

What Is Exercise?

- “Activity requiring physical effort, carried out to sustain or improve health and fitness”
- SUSTAIN or IMPROVE
 - We are either progressing or regressing with maintenance keeping that balance of two in stasis.
- Exercise at its simplest form is a stressor elicited upon the body.
- SRA - Stress / Recovery / Adaptation
 - The single most important concept on building your fitness base comes with understanding this mechanism.
 - Without recovery there can be no adaptation.
 - “Minimum effective dose” - Less is more, work smarter not harder, simple not easy.



What Is The Goal Here?

- It is important to find your why and have a plan when it comes to exercise.
 - Gain Muscle? Lose Body Fat? Increase Performance? Longevity?
 - This starts with assessing where you are at currently. If you are new to training you may be able to see a blend of these. As your training age increases and experience with exercise grows then the focus has to hone in a bit more.
 - Remember, exercise is a stress input to our bodies. Sending various signals via all sorts of exercise modalities MAY not be the right strategy for you if you have very specific goals.
 - For example: A goal of increasing lean muscle mass while continuing to run 5+ miles 3-5x/week adds a conflicting energy cost necessary for the anabolic state conducive for increases to lean muscle mass. In this situation, lowering running to “minium effective dose to maintain cardiovascular fitness” is more conducive IF the goal is soley to increase lean muscle mass.



Working Within Your Functional Capabilities

- Put simply, you can't move where you can't move
- ANY and ALL exercises can provide benefit when done with proper mobility and stability.
 - We want Mostability (“Gray Institute”) when it comes to our movement capabilities.
- Just because an exercise is touted as “the best” does not mean it is the best for YOU.
 - Get assessed by a movement specialist
 - Film yourself and review
 - Hire a coach
- The body will seek success or the path of least resistance when something is impeding its capabilities.
 - Tight tissues preventing proper loading
 - Poor joint mobility
 - Weak/unstable tissue and/or joints
 - A combination of all
- Don't force a square peg into a round hole. Find an exercise variation that works within your functional capabilities while you seek to improve mobility necessary for further advancement.

Is This Working For Me?

- This all starts with tracking EVERYTHING you do.
- Your goal every week should be to exceed prior week's performance and at minimum, maintain it. If you are not able to meet prior week's performance you have not fully recovered.
 - Exceeded prior week performance = adapted
 - Met prior week performance = maintained
 - Below prior week performance = regression / under recovery
- Example: Squats
 - Week 1: 3x10 with 135lb RIR 2
 - Week 2: 3x11 with 135lb RIR 2 (same intensity but higher volume, body is adapted and CAPABLE of more).



Understanding Intensity and Progressive Overload

- How hard you work is equally as important as the choice of exercise. If the effort and intensity is too easy then the stress signal will not create the desired adaptation.
 - At the same time, a lighter stress signal may be great for a light day to help maintain progress and facilitate recovery.
 - We need a lot less volume typically to maintain progress compared to what it took to gain that same progress.
- RIR - Reps In Reserve or RPE - Rate of Perceived Exertion
 - Utilizing RIR/RPE is a great way to understand and track how your body is handling exercise stress.
 - A general recommendation for most is to seek an RIR/RPE of 2/8, or leave two good form reps left in reserve.
 - Working to failure is unnecessary for most and comes with higher risk of injury plus a higher recovery cost for a small return of investment.
- Calibrate often
 - The mind will sometimes serve as a block to what we really can do. Stopping short of an appropriate RIR can limit progression and may even fall below the “minimum effective dose” appropriate to adapt. Every once in a while see what it’s like to truly fail under safe conditions and see if your RIR scaling is correct.



Double Rep Progression - A Simple Way To Progress

Step 1: Pick a rep range

- Do you typically like doing 3x10? Try higher or lower reps. Something novel will send a very loud stress signal.
- Various rep ranges will stimulate slightly different adaptations.
 - Lower typically better for strength, and middle to higher better for hypertrophy and endurance. However, ALL rep ranges can serve the goal of building muscle and strength as long as working close to failure.

Step 2: Apply RIR and progress through said rep range for 4-12 weeks

- Week 1: 135lb 3x10-12 - Each set was 10 reps @ 2RIR
- Week 2: 135lb 3x10-12 - Each set was 11 reps @ 2RIR
- Week 3: 135lb 3x10-12 - Each set was 12 reps @ 2RIR (you've hit the top of the rep range NOW move up in load)
- Week 4: 145lb 3x10-12 - Each set was 10 reps @ 2RIR

*Eventually the ease of progression may stall with full rep jumps each week. Progression may be smaller via simply adding 1 more rep than the week prior. Going from 10/10/10 to 11/10/10 with the same RIR is progression, albeit smaller.

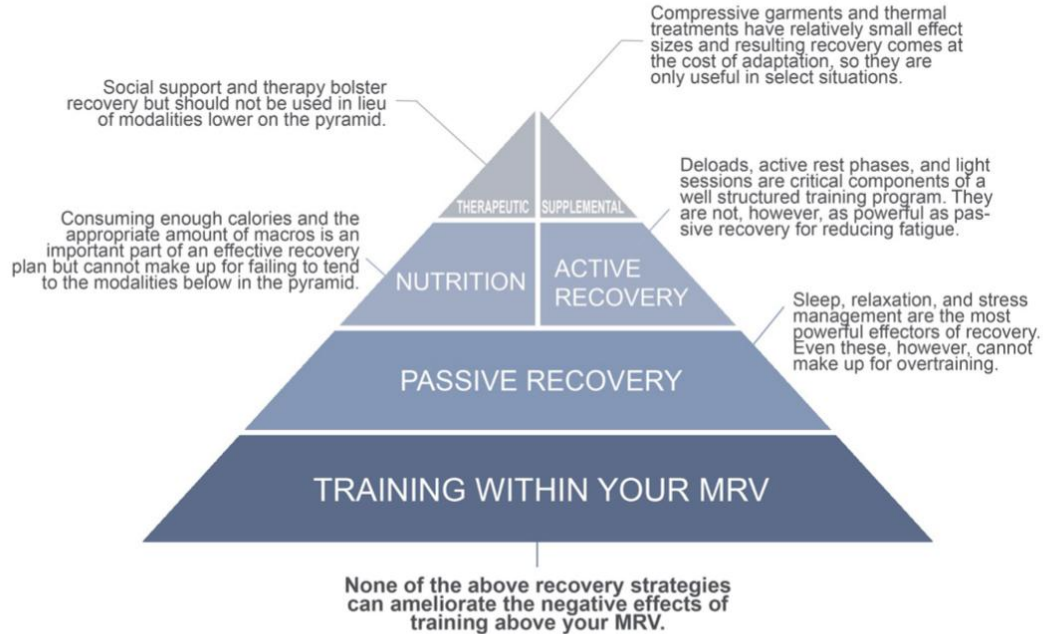
Other Ways To Progressively Overload - Source: Contreras, 2021

- Intensity of load
 - More load for same number of reps
- Intensity of effort
 - Same load x reps with lower RIR/RPE
- Volume (reps)
 - More reps with same load
- Volume (sets)
 - More sets with same load x reps
- Range of motion
 - Increased ROM with same load x reps
- Form
 - Improved technique with the same load x reps
- Mind-muscle connection
 - Increasing muscle squeeze with same load x reps
- Time
 - Same volume-load in less time
- Bodyweight
 - Same load x reps with a change in bodyweight



The Recovery Hierarchy

Figure 4: Primary recovery hierarchy



Source:
“Recovering From
Training”

-Hoffmann,
Israel, Davis

Planning For Recovery

- If you are working hard enough then you will eventually start to exceed your bodies ability to recover optimally and accumulate fatigue.
- One way you can assist with this and continue to progress is via deloads. Deloads are an integral part of programming utilizing planned periods of recovery via lighter days or less volume for the week.
- Volume reduction
 - One version is to simply take your prior week's performance and cut the volume/reps in half while keeping the intensity/load the same.
- Load reduction
 - This can be done in addition to volume reduction or by itself. Take prior week's load and reduce a small percent.
- Full deload
 - Simply taking a full week off from dedicated training. This is best served for vacations and other planned travel you may have throughout the year.
- When to deload?
 - Every 3-6 weeks is best for partial deloads (half volume/load reduction)
 - Every 12 weeks full deload

Why Strength Train?

- Building strength supports longevity immensely via the maintenance or gain of lean muscle mass.
- Injury occurs at tissue overload. The closest thing we have to “injury prevention” is building up higher tissue tolerance via strength training. This in turn provides the ability to handle more force in the tissues and across the joints which may help mitigate an injury inducing situation.
- Strength training is the signal to our bodies and muscles that “we need this stuff around and plan on being functional for a long time” AKA increasing health span.
- It does not have to be all about muscle. Learning to control loaded movement builds resilience and functional capabilities for any human task you can think possible.

Putting The FUN In Functional Training

- Life and our body moves in 3D. While certain loaded movements are best for building strength and muscle they also can create overuse movement patterns and expose our tissue and joints to very little variability.
- Even a joint like the knee has movement in all 3 planes of motion. We often only associate it with the sagittal plane (forward and back movement).
- Utilizing matrices are a great way to build up tissue and joint resiliency by exposing a particular movement pattern to 3D movement.
 - Lunge matrix common directions: Lunge forward, lunge lateral, lunge same side rotational
 - Lunge matrix uncommon directions: Lunge backward, lunge opposite side lateral, lunge opposite side rotational

Summary

1. Find your why and make a plan
2. Assess current functional capabilities and apply work where needed
3. Track EVERYTHING
4. Utilize appropriate intensity for SRA
5. Review prior week's performance and determine if you're progressing
6. Plan for periods of recovery and restoration
7. Supplement in 3D movement/exercise to build a more resilient and functional body