

Speed and Endurance

Technique is the procedure or skill used to execute a task. Percussion technique consists of three basic stroke motions.

1. Rebound stroke. Used for notes of the same or gradually changing dynamics.
2. Up stroke - to prepare for a louder note.
3. Down stroke - to prepare for a softer note.

Speed and Endurance

Speed and endurance are two different skills that are best attained via distinct types of training. Physiologically, there are two types of muscle tissue in our body – fast-twitch and slow-twitch fibers. We are each born with a particular ratio of these tissues and are genetically inclined to be more successful, for example, as either a sprinter or long distance runner depending on our particular genetically predetermined ratio. Nonetheless, both types of tissue can be trained - to a degree. Too often, players combine speed and endurance into one exercise, which compromises their attainment of both.

Developing endurance

The best way to develop endurance is to train at a slower, steady rate of speed for long periods of time; training slow-twitch muscle fibers. An efficient supply of oxygen to the muscles is best accomplished via long, slow, nasal breathing. Fatigue is usually the result of oxygen depletion, causing the muscles to fail, and is usually due to inefficient breathing. I recommend John Douillard – *Body, Mind, Sport* for an excellent discussion of breathing techniques. He is a sports medicine specialist who trains athletes and his discussion of health and fitness is very applicable to musicians.

Two basic types of exercises should be learned. Use elapsed time (stopwatch) and rate or tempo (metronome) to gauge your progress.

Fixed time period; variable tempo

1. Use a stopwatch to measure a fixed period of time, perhaps a minute or two.
2. Play at a consistent dynamic the fastest tempo possible for the entire period. Adjust the tempo, if necessary, but do not stop until the period is complete.
3. Rest for a period of a minute or two focusing on long-slow nasal breathing.
4. Repeat this cycle.

Open time period; fixed tempo

1. Determine a challenging tempo.
2. Set stopwatch.
3. Play for as long as you can, at a consistent dynamic, until you completely fatigue. Focus on long, slow, nasal breathing.
4. Record time period. With regular practice you should observe a gradual lengthening of this period.

Developing speed

The best way to develop speed is to train like a sprinter – run short bursts of speed for short periods of time; training fast-twitch muscle fibers.

Two approaches may be used.

1. Extremely short bursts – one to two seconds. Practice two through nine notes per limb (any more than this requires endurance) as fast as possible with a brief rest between each group. Each of the groups should be played in a specific rhythm pattern at specific tempo in order to gauge your progress. Numerous rhythm patterns are possible for each group. Identify your own patterns to practice, using duple or triple based rhythm patterns, and memorize these. Your goal is to compress the notes within each group as close as possible so that your limbs learn, or adapt to, what it feels like to move quickly without endurance becoming an issue.
2. Interval training. Sets of sprints and recovery periods. Vary the intensity of the sprint, intensity of the recovery, duration of the sprint, or duration of the recovery. I would suggest beginning with a cycle consisting of a 10 second sprint and a 30 second recovery. The sprint should be as fast as possible and the recovery should include playing, but at a very slow rate. In any case, don't do the next sprint until you are completely recovered from the previous one.