

A Sample Program for Periodizing the General Athlete

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Periodization is the systematic varying of repetitions, sets, and intensity to peak the athlete's conditioning at a specific time of the year. While athletes competing in a structured sport will have a predetermined season to periodize their program around, the recreational athlete does not have this option. The following article shows how to develop a periodized program for the recreational athlete, using the calendar year as the season.

To develop skills, the skills must be practiced. However, in an attempt to become as efficient as possible, the body will adapt to the specific stimulus, maintaining its homeostasis. This homeostasis is most often associated with staleness, or more commonly, plateauing. Further, this state often leads to injury or overtraining. To prevent this, a periodized program needs to be adapted, modified, and specifically set to meet the demands of your particular sport.

Phases of the Periodized Program

While traditional periodization follows a pattern of hypertrophy, strength, power and peaking, it is not necessary for all sports to follow this format. In fact, in many sports it is unnecessary to attempt a 1RM.

The hypertrophy phase is a name given to a period within the pre-season and usually a period in which the athlete returns to his/her normal level after the off-season. The hypertrophy phase is designed to increase the athlete's muscle mass, preparing them for higher intensity work to follow. Hypertrophy training involves sets in the 8 – 12 repetition range.



The second phase of the program, the strength phase, is the period that usually best prepares the athlete for competition. It features a moderate number of repetitions (5–8), and slightly longer rest periods (3 – 5 minutes) between each set. This phase also occurs in the pre-season and is marked by its strength increasing design.

The power phase is a short phase that occurs immediately before or during the season. It typically features a small number of repetitions (3 – 5), which are used in more explosive exercises and movements. Rest between sets is relatively long, sometimes reaching as much as 7 – 10 minutes.

The peaking phase is the period where the athlete peaks for a particular event or in the case of a team sport, the playoffs. In terms of resistance training it represents the “maxing” or testing of the athlete, and generally features 1 – 3 repetitions.

The recovery phase may either be a long rest period (days off) or an active rest period, and normally occurs at the end of the competitive season. Many people are concerned about detraining during this phase. The likelihood of losses during this time are minimal provided some activity is performed, thus the recovery period allows for recovery and rebuilding.

Table 1*: Phases of the Periodized Program

	Hypertrophy	Strength	Power	Peaking
Sets	2 – 4	2 – 5	3 – 5	1 – 3
Reps	8 – 20	4 – 8	3 – 5	1 – 3
Volume	High	High	Low	Low
Intensity	Low	Med High	High	Very High

*This table is adapted from Fleck and Kraemer, *Designing Resistance Training Programs*.

Steps in Planning the Program

The first step is determining each of the seasons, and setting the macrocycle or complete program. The next step is to break down the complete program into smaller mesocycles and microcycles. Finally, determine the phase, or combination of phases, you will use within each mesocycle. Then figure out the actual exercises for weight training and intervals for the anaerobic/aerobic metabolic conditioning.

Each periodized program should have a goal. It should be specific to the sport and/or the athlete. For periodization to work, it must be followed strictly.

Programming the Complete Athlete

The essence of any good program is the planning and preparation that goes into it. A thorough needs analysis of the sport requirements and the athlete's conditioning level is necessary to design the ideal program. There are however, certain rules and exercises that can be generally applied across many sports. The following periodization program is geared to the recreational athlete, or dedicated fitness enthusiast. The program is progressive and attacks the important elements of fitness and athleticism.

Developing the Program

To develop a sound training program, it is necessary to examine the sport requirements and/or client goals. We will use a needs analysis approach and develop a program using a hypothetical athlete. We will assume the client is able to perform the exercises selected and has been cleared to exercise. It will also be assumed that the athlete is looking to improve overall strength and energy.

Depending on time, it may be necessary to vary workouts from 2 to 4 times per week. Since we will try to develop strength, power, balance, speed, and agility, we will favor doing a two-day or three-day workout. If time permits, the two-day workout can be doubled, making four work days during a week. To develop overall skills, we will stick to gross movements consisting of multiple joint exercises in the weight room, and take it to the field for the conditioning and other components.

The first thing to do is to determine the relative energy requirements of the particular sport the athlete is interested in. In the case of many recreational athletes, this will vary quite a bit, as most are involved in several activities. The second component of our training prescription is deciding on the appropriate number of repetitions and sets for both resistance training exercises, and balance, agility, and power related exercises. Again, we need to be specific in terms of applying suitable volume based on sport need. For the general fitness enthusiast, repetition range should be between 5 and 12.

Keeping in mind that time is always an issue, we recommend doing a complete body workout preceded, or followed by interval training, plyometrics, agilities and rotational training. This will depend on the time of year and the client's needs.

Interval Training

Interval training is a very good method of training because it allows maximal effort for repeated trials. This benefit allows more time at the maximal level because the rest interval will allow recovery. Rather than performing one continuous session or short session, multiple sessions can be performed on the same training day. Thus, two, three, four, or more times the amount of work can be performed. However, it should be noted that for best results, the athlete must give 100% effort both mentally and physically for the prescribed times in each interval.

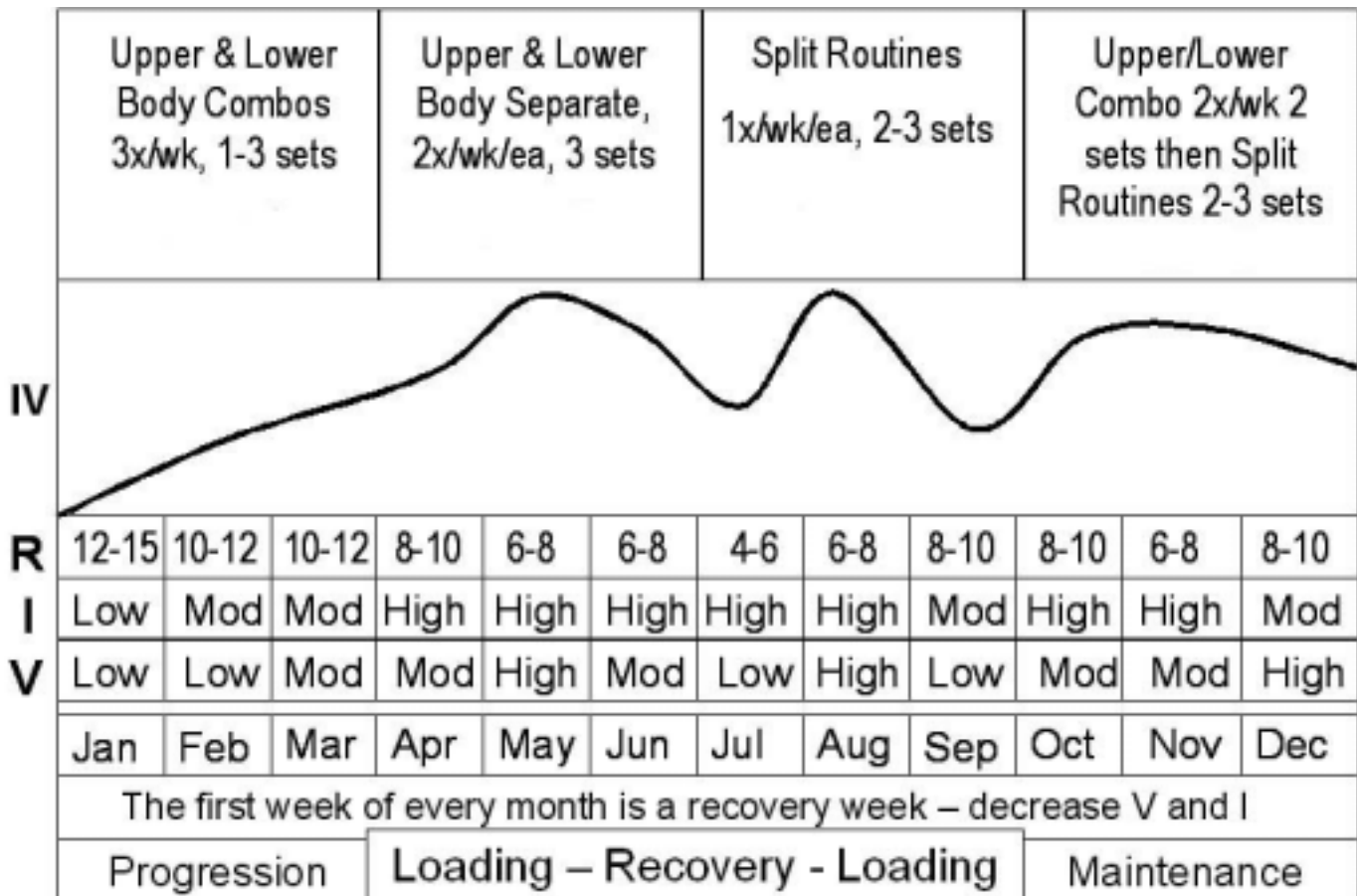


Table 2: Combo Routines

Day 1	Day 2	Day 3
Squat or Leg Press	Lunge	Bench Press
Bench Press	Dumbbell Press	3 Position Pulls*
Pull-up	Dumbbell Row	Squat
Step-up	Leg Extension	Leg Curl
Incline Dumbbell Press	Dumbbell Press	Calf Raise
Bent Over/Machine Row	Leg Curl	Superset Bicep Curl and Tricep Extension
Romanian Deadlift	Biceps	
Rotator-Cuff Circuit	Triceps	

Table 3: Upper-Lower Routines

Upper 1	Upper 2	Lower 1
Bench Press	Pull-Up	Step-Up
Incline Press	Dumbbell Bench Press	Lunge
Military Press (standing)	Dumbbell Row	Squat
Triceps Extension	Incline Dumbbell Press	Leg Curl
Bent-Over Row	Dumbbell Shrug	Romanian Deadlift
Lat Pull-down	Dumbbell Triceps Extension	Plantar Flexion
Shrugs	Dumbbell Curls	Dorsi-flexion
Biceps Curls		

Table 4: Split Routines

Push	Pull	Push/Pull Combo
Bench Press	Cable/Pulley Row	Lunge
Squat	Deadlift	Incline Dumbbell Press
Military Press	Chin-Up	Step Up
Step Up	Leg Curl	Upright Row
Triceps Extension	High Pull	Russian Deadlift
Calf Raise	Biceps Curl	Biceps
Back Extension	Crunch	Triceps
		Crunch w/ Twist

Varying Routines

Periodization is the act of changing routines to meet needs. Identifying those needs allow us to build a good program. It is our suggestion that no cycle should last more than 4 to 5 weeks and that the end of each cycle include a “tapering” or “detraining” week to prevent staleness. Overall, the volume and intensity should reflect the time of year and clients specific goals, with lower volume and intensity work occurring during busy or active times and high-volume work when more time and effort can be afforded towards the workouts.

Summary

Periodization is a necessity, especially when looking at the true metabolic and biomechanical demands of the sport. A key component for developing good programs is the ability and the knowledge to for-see problems and have a method to modify them. When using periodization, the percentage-based method should only be used with sports requiring “one-time” peaking such as lifting or certain track and field events. However, it does not mean that it is wrong to use the %1RM method for your sport. In most cases however, it is suitable to use the “best set” as the basis for the program.

References

Fleck S, Kraemer W. 1997. *Designing resistance training programs*. Champaign, IL: Human Kinetics.

About the Author

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