WHY YOU NEED TO SPRINT TRAIN

When it comes to sprint workouts that train short, maximal-effort running intervals, many Bootcampers—always trying to push the intensity envelope—expect to reduce the rest period as much as possible. However, this changes the focus and stimulus of the workout—and not necessarily for the better. We have all heard of “adrenaline junkies”; these athletes are “lactic acid junkies,” harbouring the misconception that unless you are close being sick, you haven’t worked hard enough.

Wrong. It depends on what you are working on. Pure strength or power workouts generally don’t get you to the state of lying on the floor, gasping for breath, feeling absolutely wiped out and ready to throw up, and neither should a sprint workout where the focus is really on sprint technique and high power output.

When you work predominantly type-2b muscle fibers using the phosphagen system, little to no lactic acid is produced. So, when you do short sprint interval work, you should not produce much lactic acid.

You will start to tire after repeated efforts (those muscle fibers will take a beating) and you may be a little sore the next day or two, as the muscles have worked hard, but you shouldn’t feel any significant lactic acid burn.

In contrast, consider a normal bootcamp workout with shuttle runs

Despite the “look” of these workouts, they really are not interval training workouts; they are circuit training workouts. By definition, interval training is a series of periods of exercise and rest. These circuit workouts do not have any significant rest periods incorporated into their design; you are meant to storm through as fast as you can. Granted, if you aren’t strong enough and fit enough to move through them without breaks, you will end up working in intervals and will use more of the phosphagen and glycolytic systems during the work phases and then use the oxidative system to recover. However, stronger athletes can work continually during these types of workouts will be obtaining the majority of their energy via the oxidative system. These athletes are working sub-maximally at each individual effort.

These types of workouts challenge the oxidative system and hence your cardio respiratory fitness. But these Bootcamp circuits also challenge the muscular endurance of every muscle group; improve your skill, and develop balance and core stability.

However, these longer workouts are not about improving your sprint performance. The metabolic hit these workouts deliver to the oxidative system (and a very large number of muscle groups) is very strong, so you fatigue and the 100 meter runs are like a jog (or maybe a cruise for the fitter athlete); they are certainly not 100-meter maximal sprints. Not so long ago, one circuit session included 20-meter shuttle runs, but it was a multi-round workout with several other exercises, so the runs would have to be performed at less than maximal pace due to fatigue. To train at maximal pace. You must rest between the bouts of exercise.

Although the circuit training sessions rely predominantly on the oxidative system, if you really push for a good time or high number of rounds you will also finish with high lactic acid concentrations, so the glycolytic system will certainly have been stressed and you might feel a little sickly. But these kinds of workouts do not target type-2b muscle fibres and the phosphagen system. For that you need power work and maximal sprints… and relatively long rest intervals.

Don’t worry if when you do a sprint workout or a heavy plyometric session you may not feel as if you have worked as hard as on a circuit training type of workouts. Routine is the enemy.

Per Astrand, a world-renowned exercise physiologist argues that major adaptations for human survival “were consistent with habitual physical activity, including endurance and peak effort alternated with rest.” We evolved performing lots of endurance activities such as tracking animals, moving with the seasons, gathering food and materials, building shelter, etc. However, we also required very short-duration outputs of peak power during fights and sprints (to chase, or flee, an opponent or animal). Hence, sprinting distances of 10 to 40 meters is probably one of the most fundamental physical survival skills we ever developed as humans. If you were fleeing a more powerful animal you probably would be sprinting a short distance to safety or shelter. If you were too far away from safety you would have to turn and fight. Either way, you needed to be powerful….and the outcome, good or bad, was probably decided in a matter of seconds.