

# OVERTRAINING

## WHAT IT IS & HOW TO ADDRESS IT

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As we sifted through the various articles we have written so far, we felt it was time to discuss the ever-sleeping giant, **OVERTRAINING**. Not many of us realize it but there are numerous subtle and not so subtle signs of overtraining that the body experiences physically and the mind experiences emotionally.



These signs and symptoms are difficult to observe and even harder to acknowledge and accept. In this installment of Athletic Trainers Perspective, we will be defining overtraining, how it occurs, what to look out for, how to address it and how to prevent it from happening in the future. Let's dive in.

## OVERTRAINING'S MANY DEFINITIONS

Overtraining, if you have experienced it, is exactly as it sounds. An individual is simply doing too much activity for the body to continue producing physiological and psychological benefits and the individual begins to experience subtle declines in performance and daily life. This is but a lamens explanation of overtraining. There are numerous scientific and colloquial definitions of overtraining "... Burnout, chronic overwork, physical overstrain, overfatigue" (Baechle EdD CSCS & Earle MA CSCS, 2008) These can discuss both physiological and psychological elements and it can be daunting and frustrating as this author is sure to tell you. However, we listed examples of two of the most concise scientific ones for a better understanding.

"Overtraining occurs because of an imbalance between a physical load placed on an athlete and his or her coping capacity. Both physiological and psychological factors underlie overtraining." (Prentice PhD, 2011)

"Overtraining occurs when the individual trains at a greater level than he or she might be accustomed to in terms of frequency, intensity, and duration." (Lox, Martin Ginis, & Petuzello, 2010)

# CONTRIBUTORS TO OVERTRAINING: PHYSIOLOGICAL & PSYCHOLOGICAL

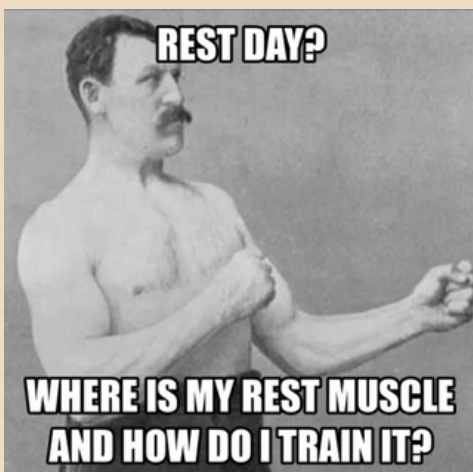
We have to consider both physiological and psychological elements to exercise health and wellness to understand what overtraining is and better identify when it is happening. We know how it occurs now, right? To put it simply, doing too much in our exercise/fitness programs. Now let's discuss potential causes of doing too much because it most certainly can sneak up on you when you least expect it.

## PHYSIOLOGICAL

The most common physiological element that we see in the fitness/exercise realm that causes overtraining is inappropriate or misguided programming. Yes, programming is a physiological concern. Some of you understand the ins and outs of programming and understand how to utilize periodization within the larger exercise program (i.e. be able to define and appropriately utilize micro, macro, and meso cycles).



The following quote should help explain overtraining for individuals that study kinesiology, are certified personal trainers, and/or strength coaches: "Fatigue that follows one or more exhaustive training sessions usually is relieved by a few days of reduced training or rest and a carbohydrate-rich diet. Overtraining, on the other hand, is characterized by a sudden decline in performance and physiological function that cannot be remedied by a few days of reduced training, rest, or dietary manipulation." (Wilmore PhD, Costil PhD, & Larry Kenney PhD, 2008).



In addition, individuals that participate in overreaching and overload principles as part of their exercise programs can be at an increased risk for overtraining. These smaller periodizations use volumes that exceed an individual's 'normal training volume thereby increasing the risk of overtraining. This again is more common when the larger fitness/exercise program does not plan for appropriate rest, and recovery cycles and especially when refueling is inadequate.



## PSYCHOLOGICAL

The most common psychological element that we see in the fitness/exercise realm that attributes to overtraining is called staleness. Staleness is exactly as it sounds, dull boring, 'over it,' no longer as good as it once was. This is a syndrome that will come up on your google research related to overtraining. Often times staleness syndrome is synonymous with or can be a precursor to overtraining: "Staleness is often attributed to emotional problems stemming from daily worries, fears, and anxieties." (Prentice PhD, 2011). We have to consider that there are psychological/emotional elements that exist outside of the training atmosphere which will impact our performance.

## A FRUSTRATING COMBINATION

As we can see, overtraining is commonly caused by overworking the body both physically and stressing it mentally in varying amounts of time, intensity and volume without appropriate rest/recovery. It's nothing short of compounding interest we owe on our bodies and minds. We all must remember, especially if you work in health care or health and wellness that there are existential circumstances surrounding the people we help. Do not discount elements surrounding, work and social lifestyles while attempting to get 'bricked up'. They are equally responsible for the causes of overtraining.

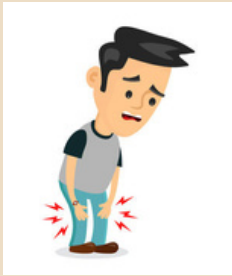


**"I do The Beatles Workout. I'm so tired because I carry that weight down the long and winding road 8 days a week!"**

# SIGNS & SYMPTOMS

Let's move into the signs and symptoms. To be clear, signs and symptoms of overtraining are to be evaluated on a case-by-case basis and specifically related to each individual's experience. What we have listed below are the more commonly perceived and observable signs and symptoms of overtraining.

## Physiological signs and symptoms of Overtraining include but are not limited to:



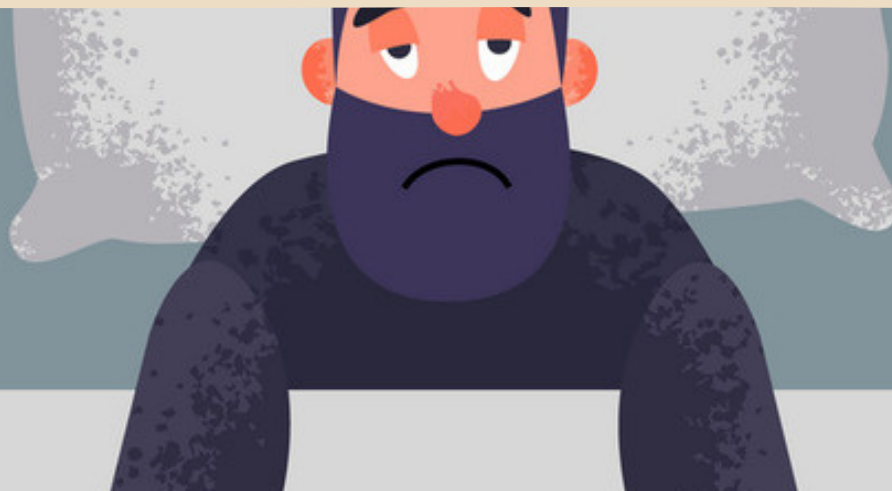
- Increased resting heart rate
- Increased blood pressure
- Early onset fatigue
- Body weight loss
- Decrease in performance
- Anticipation of muscle soreness prior to competition or high-stress situations



## Psychological, emotional, and behavioral signs and symptoms of Overtraining include but are not limited to:



- Change in appetite
- Sleep disturbances
- Irritability, restlessness, excitability, anxiousness
- Loss of motivation or vigor
- Lack of mental concentration
- Feelings of depression
- Lack of appreciation for things that are normally enjoyable



# HOW TO ADDRESS OVERTRAINING

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How do we address an individual that we believe may be experiencing overtraining? How do you address signs and symptoms of overtraining? The easiest action and oftentimes the best first step to take is to seek out resources to learn how to address such a delicate topic. The best way to address an individual you believe is experiencing this is to reach out to someone who is trained and has the knowledge and experience to address the person it is affecting appropriately and precisely. While both of these actions are relatively easy it can still be difficult to have someone listen and understand what they are doing is detrimental to their health and that changes need to be made.

We must remind ourselves that overtraining like other mental health concerns is not simple, it is not an easy fix, this is not something to downplay, it will not wear off, and it is not a phase. You have to remain patient and seek help as soon as possible.

## YOU HAVE RESOURCES AVAILABLE

Seeking advice to get the person the help they need is the single best course of action you can begin to take. Below is a list of resources available to you on campus if you need to get started:



- <https://counseling.umd.edu/cs/resources>
- <https://counseling.umd.edu/cs/commonconcerns>
- <https://counseling.umd.edu/sites/default/files/2021-11/resourcedirectory.pdf>

The other side of this coin is to plan and prepare a detailed program filled with variety and rest/recovery periods. This all surrounds the topic of periodization. Periodization has numerous models that are specific to each sport or each client's fitness/exercise goals. Periodization is a very large and brutally detailed view of the overall fitness/exercise program. "The first component of periodization consists of dividing the annual plan into shorter, more manageable training phases. Doing so enhances the organization and allows the coach to conduct the program systematically." (Bompa PhD & Buzzichelli, 2022). That's just the beginning as previously mentioned you also need the knowledge/understanding of meso, macro, and micro cycles to apply this safely.

Now there is a lot more to discuss, but we can save that for another article. In short, you need to look at the big picture to plan for the smaller and more detailed pieces of the health and wellness puzzle. Again this may require professional help. A Certified Personal Trainer, Certified Strength Coach, Athletic Trainer, and Physical Therapist are great resources to ask about programs compared to health and wellness goals.





## CONCLUSION

In conclusion, overtraining affects the human body both physically and mentally. It is due to inappropriate programming in which the body is taking on excess volume than the person normally experiences and neglects to factor in daily work-life stressors. Remember, the best way to address overtraining is to seek out professional help to create lasting changes in your exercise/fitness program and help with emotional challenges should they arise. We hope you enjoyed this article.

## REFERENCES

- BAECHLE EDD CSCS \*D NSCA CPT \*D, T. R., & EARLE MA CSCS \*D NSCA-CPT \*D, R. W. (2008). ESSENTIALS OF STRENGTH TRAINING AND CONDITIONING (3RD ED.). CHAMPAIGN, IL: HUMAN KINETICS.**
- BOMPA PHD, T. O., & BUZZICHELLI, C. A. (2022). PERIODIZATION OF STRENGTH TRAINING FOR SPORTS (4TH ED.). CHAMPAGIN: HUMAN KINETICS.**
- LOX, C. L., MARTIN GINIS, K. A., & PETUZZELLO, S. J. (2010). THE PSYCHOLOGY OF EXERCISE INTEGRATING THEORY AND PRACTICE (3RD ED.). SCOTTSDALE: HOLCOMB HATHAWAY, PUBLISHERS, INC.**
- PRENTICE PHDD, A. P. (2011). PRINCIPLES OF ATHLETIC TRAINING A COMPETENCY-BASED APPROACH (14TH ED.). NEW YORK: MCGRAW-HILL COMPANIES, INC.**
- WILMORE PHD, J. H., COSTIL PHD, D. L., & LARRY KENNEY PHD, W. (2008). PHYSIOLOGY OF SPORT AND EXERCISE (4TH ED.). CHAMPAIGN, IL: HUMAN KINETICS.**



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