An Ergometer and Training System Developed at the University of Texas at Austin

Question: "What 10 min HIT workout improves both Max Power & VO_{2max} with training but is not 'very hard'?"

Answer: The 'Inertial Load' (IL) cycling method lets a person 'sprint' maximally from 0 to >150 RPM in approximately 4 sec. against the inertial load provided by the 'un-braked' flywheel. Training sessions are 10 min in total time with only 1-2 minutes of actual exercise. Cycle sprints are performed repeatedly with various recovery periods (e.g.; 15-60 sec).

- **Taking 30 sec of recovery** allows 18 sprints, of 4 sec duration, to be performed in about 10 min. Oxygen consumption stabilizes at 55-60% VO_{2max} and blood lactate is 4 mM and perceived exertion is not 'hard'.
- **Taking 15 sec recovery** allows 30 sprints to be performed in about 10 min. Oxygen consumption stabilizes at 70-75% VO_{2max} and blood lactate is 7 mM and perceived exertion is 16 (less than 'very hard'). Repeat 'all-out' 30 sec Wingate intervals are more than 'very hard'!
- **After 8 weeks of training**, thigh muscle volume (from MRI) increases significantly, maximal power increases 12-17% and VO_{2max} increases 10-15% in men and women who are young and older.
- **The Inertial Loading (IL) of the PowerCycle** allows a person to exert maximal effort through the full spectrum of the torque vs. velocity curve in a single 4 sec bout.
- **Instant feedback** of maximal power provided for each sprint.

Effective training for people with limited time but who want to derive health benefits and improve both maximal anaerobic and aerobic power.

More information to come about PowerCycle

References

