

In the first part of this rationale, I described the team of volleyball players whom I have begun coaching this past week. The players are 13-14-year-old freshmen who have not been training in the off season, including some of whom are not overly athletic. This leads me to believe that when it comes to training of any kind, my team is at the beginner level. While planning a training regimen for them using the tools and resources provided through the course, this beginner status could not be forgotten. Of course, if, during training, individuals prove themselves to be more capable than my original assessment I will adjust the program accordingly. Essentially, this is the first high school sport these girls will ever play, and they are unaccustomed to a lot of conditioning and training. There are quite a few goals I could set for my team, but I believe that strength is important, and should be the training goal of this precious pre-season time I have. There are a little less than 6 weeks until our first game (a tournament), but following the program described here should help my players gain strength in some vital areas that will make them better volleyball players in general.

Strength is important in volleyball because there are many different movements that occur during a game that involve hitting the volleyball in some fashion. Players can bump, set, spike, serve, etc. but they must be able to perform these actions accurately, powerfully, and without injury. While power is a worthy goal and an obvious factor, the knowledge gained from this course have made me consider that it is more important to develop the strength first, and work on power later when considering my current team. Gaining strength in the muscle groups used during volleyball (mainly the arms and legs) will not only benefit the game, it can also help prevent injury that could potentially happen while training. Due to their beginner status, it is important not to over-train, so the strength training would only happen 1-2 times a week. During these sessions, the girls would perform a variety of exercises in a specific order: power exercises

first, then non-power core exercises. Assistance exercises could come next, although I am choosing to skip them in order to focus on the previous two types of exercises.

Power exercises for this group of girls would include upper and lower body exercises (alternating), and some push and pull exercises (also alternating). This type of exercise involves performing exercises quickly and/or explosively. An example of a power exercise that could work is a push press, or an exercise similar in nature. This exercise involves extending the hip and knee quickly, pushing a bar off the shoulders, and finishing by pressing the bar overhead. The number of repetitions and volume of sets during each work out will depend on different players' abilities. Players should be working with heavier loads at small sets—5 or less. There should be a 2-5 minute rest period between exercises, and alternating the upper and lower body exercises will help provide more time for the body to rest as well. Another power exercise that could be beneficially utilized would be a power clean, or—again—something like this type of exercise. The power clean exercise involves pulling a bar rapidly (with force) from the floor to the front of the shoulders. On the 1-2 days a week that players perform these types of exercises, I would limit the variety of exercises to 2-3 upper and lower body exercises each.

After power exercises, there should be some non-power core exercises. These types of exercises include (but are not limited to) squats, bench presses, dead lifts, shoulder presses, lunges, etc. For my girls, I would start with some basic squats and/or lunges. These types of exercises help to strengthen the muscle groups in the legs, as well as various core muscles. The forces needed to move (walk, run, jump, etc.) in general begin in the core muscles, and it is incredibly important for a volleyball player to have a strong core. Structural exercises that load the spine directly or indirectly help to strengthen the core muscles, which ultimately can result from this type of training.

The last part of the strength training program would be assistance exercises, if they are necessary or if the players are ready for this type of training. My players are new to all of this, and I would skip the assistance exercises for now in order to focus on the power and non-power exercises. Assistance exercises are beneficial because they focus on smaller muscle areas and one joint, yet can be considered less important when thinking about improving sport performance. My training goal is strength, so in order to progress correctly and not over train or exhaust my players, strength training without assistance exercises could be a good fit.

It is also incredibly important for volleyball players to be able to accelerate and move quickly. This can be trained using metabolic conditioning. Volleyball games can last a long time, and volleyball players must be able to perform at high intensity levels for brief periods of time followed by rest periods. Metabolic conditioning helps the body learn to function optimally under circumstances it will face during a volleyball game. Interval training or high intensity interval training could help players' bodies adapt to working hard for minutes at a time and then resting. High intensity interval training is an effective way to increase the maximal oxygen uptake, which could be beneficial on the court for volleyball players. This type of training specifically requires players to spend less than or equal to 2-3 minutes at 90% VO₂, and then rest for less than or equal to 2 minutes. One way to train in this capacity is to run sprints, or suicides as they are colloquially known. This type of exercise requires players to work hard and often times in an "all out" fashion, and can improve running speed and economy. Effective volleyball players must be fast and able to accelerate quickly in order to reach the ball in time.

The players also need to spend some time working on the fundamental skills of volleyball. This includes (but it not limited to) serving, spiking, passing, receiving the serve, setting, and digging. In order to avoid over training or injuring the athletes, strength training

would occur 1-2 times a week while different types of metabolic conditioning would occur every other day in the beginning, and would continually increase week after week, but never more than 10% per week. Players would work on the fundamentals daily. The described program should produce strength in the athletes, as well as allow them to perform their very best throughout a volleyball game.