



## Athlete Health and Wellbeing

### Sports Science – Macrocycles and Mesocycles

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Hello once again coaches, parents and athletes and thank you for taking the time in reading this article. The aim for this article is to give everyone a background knowledge on the types of training we can complete without touching a volleyball, the benefits of each and how they apply to our sport of volleyball along with some general physiology.

Before we get into what makes up session, we must consider what makes up an entire season, year or Olympic period (denoted macrocycle in S&C). How your training goal modulates through your macrocycle will depend on your goal and often blocks are created which we call mesocycles. For example, if you wanted to peak your physical preparedness for the 2020 PVL/JPVL season, your mesocycle arrangement on a 52-week macrocycle plan would look very different in comparison to an athlete competing at the 2022 Commonwealth Games.

For our mesocycles, as volleyball players who don't require excessive aerobic fitness, the main goals are hypertrophy (increase in muscle size), strength development (increase in maximal exertion), power (the ability to use strength quickly) and maintenance periods (usually in season where the goal is not to excessively fatigue but to maintain or slightly build muscle). As power is the main goal for us as volleyball athletes, it would be excellent if we could focus on that and that alone. However, in order to be very powerful we need to be strong and to be strong we need to have some degree of muscle mass (strength is somewhat proportionate to size).

For general hypertrophy training a medium to high resistance is placed on the desired muscle groups for a moderate set and rep range. For strength, a very high load is used for a small number of reps and for power training, resistance is often varied significantly with speed being the key technical cue.

For more information regarding periodisation planning, what makes up each type of training, or other types of training that you may have heard of but either do not fully understand or would like more information on, please contact our High Performance Coordinator via the details provided above.