



The New Jersey Police Chief

The Official Publication of the New Jersey State Association of Chiefs of Police

Vol. 19, No. 6 • June 2013

INSIDE THIS ISSUE:

- *From the President's Desk*
- *A "Victory" - I Think Not!*
- *FBI Releases Preliminary Statistics for Law Enforcement Officers Killed in the Line of Duty*

Police Chiefs In-Service Seminar
A Leadership Retreat for Senior Commanders

HIIT ME!

By Matt Brzycki, Assistant Director of Campus Recreation, Fitness, Princeton University

One of the latest trends in fitness is High Intensity Interval Training or HIIT. Basically, HIIT is a form of anaerobic training. And consistent with anaerobic training, HIIT involves periods of high-intensity activity alternated with periods of low-intensity activity.

The roots of HIIT can be traced back to a 1996 study that was led by Dr. Izumi Tabata. In that study, seven subjects did HIIT four times per week for six weeks. Each workout consisted of seven to eight repeats of 20 seconds of all-out sprinting on a stationary cycle with 10 seconds of recovery between each sprint. (This has since become known as the Tabata Protocol.) Once per week, the subjects also did 30 minutes of aerobic training along with four repeats of 20 seconds of all-out sprinting on a stationary cycle with 10 seconds of recovery between each sprint. The subjects not only increased their anaerobic fitness by about 28% but also significantly improved their aerobic fitness by almost 15%. Since this seminal study, a growing body of research has found that HIIT can produce benefits that are nothing short of spectacular.

In a more recent study, for example, researchers assigned 16 subjects to two groups: One group did aerobic training that consisted of 90 to 120 minutes of continuous exertion. The other group did HIIT that consisted of four to six repeats of a Wingate Test (30 seconds of all-out sprinting on a stationary cycle) with four minutes of recovery between each sprint. Both groups did their assigned workout six times over a period of two weeks. In a cycling test that equated to about 18.65 miles, the group that did aerobic training improved their time by 7.5% while the group that did HIIT improved their time by 10.1%; in a cycling test that equated to about 1.24 miles, the group that did aerobic training improved their time by 3.5% while the group that did HIIT improved their time by 4.1%. And get this: Over the two-week period, the total exercise time of the group that did aerobic training was 630 minutes while the total exercise time of the group that did HIIT was 15 minutes (135 minutes if you count the recovery taken between sprints). Wow.

Although in most studies, HIIT was done on a stationary cycle, a wide range of equipment can be used. Inside the gym, this includes rowers, ellipticals and treadmills; outside the gym, this includes running on a track and swimming in a pool.

So how can you incorporate HIIT into your fitness program? A variety of protocols can be used for HIIT but the general idea is to do an all-out effort that lasts about 10 to 30 seconds followed by a less intense effort of about 30 to 60 seconds. **So you might pedal a bike as fast as possible for 10 seconds then "free wheel" for 20 seconds. Or** you might run as fast as possible for 30 seconds then walk for 60 seconds. Regardless of the protocol that you employ, the sequence would be repeated such that you accumulate a total of about three to four minutes of intense activity.

Be advised that because of its highly intense nature, HIIT isn't recommended for everyone. If you opt to do HIIT, you must ease into it and progress gradually to avoid injury. Early on, for instance, you should use a lower level of intensity with shorter work intervals and longer recovery intervals.

Bottom line: HIIT is an effective and efficient way to improve your fitness.

Matt Brzycki is the Assistant Director of Campus Recreation, Fitness at Princeton University in Princeton, New Jersey. A former Marine Drill Instructor, he has authored, co-authored and edited 17 books including his latest, the fourth edition of A Practical Approach to Strength Training.