

### Gym Science and Overtraining Syndrome

We love to see it; chiseled bodies sculpted from sweat and dedication. We hate to listen to it; those with chiseled bodies that lack knowledge of basic muscle physiology, yet consistently pitch unsolicited exercise advice. Cue— Gym Science; awareness created from experience, tradition and superstition.

It is no unicorn that progressive overload is recommended to increase adaptation in muscles, tendons (Davis' Law), ligaments, bones (Wolff's Law), ect. However, it becomes dangerous and detrimental to progress when exercise is misused. Nonfunctional overreaching and overtraining syndrome (OTS) decreases glycogen and glutamine, while increases central fatigue and oxidative stress, resulting in negative symptoms not intended for the athlete. Defense mechanisms for OTS include; periodization, adequate nutrition, and common sense (if you're exhausted, take a break).

Okay— so why are people recommending this? Perhaps we can start with lack of accreditation and knowledge of individualism. Personal trainers (PT) are not required to have a permissible license, thus limiting complex education and regulation. Okay— Jimmy with 25% BF has a PhD in exercise physiology, but Dwayne 'The Rock' Johnson can crush a watermelon between his thighs while singing me happy birthday. Which gets more YouTube views? Ethical appeal eternally fuels Gym Science and attempts to deteriorate individualism. Modern societal standards generate momentum through the success of influencers. Although their diet, muscle fibers, environment, past medical history, social security number, ect. may be polar opposite of someone, they are influenced to abide by the influencer's recommendations to generate similar results.

Although experience increases and reinforces knowledge, it is paramount to generate a permissible licensure for PTs to decrease complications of OTS and ensure accurate exercise prescription.