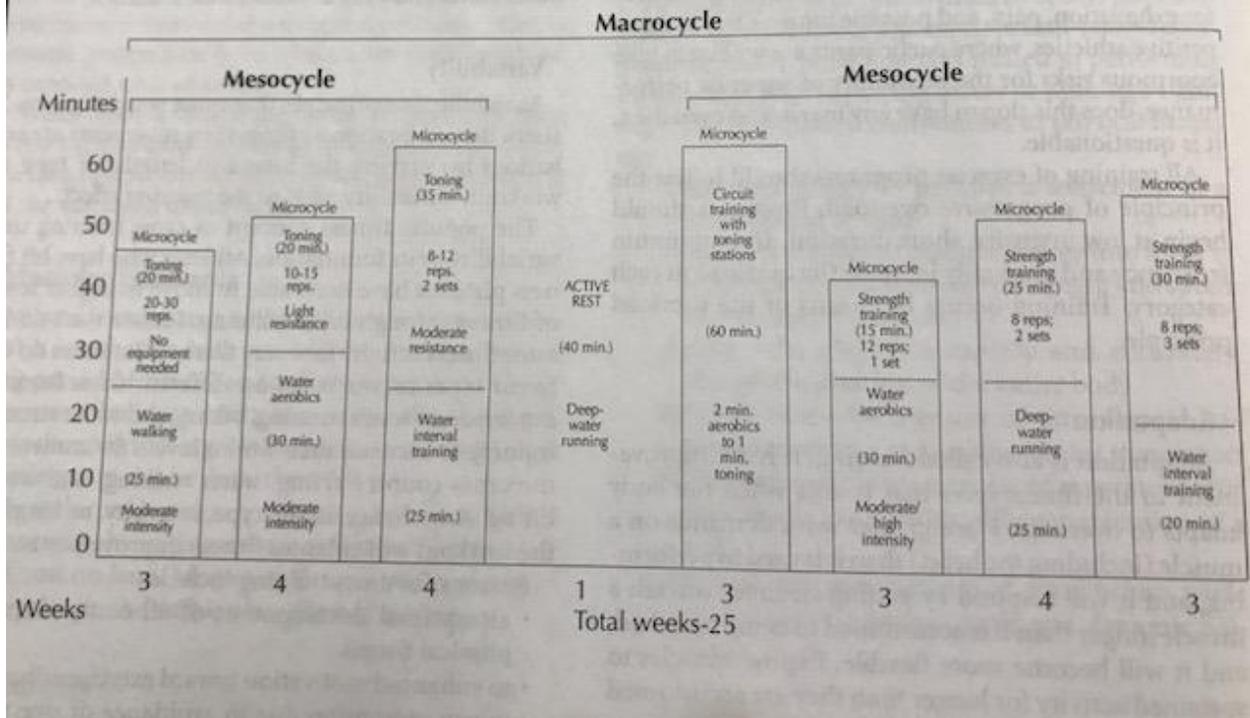
**Frequency** refers to the recurrence of training sessions each week. While most frequencies tend to be three times per week, other frequencies also are successful. A cycle of “two days on, one day of rest, and two days on” works well also.

**Active rest periods** are generally scheduled between mesocycles. Active rest is not a time of inactivity, but a time of low-impact or low-intensity activity that helps the body to restore itself before moving into the next, more exertive mesocycle.

Periodization has been well received with personal trainers and also with well-conditioned fitness enthusiasts. Periodization helps the instructor and student to achieve goals regarding weight loss or improvements in strength or conditioning. Periodization also provides specific progression and structure using cross training. It holds the student’s interest because it allows for variety and change at regular intervals while still increasing progression. It prevents overtraining and injury because it is set up specifically for training periods with regard to intensity, duration, frequency, and active rest.

There is no one formula for periodization. A periodization plan is generally created around a student’s specific fitness or training goals and considers his/her current level of fitness with those goals. The gains for students using periodization are amazing. They include not only physiological improvement but excitement due to the success experienced and the variety offered by this program.

DIAGRAM 1-3 Training Cycle—Six Month Periodization Sample



**Periodization for Weight Training** As mentioned, periodization programs are designed to produce maximum gains and reduce the risks of overtraining, which can lead to declining performance. Research suggests periodized training programs do a better job of developing muscular fitness than nonperiodized programs (Harries, Lubans & Callister 2015).

Two relatively new weight training periodization programs for women are block periodization and weekly undulating periodization (Bartolomei et al. 2015). **Block periodization (BP)** is a Russia-developed program using phases of 2–6 weeks, with each phase targeting a specific training stimulus (e.g., strength, hypertrophy, power). Bartolomei et al. note that BP phases move progressively from hypertrophy to strength to power. In contrast, **weekly undulating (WUD) periodization** progresses from high volume and low intensity to low volume and high intensity over periods of several weeks (mesocycles) in resistance training parlance (Bartolomei et al. 2015).

BP and WUD had never been scientifically compared in a female population, which inspired the researchers to conduct this study.

Bartolomei S<sup>1</sup>, Stout JR, Fukuda DH, Hoffman JR, Merni F. Block vs. Weekly Undulating Periodized Resistance Training Programs in Women. *J Strength Cond Res.* 2015 Oct;29(10):2679-87

Harries, S.K., Lubans, D.R., & Callister, R. 2015. Systematic review and meta-analysis of linear and undulating periodized resistance training programs on muscular strength. *Journal of Strength and Conditioning Research*, 29 (4), 1113–25.