

The 7 Stages™ of Power

Chronic exercisers aren't losing weight, nor are they achieving cardiovascular goals, why?

- Lack of an objective training plan.
- Training at too high of intensities without allowing for proper adaptation.
- Lack of information regarding your **Output** and the **Stress** that creates on one's system.

Output: In this case, your measurable efforts in terms of Watts produced.

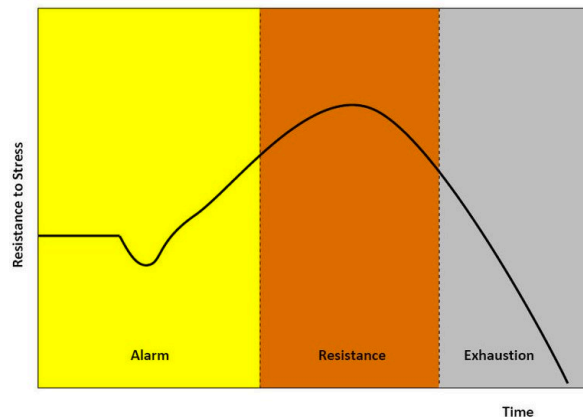
Stress: This output comes at various cumulative physical "costs."

Eustress vs. Distress

Alarm: When stress is identified the body's first response is alarm. Fight or flight.

Resistance: If the stressor persists, it becomes necessary to form a coping mechanism to keep up with the new demands.

Exhaustion: If continued, resources will be depleted. Bodily functions become impaired. Long-term or acute damage is possible.



Knowing that "rest" is imperative for growth, why is this so difficult for us to accept?

Fitness – Fatigue = Form

How do I use this information to improve my classes?

- Easily create an objective training plan
- Training at appropriate intensities allows for proper adaptation and superior form.
- Specific information regarding your **Output** and the **Stress** that creates on one's system.

References and recommended reading:

Allen, H., and A. Coggan. Training and Racing with a Power Meter. VeloPress, 2006

Hans Selye, History of the Stress Concept. Ch. 2 in [Leo Goldberger](#) and [Shlomo Breznitz](#) *Handbook of Stress: Theoretical and Clinical Aspects*. Free Press, 1982

Adaptation	1 Active Recovery	2 Endurance	3 Tempo	4 Lactate Threshold	5 VO₂Max	6 Anaerobic Capacity	7 Neuro- muscular Power
Increased plasma volume		+	++	+++	++++	+	
Increase muscle mitochondrial enzymes		++	+++	++++	++	+	
Increased lactate threshold		++	+++	++++	++	+	
Increased muscle glycogen storage		++	++++	+++	++	+	
Hypertrophy of slow-twitch muscle fibers		+	++	++	+++	+	
Increased muscle capillarization		+	++	++	+++	+	
Interconversion of fast-twitch muscle fibers		++	+++	+++	++	+	
Increased stroke volume		+	++	+++	++++	+	
Increased VO ₂ Max		+	++	+++	++++	+	
Increased ATP stores						+	++
Increased Anaerobic Capacity					+	+++	+
Hypertrophy of fast-twitch muscle fibers						+	++
Increased neuromuscular power						+	+++

Note: Plus signs represent the magnitude of training adaptation give a “dose” of training. More plus signs equals greater adaptation. (Allen and Coggan 2006)