



Excessive Strength Focus?

WEEKLY

By Dr. Mike T. Nelson

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Here is a question that has kept me up many a night. How do you determine what type of training is best for an athlete without running them through a program to know?

If you have trained clients/athletes for any length of time, you know that not all of them respond the same to training. Some respond well to pure strength work and it seems that you can pound them into the ground and they spring back up like those darn dandelions that you can never kill. Send them through the proverbial "brick wall of training" from hell, and they just brush it off and ask for more.

Others tend to crumble much faster and feel like they got run over by a Peterbuilt truck. Subjective feedback is a great way, but is there a more quantitative way to determine it? Hold on to your squat suit since I believe there is a way to do it.

Enter Heart Rate Variability (HRV)

Heart rate variability used to only be available to huge geeks like me in the lab, but advances in technology has made it possible to run it through smart phone at a fraction of the price.



What Is HRV?

HRV is technically the fine scale variability—how much your heart rate (HR) changes ever so slightly from one beat to the next. Instead of looking at just your average heart rate, when we look into it further, we find that this slight variation holds valuable information about your physiologic health⁴ and potentially even your metabolic health (ability to burn fat)^{1,2,3}.

HRV analysis gives you the status of the autonomic nervous system (ANS) which has 2 branches. 1) The Parasympathetic (aka rest and digest) and 2) The Sympathetic (aka fight or flight). Both are important for training and recovery. In a perfect world, you want a balance of both. Too much parasympathetic and you will feel horrible

and sleepy as you drool on your couch all day (which can happen to athletes that are massively overtrained).

Too much sympathetic and you are burning the candle at both ends and impairing your recovery (oh, I've done that). If you keep it up, you will drive yourself and your gains right into the ground. (crap, I've done that too).

HRV tells you the state of your ANS—is it go time in the gym or is it better to do some low intensity recovery-based work so you can hit it hard the next day? This is great info, but is there a way to set it up to determine a better training template BEFORE you even start? I believe this is possible.



HRV, Rabbit Holes, and Training Templates

A bit more down the rabbit hole is a typical set up that I run to see how the athlete responds to different training stressors.

HRV Testing Template Set Up

2 days off, strength session (singles, double, triples), measure HRV

2 days off, hypertrophy session (dudebrah hypertrophy work, rep range 10-15), measure HRV

Here is how it breaks down - After 2 days off, I have the client do a strength/power session, measure HRV for 2 days after (off days), then repeat with a more "dudebrah hypertrophy isolation" type day (again, depends on the athlete's goals of course) and measure HRV again. This gives you an idea of how they respond to the 2 different types of stressors and roughly how much recovery you will need. Generally, I find that the higher intensity day is more

Train like an animal. Think like a human.



stressful to the athlete. I now have data to set up their template of training.

Hypertrophy/Strength Hybrid Example

The most common request I get from athlete is that they want to perform better and LOOK better too. They want a nice mix of muscle hypertrophy and strength without adding a crap ton of fat in the process. Many times this is similar to powerlifters who may need to put on a bit of size to jump to the next weight class while maintaining a great physique.

Here is an example of how I used this HRV testing template with a client who was a natural pro bodybuilder. In the past, he had been doing a very high intensity based program 3-5 days per week before working with me. He had stalled out and was feeling more and more beat up with an accumulating list of injuries/ achy joints.

We ran that above experiment several times and each time the strength-based sessions were more stressful to him. However, hypertrophy work was not very stressful. In the end, he did about 1 pure strength/power session per week and 3-4 hypertrophy sessions at 30-50,000 lbs of volume each session. He did awesome, got stronger and added muscle too. For whatever reason, this training was more in tune with his body which recovered better from this type of stress.

Actual Template For Strength/Hypertrophy Hybrid 1

Sunday	Rest-day / Optional HIIT
Monday	Strength based session, 3-5 rep range, compound lifts
Tuesday	Rest-day / Optional blood flow restriction work, 10 min total
Wednesday	Hypertrophy work, upper body
Thursday	Hypertrophy weak point work
Friday	Rest-day / Low intensity cardio
Saturday	Hypertrophy work, lower body

We later modified by including one strength based compound lift at the start of the hypertrophy session. This gave him a bit more complete rest days and the hypertrophy

work helped mitigate a bit of the stress response from the strength work. This would not be my first preference if the athlete needed to add strength in order to get bigger, but he was already pretty strong.

Actual Template for Strength/Hypertrophy Hybrid 2

Sunday	Rest-day / Optional HIIT
Monday	Strength work, bench / Upper body hypertrophy
Tuesday	Rest-day / Optional blood flow restriction work, 10 min total
Wednesday	Strength work, front squat, lower body hypertrophy
Thursday	Hypertrophy weak point work (optional)
Friday	Rest-day / Low intensity cardio
Saturday	Strength work, deadlift (trap bar), beach muscle day (arms / shoulders)

Summary

You can use HRV to help determine what split may work best for your athletes by looking at the acute stress response to different types of training. This will save you many, many weeks vs. running a more strength based program for 4-12 weeks and finding out that the athlete was not that much stronger and just felt more and more beat up over time.

Test it out!

--Dr Mike



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About the Author

Dr. Nelson has spent more than a decade of his life learning how the human body works, specifically focusing on how to properly condition it to burn fat and become stronger, more flexible, and healthier. He has a PhD in Exercise Physiology, holds a BA in Natural Science, and an MS in Mechanical Engineering (Biomechanics). He currently teaches exercise physiology and nutrition classes for Globe University. Through techniques he's developed and his client's

results, Mike has been featured in international magazines, in scientific publications, and on websites across the globe. Visit www.miketnelson.com for more of his work. Dr. Nelson also has an ongoing lecture series in the RTS Classroom. [Check it out here!](#)

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