Myo-reps for HIT clients

More Results in Less Time

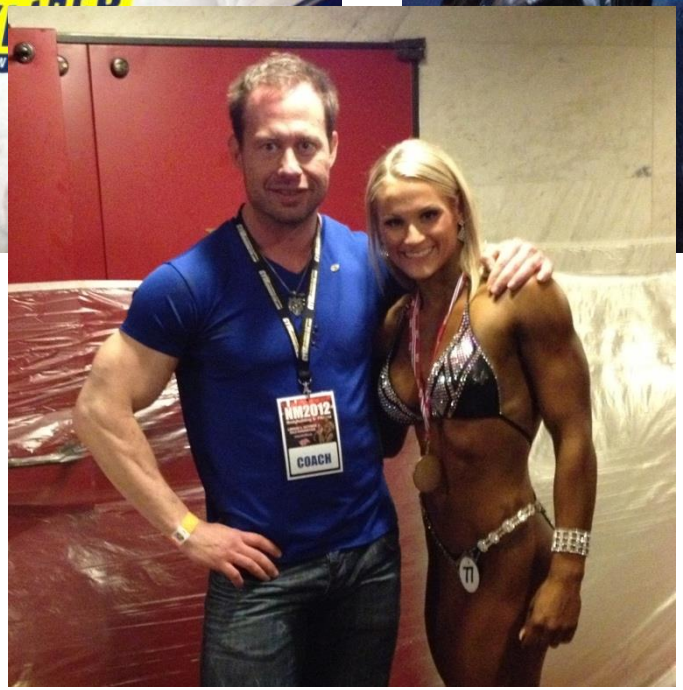
For Every Athlete, Lifter and Client

HIGH INTENSITY BUSINESS

Who am I?

- 50 years old from Norway
- Wife and 7-year old son
- Engineer by education
- 30 years coaching 5000+ clients
- Coach, Mentor, Author, Teacher, Speaker
- Myo-reps E-book (www.myoreps.com)

My clients

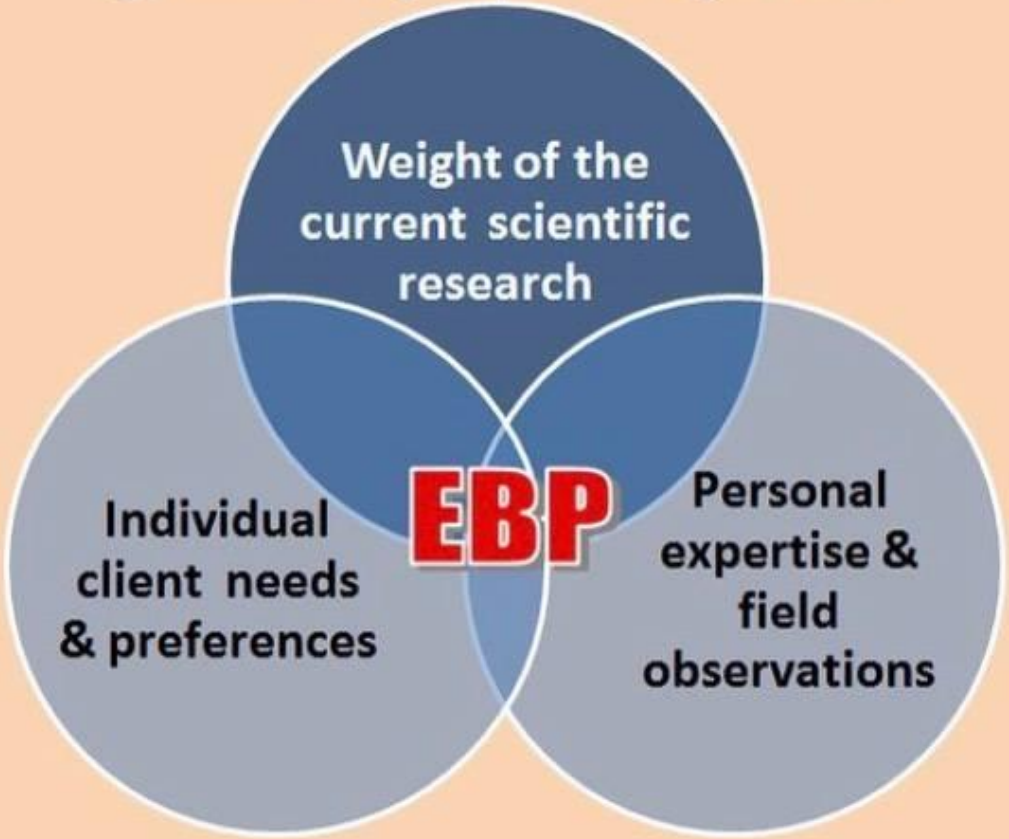



PUMA
CREDIT SUISSE
SWISS LIFE
SRG SSR


OMEGA
OMEGA

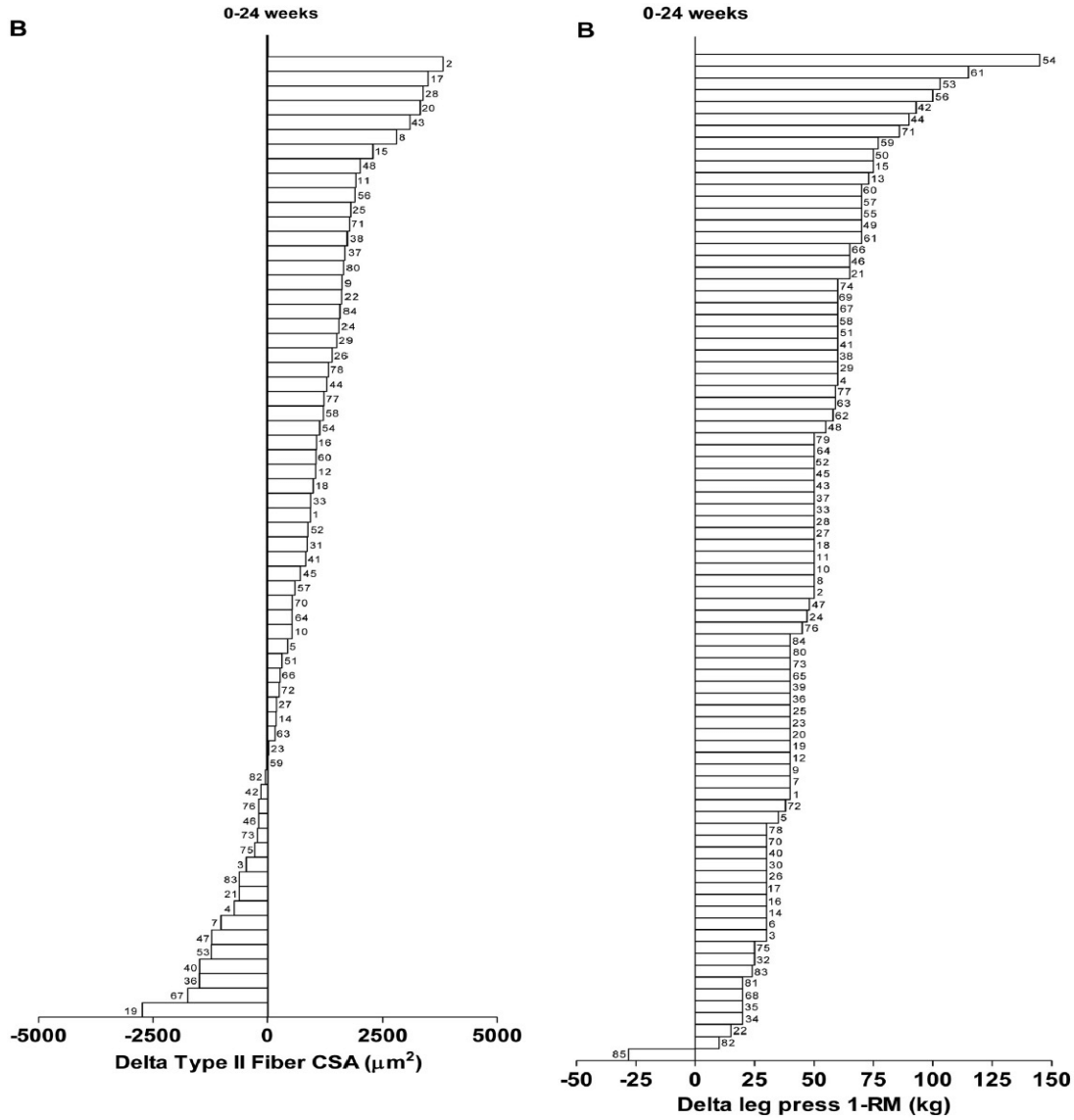
Evidence-Based Practice

@thealanaragon | alanaragon.com

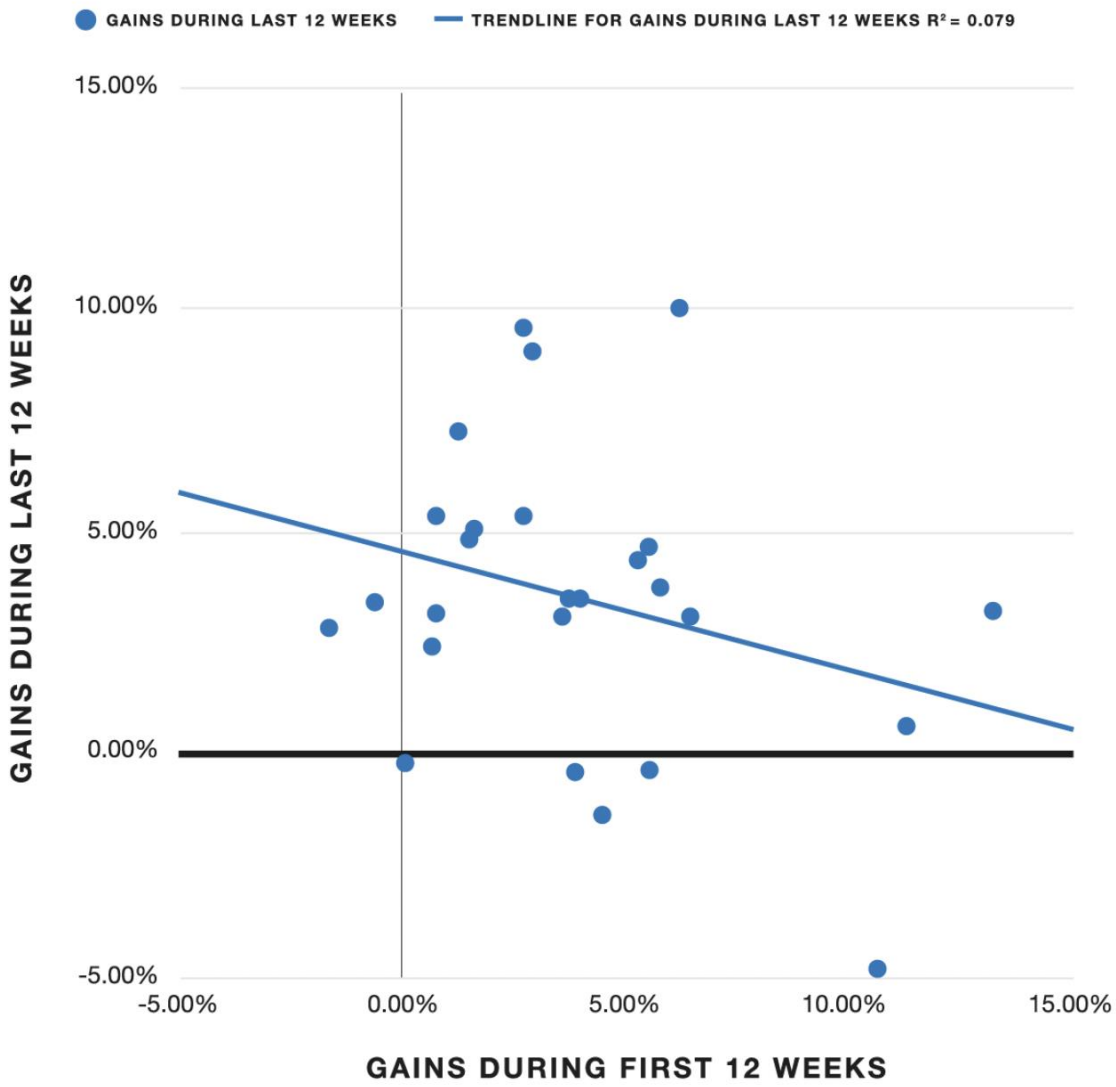


Evidence-based practice (EBP) is a commonly misunderstood concept. Allow me to clear that up... EBP is not limited to PubMed abstracts that you try to dick-slap people with online. ***EBP is where the weight of the scientific evidence converges with experience in the field.*** **Put simply, EBP is where science meets practice.** Cheers to all of the evidence-based practitioners in the field. Pseudoscience and quackery HATE US. ☺

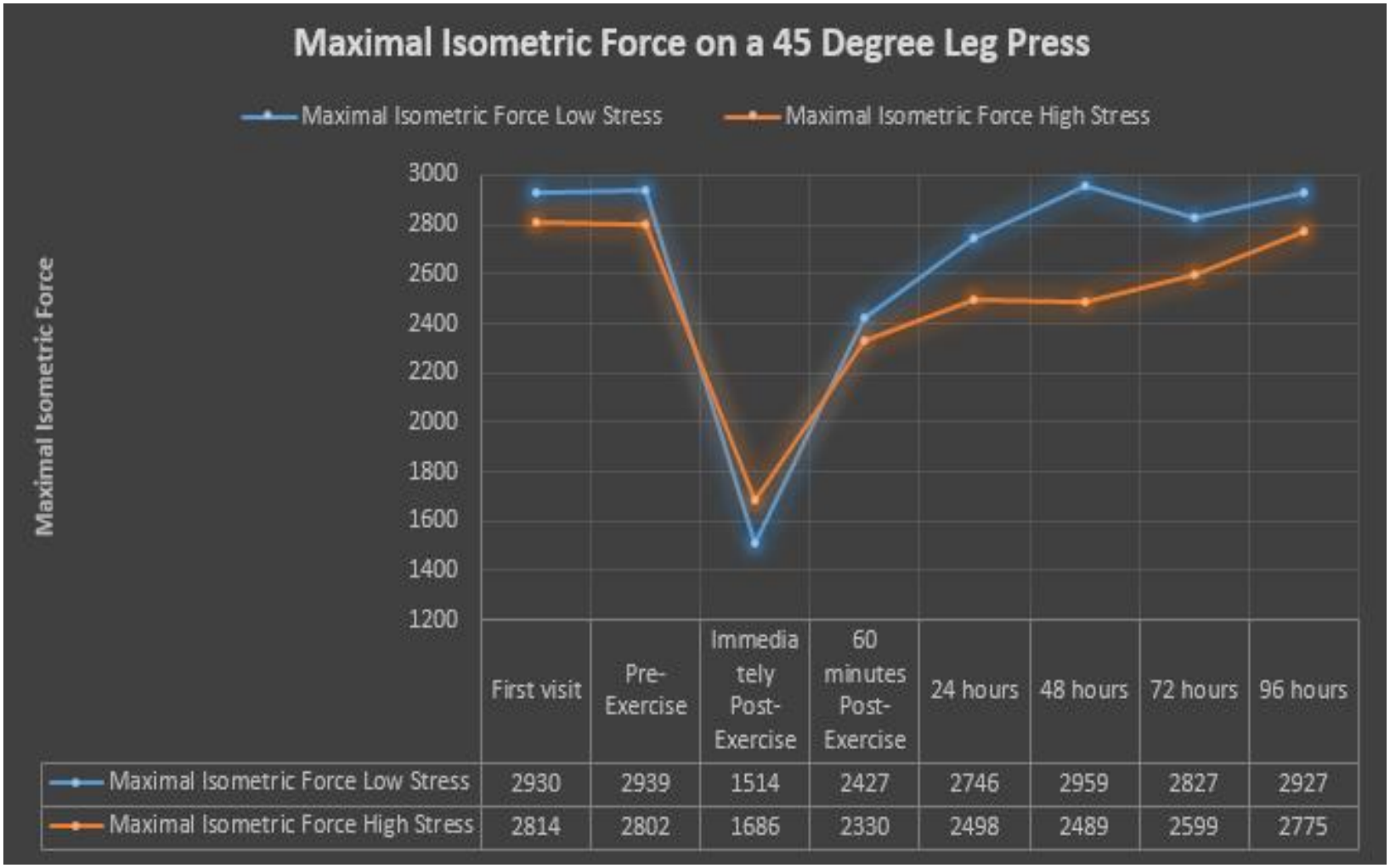
Individual training response



Training Response Over Time

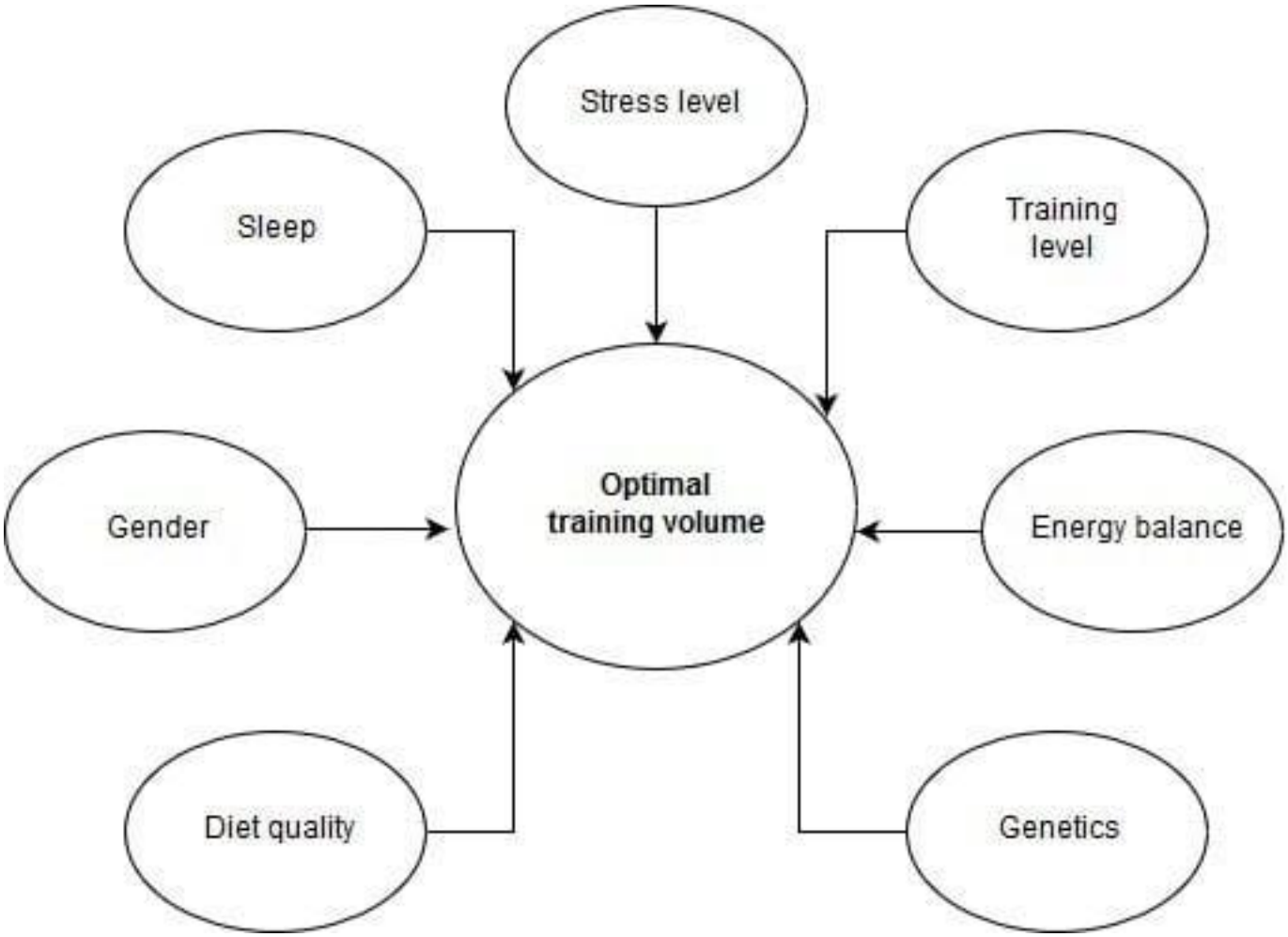


Stress and Recovery – 2 vs 5+ days

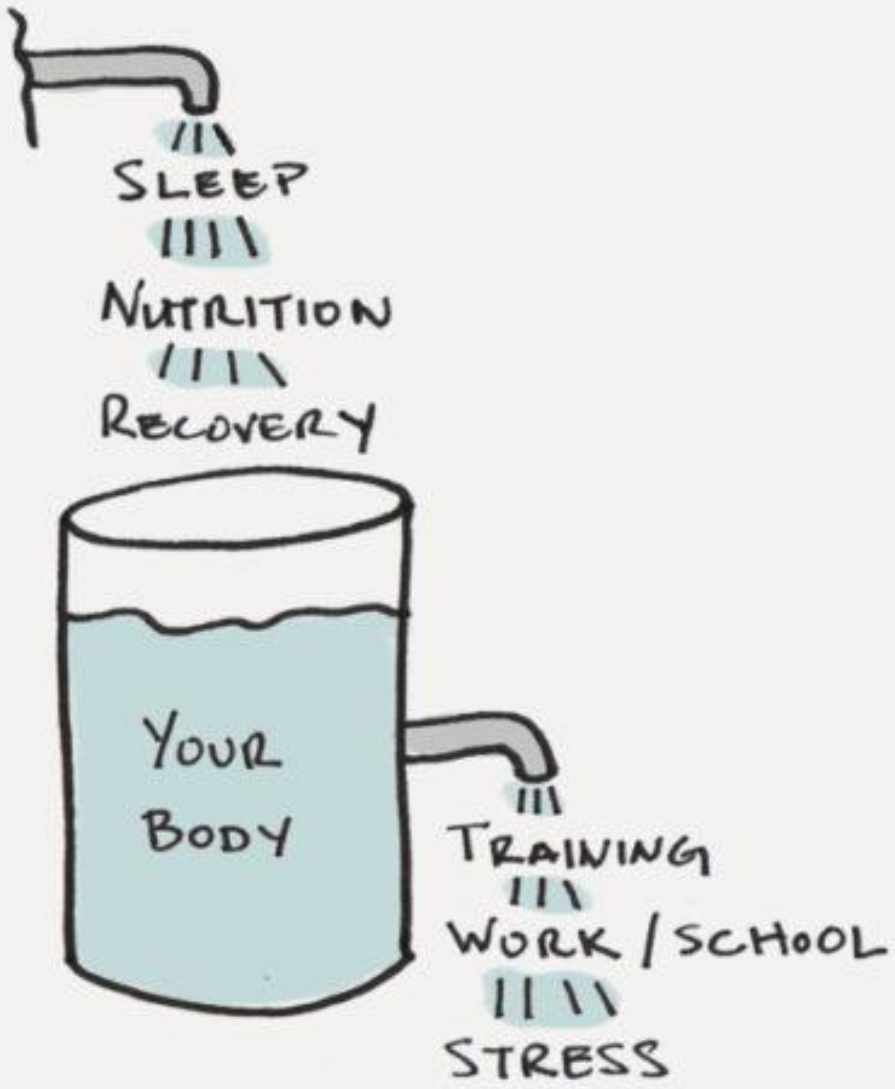


	First visit	Pre-Exercise	Immediately Post-Exercise	60 minutes Post-Exercise	24 hours	48 hours	72 hours	96 hours
Maximal Isometric Force Low Stress	2930	2939	1514	2427	2746	2959	2827	2927
Maximal Isometric Force High Stress	2814	2802	1686	2330	2498	2489	2599	2775

Consider the totality of your environment



KEEP YOUR BUCKET FULL



myo-reps

Myo-reps - 2005

- 163,000 hits on Google
- 7000 YouTube videos
- Curriculum of major PT Schools and Unis today
- Featured by: Renaissance Periodisation, Jeremy Ethier, Jeff Nippard, Sean Nalewanyj, Dan Go, Christian Thibaudeau, Menno Henselmans, Mike Tuchscherer, Testosterone Nation

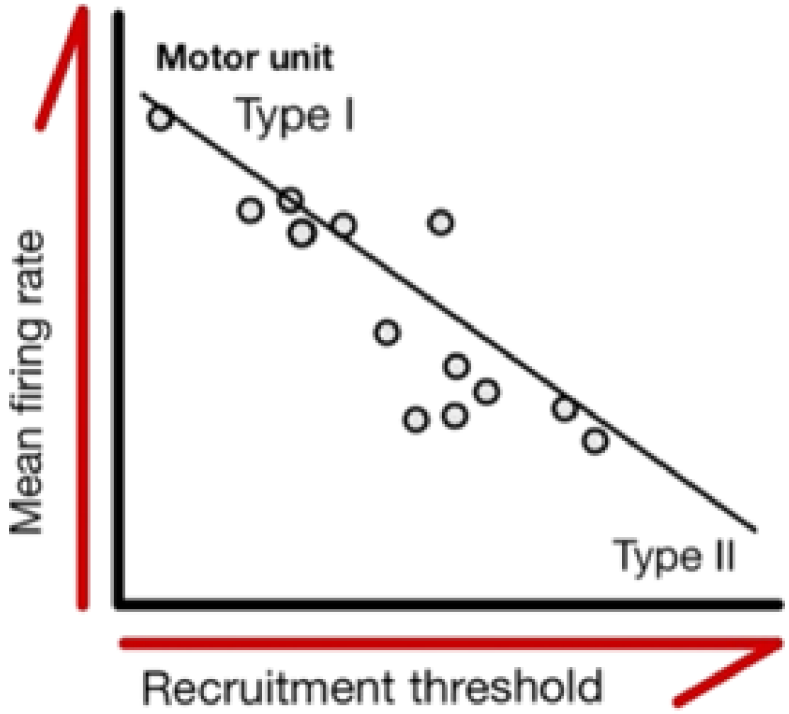
Effective Re
Science Exp
2.6M views • 4 ye
Jeff Nippar
The "effective rep
The concept has

More Gains
1.5M views • 2 ye
Jeremy Eth
If you're in a crazy
Intro

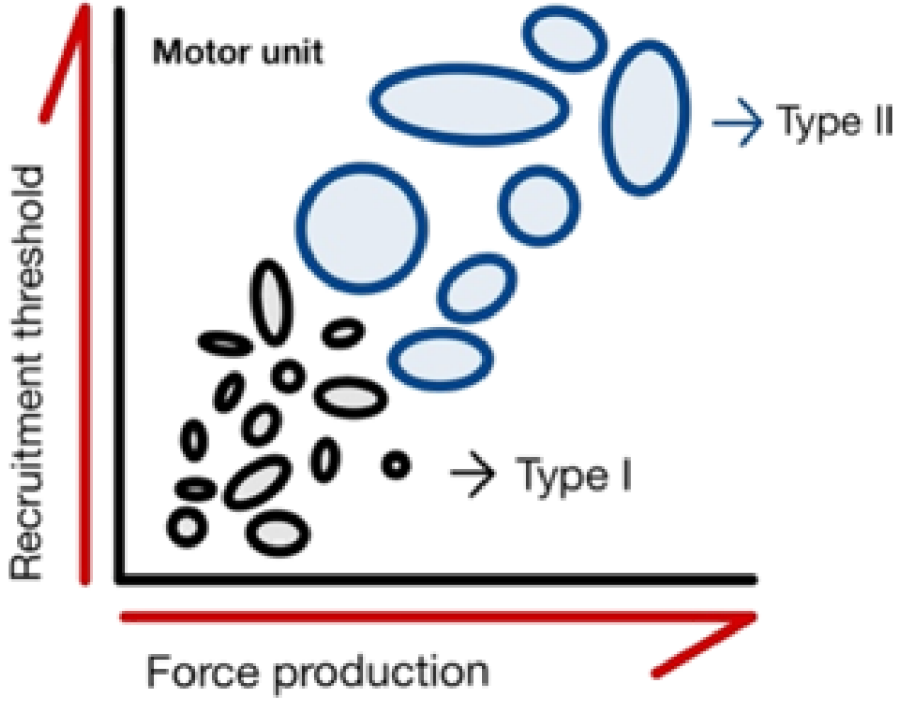
'Myo-reps can help with building muscle,' said Schwarzenegger, 'because it taps into many of the ways that a muscle grows. In particular, muscular tension, metabolic stress, and muscular damage are the three primary drivers of growth. Plus, the limited rest will keep your heart pumping.'

'Just because a workout is short doesn't mean you can't see amazing results,' he added.

Henneman's Size Principle



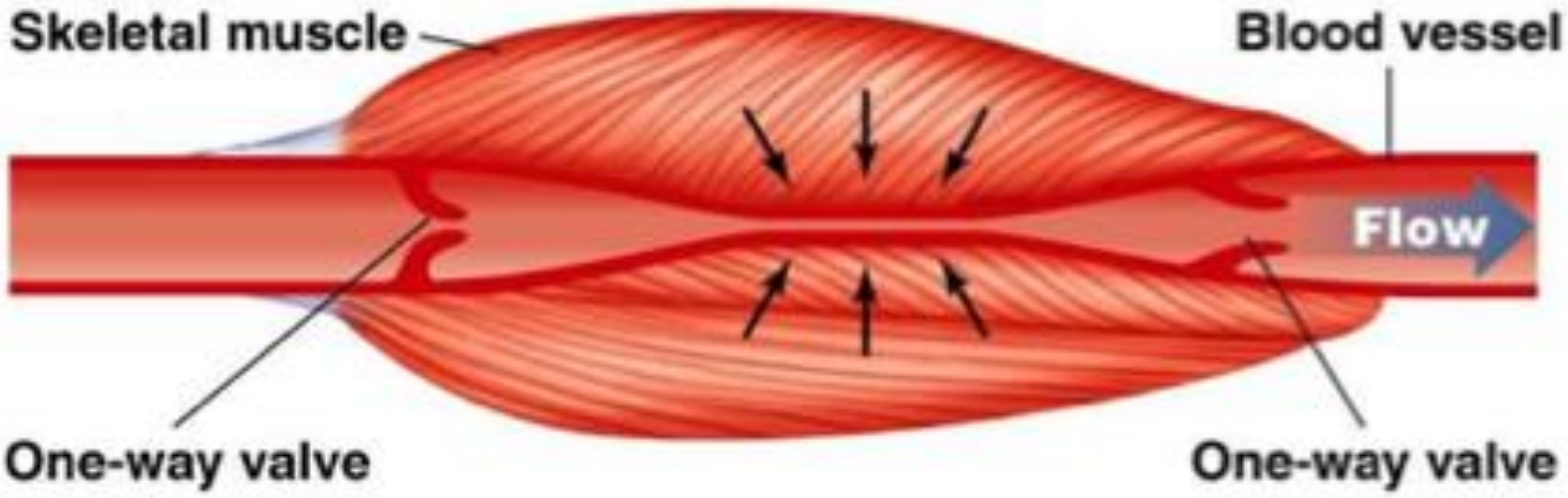
(a)



(b)

Blood Flow Restriction - KAATSU

Dr Yoshiaki Sato

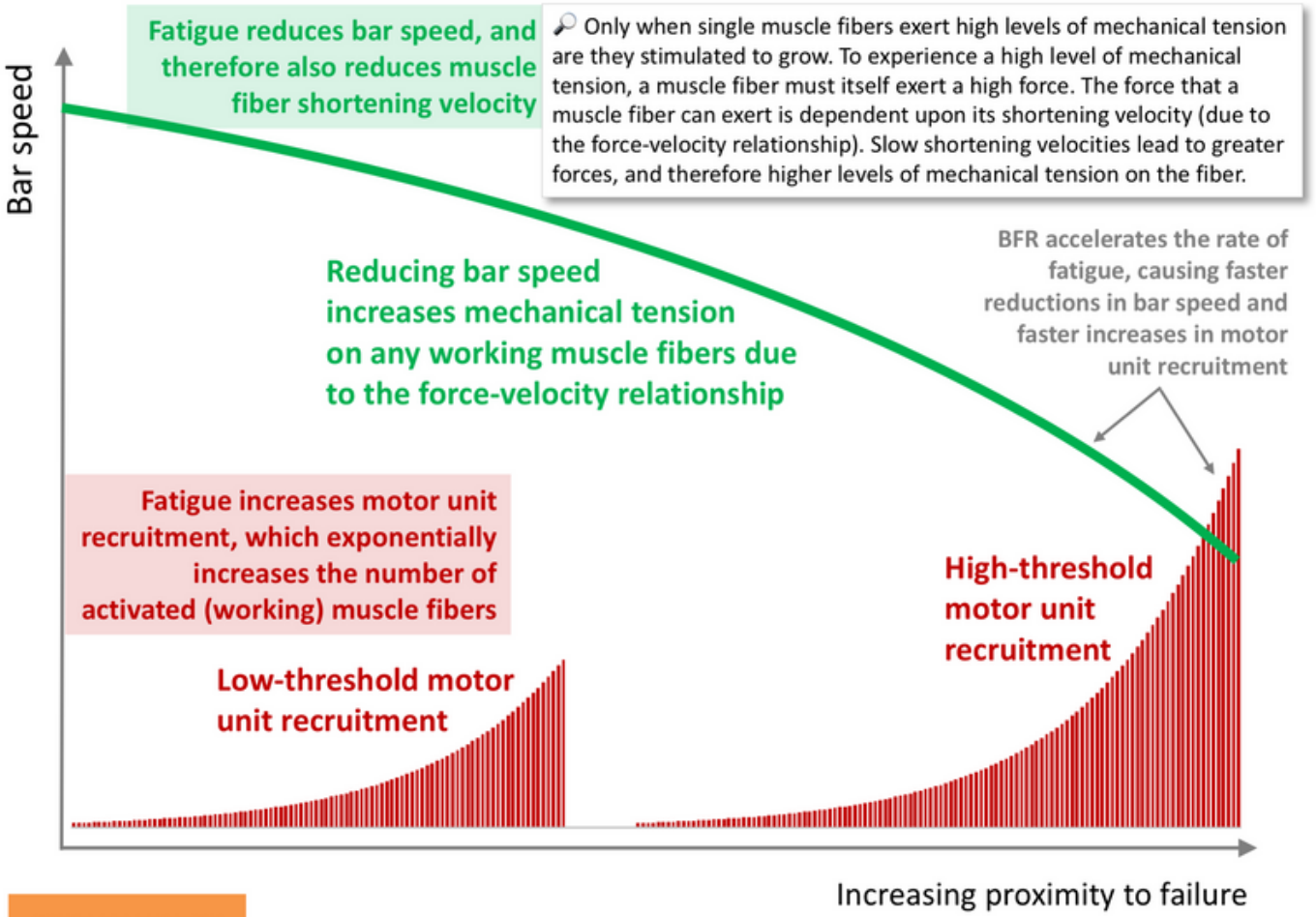


(b) External pump


structure
structure
structure
© Revolution Series/Luke Webber

Mathias Wernbom

Light load strength training in combination with blood flow restriction (BFR) likely triggers hypertrophy because fatigue causes the fibers controlled by high-threshold motor units to experience high levels of mechanical tension



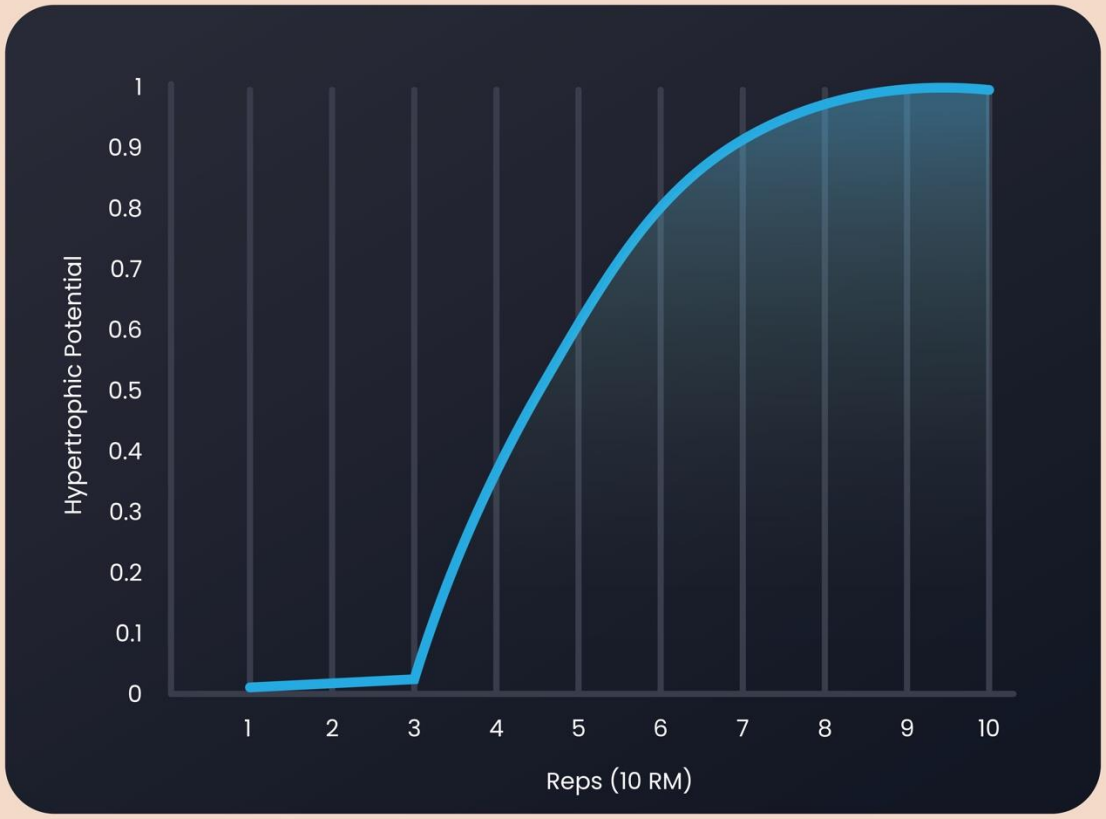
SUMMARY

Blood flow restriction (BFR) training is often thought to cause hypertrophy through metabolic stress. However, this hypothesis is unnecessary. In fact, the fatigue caused by light load strength training is simply accelerated by BFR. This fatigue increases motor unit recruitment and reduces bar speed, which reduces muscle fiber shortening velocity, thereby allowing the fibers of high-threshold motor units to exert high forces and experience high mechanical tension.

Author: Chris Beardsley

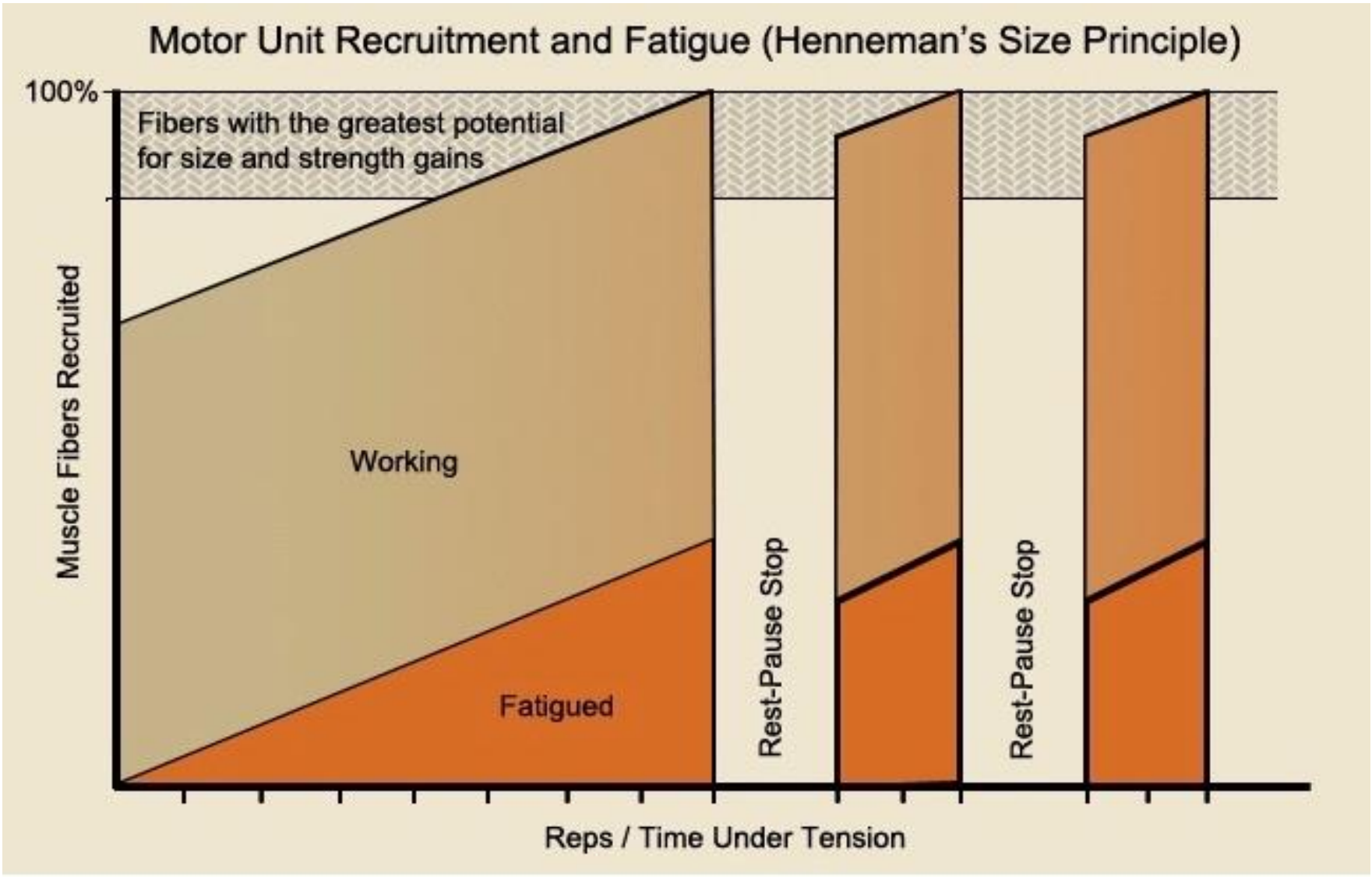
Strength & Conditioning Research

«Effective» reps – Borge Fagerli (2006)

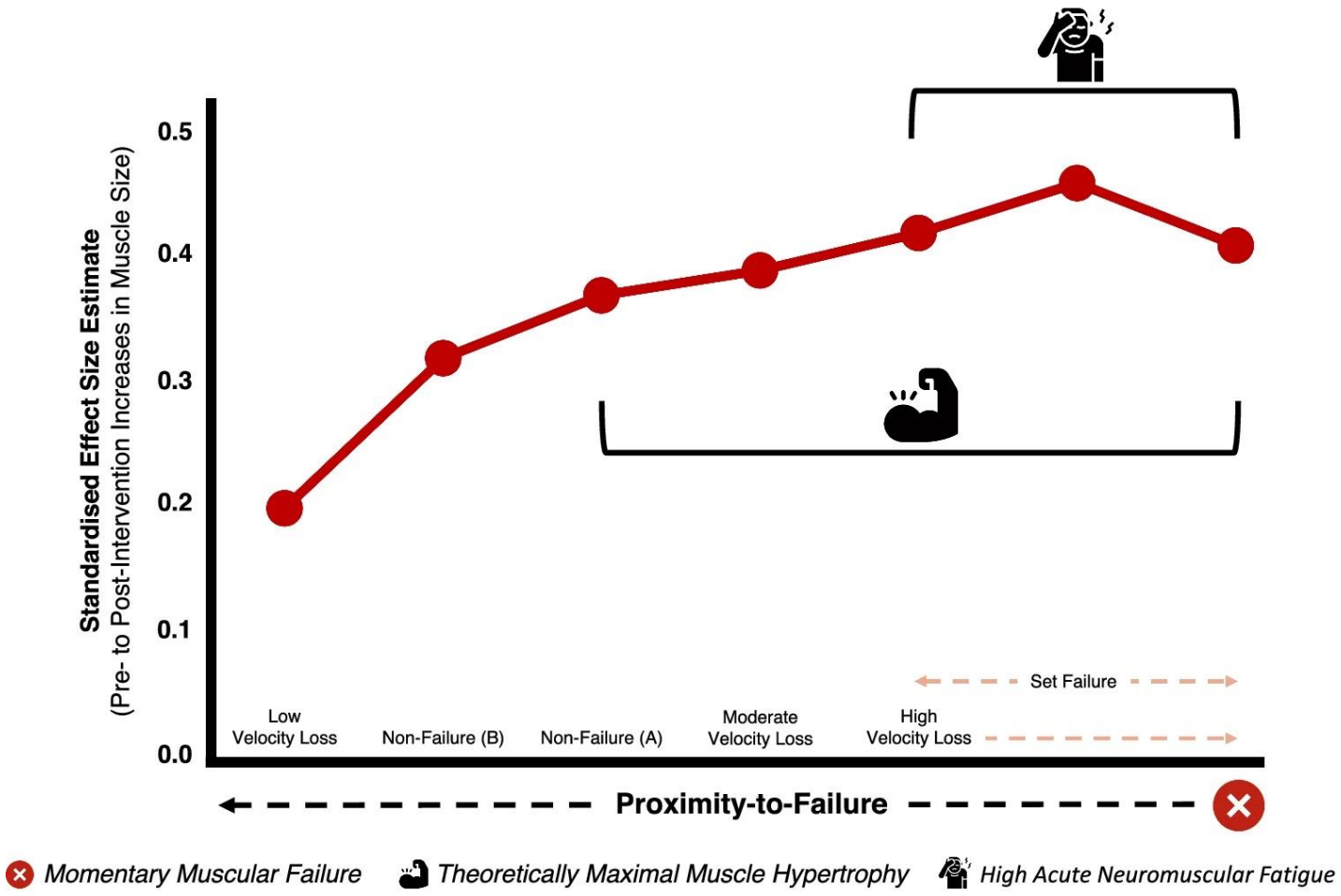


Slope of curve different according to load, muscle group, exercise, fiber type++

Myo-reps


Motor Unit Recruitment and Fatigue (Henneman's Size Principle)
100%
Fibers with the greatest potential for size and strength gains
Muscle Fibers Recruited
Working
Fatigued
Rest-Pause Stop
Rest-Pause Stop
Reps / Time Under Tension

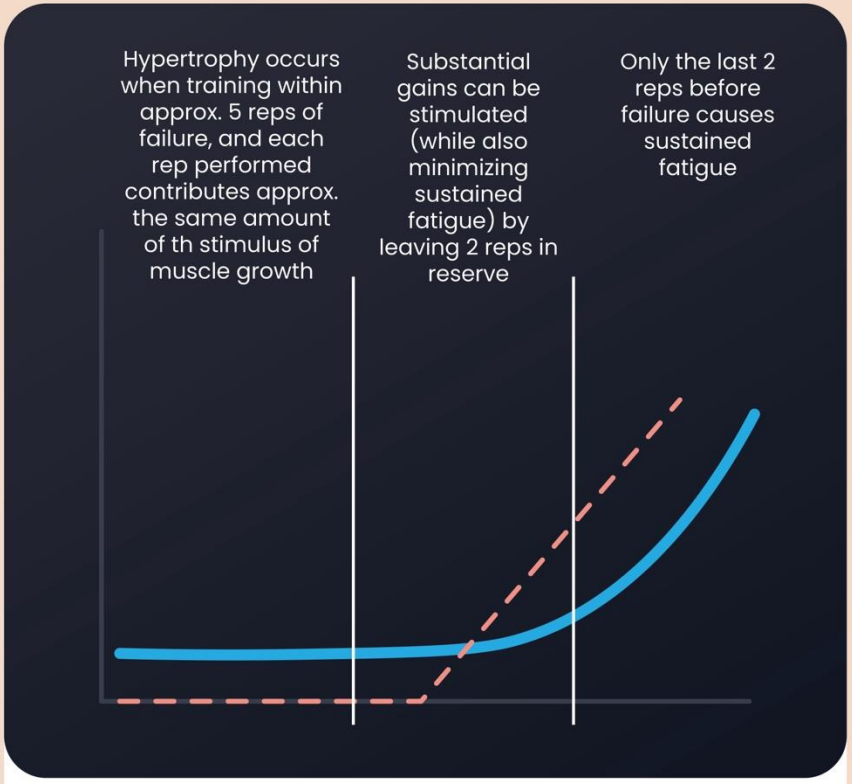
Going to failure requires more recovery

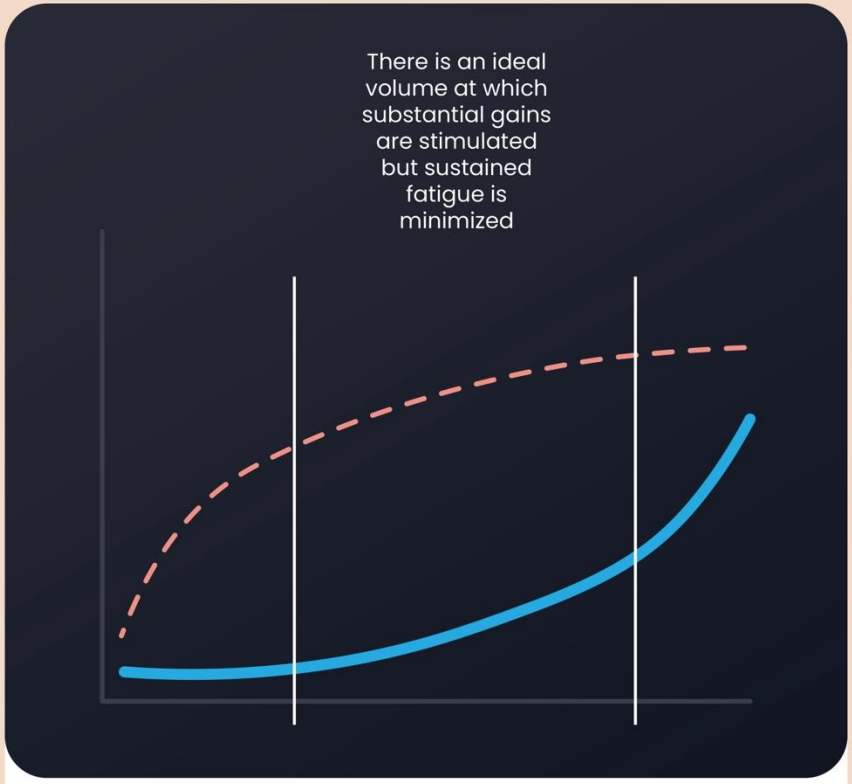


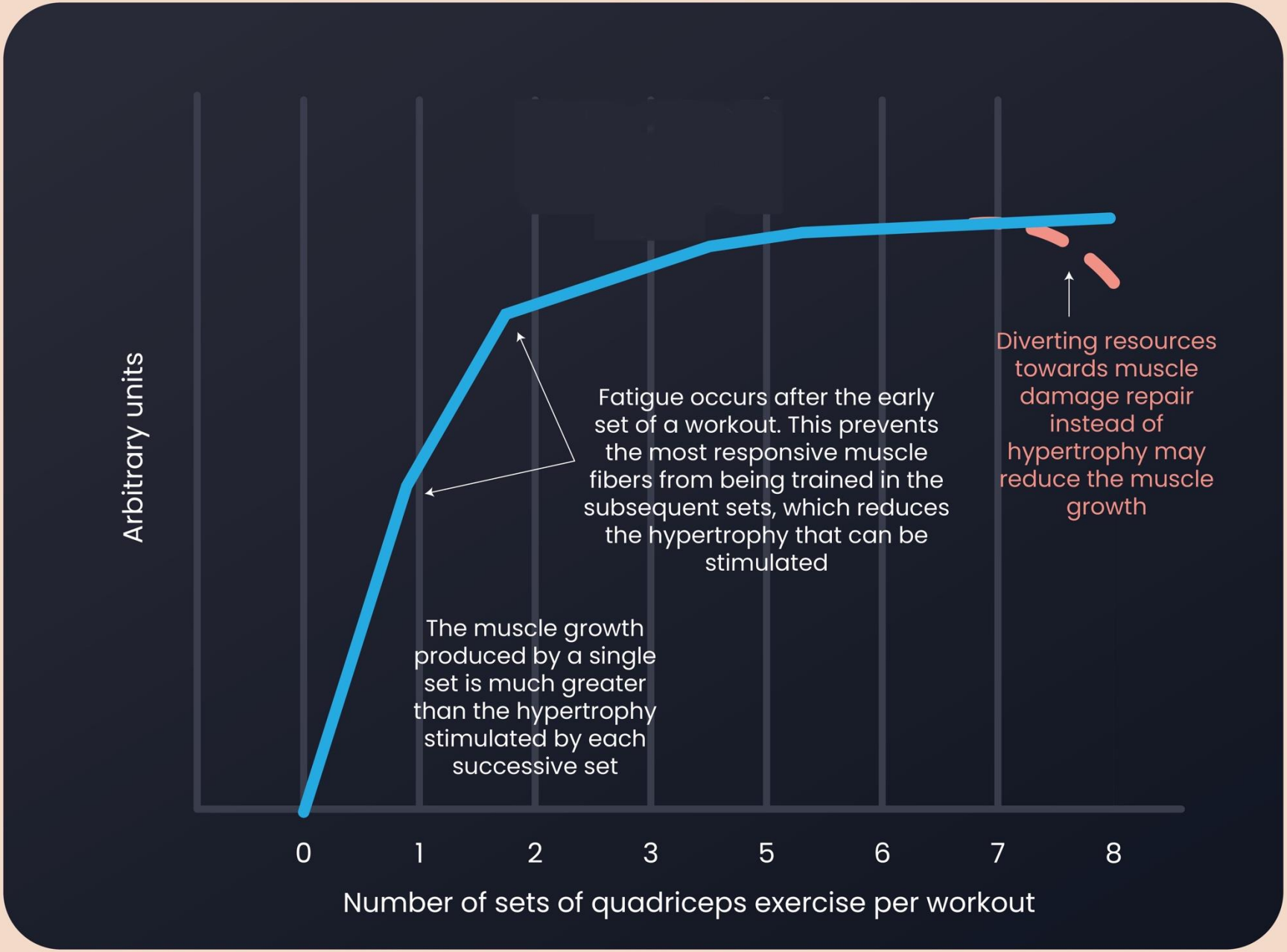
Refalo, M.C., Helms, E.R., Trexler, E.T. *et al.*
Influence of Resistance Training Proximity-to-Failure on Skeletal Muscle Hypertrophy: A Systematic Review with Meta-analysis. *Sports Med* **53**, 649–665 (2023).

	Combined	Orientation	Beginner	Experienced	Advanced	Expert
Chest press						
Predicted	12.38 ± 3.45	15.40 ± 2.77	14.86 ± 3.00	14.00 ± 3.46	11.14 ± 2.55	10.48 ± 2.86
Actual	14.21 ± 5.52	20.47 ± 6.36	18.76 ± 6.78	15.86 ± 4.16	12.17 ± 3.39	10.93 ± 3.17
Elbow flexion						
Predicted	11.53 ± 2.99	15.40 ± 2.77	13.38 ± 2.85	12.67 ± 3.07	10.60 ± 2.06	9.60 ± 1.58
Actual	12.48 ± 4.32	18.20 ± 4.95	16.57 ± 4.65	13.14 ± 2.67	10.74 ± 2.36	9.81 ± 2.11
Leg press						
Predicted	12.50 ± 3.41	15.40 ± 2.77	14.95 ± 3.14	13.67 ± 3.65	11.45 ± 2.62	10.71 ± 2.79
Actual	16.40 ± 6.29	23.87 ± 7.04	22.19 ± 5.75	17.62 ± 4.50	14.52 ± 4.13	12.10 ± 3.79
Pulldown						
Predicted	12.48 ± 3.47	15.40 ± 2.777	15.27 ± 3.13	13.29 ± 3.36	11.55 ± 2.93	10.57 ± 2.77
Actual	13.81 ± 5.19	20.27 ± 6.92	17.86 ± 5.76	14.57 ± 4.04	11.95 ± 2.81	10.95 ± 2.83
Seated row						
Predicted	12.38 ± 3.45	15.40 ± 2.77	14.86 ± 3.00	14.00 ± 3.46	11.14 ± 2.55	10.48 ± 2.86
Actual	14.09 ± 5.29	19.67 ± 5.38	18.33 ± 5.80	15.81 ± 4.24	12.26 ± 3.60	10.93 ± 3.48

Fatigue ≠ Stimulus – they are separate



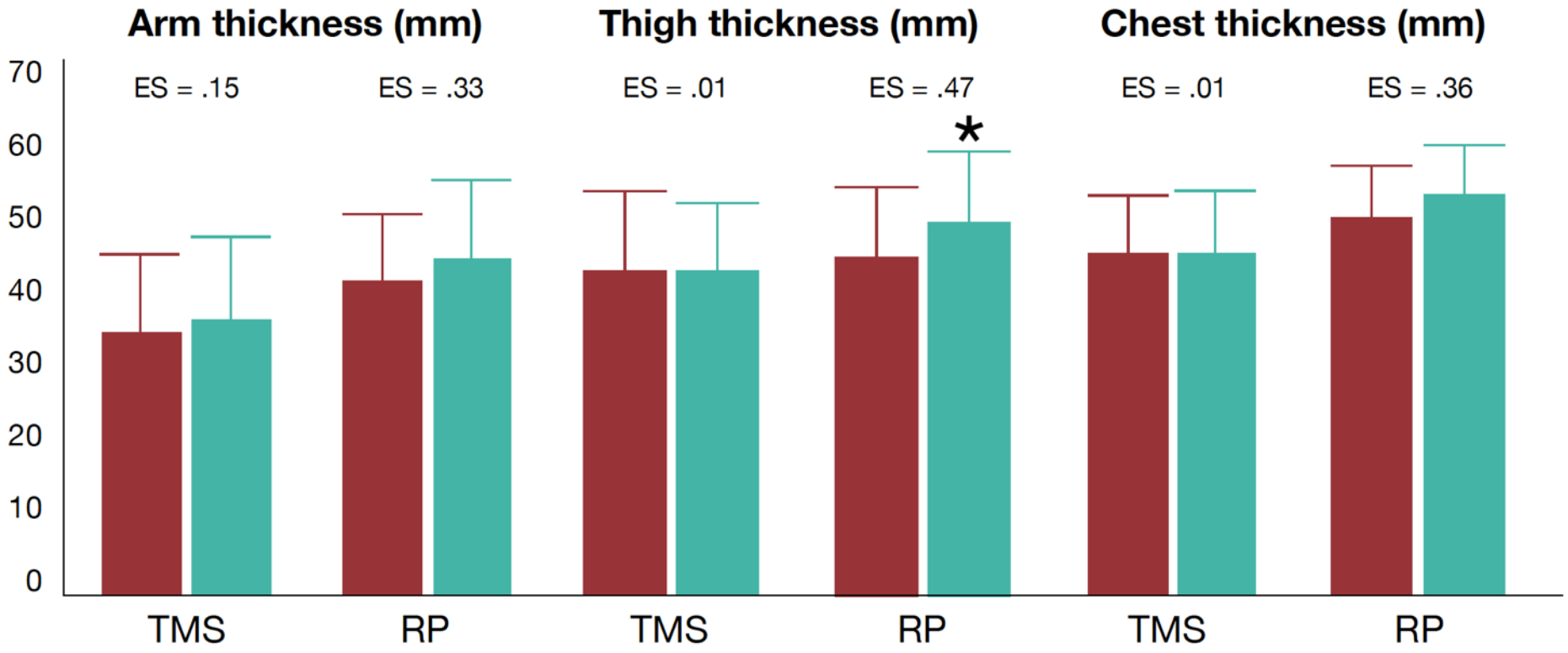



Arbitrary units
Fatigue occurs after the early set of a workout. This prevents the most responsive muscle fibers from being trained in the subsequent sets, which reduces the hypertrophy that can be stimulated
Diverting resources towards muscle damage repair instead of hypertrophy may reduce the muscle growth
The muscle growth produced by a single set is much greater than the hypertrophy stimulated by each successive set
0
1
2
3
5
6
7
8
Number of sets of quadriceps exercise per workout

Prestes et al., Strength And Muscular Adaptations Following 6 Weeks Of Rest-Pause Versus Traditional Multiple-Sets Resistance Training In Trained Subjects. J Str CondRes. 2017 Apr 4.

3 sets 6 reps or rest-pause, 20sec - (80% of 1RM)

Rest-pause CSA: 11 ± 14% vs. traditional multiple-set: 1 ± 7%



Stragier S, Baudry S, Carpentier A, Duchateau J. Efficacy of a new strength training design: the 3/7 method. Eur J Appl Physiol. 2019 May

70% of 1RM

3-4-5-6-7 with 15sec rest x 2

vs

8 sets of 6 reps, 2.5mins rest

1RM 22% vs. 12%

Biceps 9.6% vs. 5.5%

Karimifard, M.; Arazi, H.; Mehrabani, J. Twelve Weeks Rest–Pause and Traditional Resistance Training: Effects on Myokines and Performance Adaptations among Recreationally Trained Men. Stresses 2023, 3, 302-315

70% – 3 sets of 10 reps
75% - 3 sets of 8 reps
80% - 3 sets of 6 reps
85% - 3 sets of 4 reps
vs
RP: Max reps + mini-sets with 20-30sec rest = same total reps

Leg Press 1RM 63% vs. 51%
Chest Press 1RM 75% vs. 64%

Thigh CSA 32 vs. 17%
Biceps CSA 33% vs. 19%

MUSCULAR ADAPTATIONS FOLLOWING 8 WEEKS OF A MYOREPS SET CONFIGURATION VERSUS TRADITIONAL STRAIGHT-SETS IN RESISTANCE-TRAINED INDIVIDUALS

Joshua T. Bradshaw[1,3], Christopher Barakat[1,3], Andrew Barsuhn[1], Salvator Inglima[1], Tahran Gotlo[1], Baron K. Thompson[1], Eduardo O. De Souza[2], Joseph Walters[1]

1 - The University of Tampa, Health Science & Human Performance, Tampa FL, USA 2 - Competitive Breed LLC., Lutz, FL, USA

INTRODUCTION

It has been proposed that the manipulation of acute training variables can maximize strength and hypertrophic adaptations (1). Previous literature has demonstrated the acute effects of altering the structure of a set by redistributing rest periods (2). However, the data investigating chronic responses in trained individuals is still limited (3).

PURPOSE

To compare the longitudinal effects of eight weeks of a Myoreps (MYO) set configuration versus traditional straight-sets (TRAD) on muscular hypertrophy in resistance-trained males.

METHODS

Thirteen resistance-trained males (one repetition maximum (1RM)/body mass (BM) ratio > 1.40) were randomly assigned to either a Myoreps group (n = 7) or a traditional straight-set group (n = 6). Subjects underwent an 8-wk upper-body RT program consisting of Bench Press, Incline Bench Press, and Cable Chest Fly exercises that were trained twice per week. The MYO condition began with a set to concentric failure using a 8-12 RM load, followed by 40 s rest. Subsequent cluster sets were then performed to a predetermined repetition number based on the repetitions achieved on the first set. Cluster sets were separated by 20 s of rest and repeated until the repetition target was unachievable with maximal effort. The TRAD group performed three sets to concentric failure with a 8-12 RM load on each exercise with 120 s rest between sets. Muscle thickness (MT) was assessed using B-mode ultrasonography at the belly (BMT) and lateral (LMT) portions of the pectoralis major at pre- and post-testing.

Figure 1. Pectoralis Major Muscle Thickness (MT) Ultrasound Measurement.

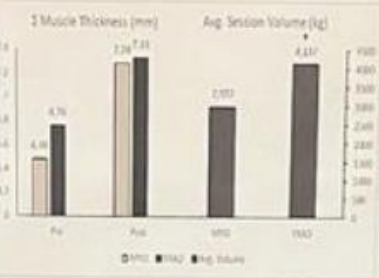


Figure 2. Sum Muscle Thickness (mm) from pre- to post-intervention and Average Session Volume (kg) between conditions.

REFERENCES

1. Krzysztofik M, Wilk M, Wojdała G, Gołaś A. Maximizing muscle hypertrophy: A systematic review of advanced resistance training techniques and methods. International journal of environmental research and public health. 2019 Jun 19;16(24):4897.
2. Rooney KJ, Herbert RD, Balnave RJ. Fatigue contributes to the strength training stimulus. Medicine and science in sports and exercise. 1994 Sep 1;26(9):1160-4.
3. Davies TB, Tran DL, Hogan CM, Haff GG, Latella C. Chronic effects of altering resistance training set configurations using cluster sets: a systematic review and meta-analysis. Sports Medicine. 2021 Apr 5:1-30.

RESULTS

A repeated measures ANOVA revealed only a sig
effect for MT, F (1,12) = 10.5, p < 0.05, (M = 0.68 m
0.21). However, there was no statistical significance
groups. Additionally, subjects in the MYO performe
cantly less volume compared to TRAD, t(195) = 12.2, p
0.001, (M = 1163, SE = 94).

CONCLUSION

Our data suggest that strength training pe
Myoreps set configuration produces
phic response to traditi
average session volu
es in MT were comp

PRAC

Within the contex
Myoreps set con
by providing a
done.

Joshua Brad
email: josh

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Thirteen resistance-trained males (one repetition maximum [1RM] : body mass [BM] ratio = 1.45) were randomly assigned to either a Myoreps group (n = 7) or a traditional straight-set group (n = 6). Subjects underwent an 8-wk upper-body RT program consisting of Bench Press, Incline Bench Press, and Cable Chest Fly exercises that were trained twice per week. The MYO condition began with a set to concentric failure using a 6-12 RM load, followed by 40 s rest. Subsequent cluster sets were then performed to a predetermined repetition number based on the repetitions achieved on the first set. Cluster sets were separated by 20 s of rest and repeated until the repetition target was unachievable with maximal effort. The TRAD group performed three sets to concentric failure with a 6-12 RM load on each exercise with 120 s rest between sets. Muscle thickness (MT) was assessed using B-mode ultrasonography at the belly (BMT) and lateral (LMT) portions of the pectoralis major at pre- and post-testing.

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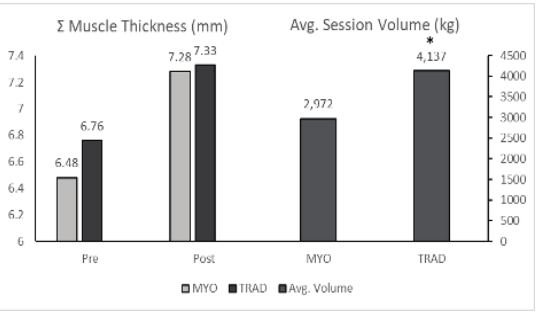

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RESULTS

A repeated measures ANOVA revealed only a significant time effect for MT, $F(1,12) = 10.5$, $p < 0.05$, ($M = 0.68$ mm, $SE = 0.21$). However, there was no statistical significance between groups. Additionally, subjects in the MYO performed significantly less volume compared to TRAD, $t(195) = 13.2$, $p < 0.001$; ($M = 1165$, $SE = 84$).

CONCLUSION

Our data suggest that strength training performed with a Myoreps set configuration produces a comparable hypertrophic response to traditional straight-set training. Despite the average session volume-load difference of ~1160 kg, changes in MT were comparable between conditions (Figure 2).

PRACTICAL APPLICATIONS

Within the context of muscle hypertrophy, utilizing a Myoreps set configuration may increase training efficiency by providing a similar growth stimulus with less total work done.

CONTACT

Joshua Bradshaw
email: joshtbrad@competitivebreed.com

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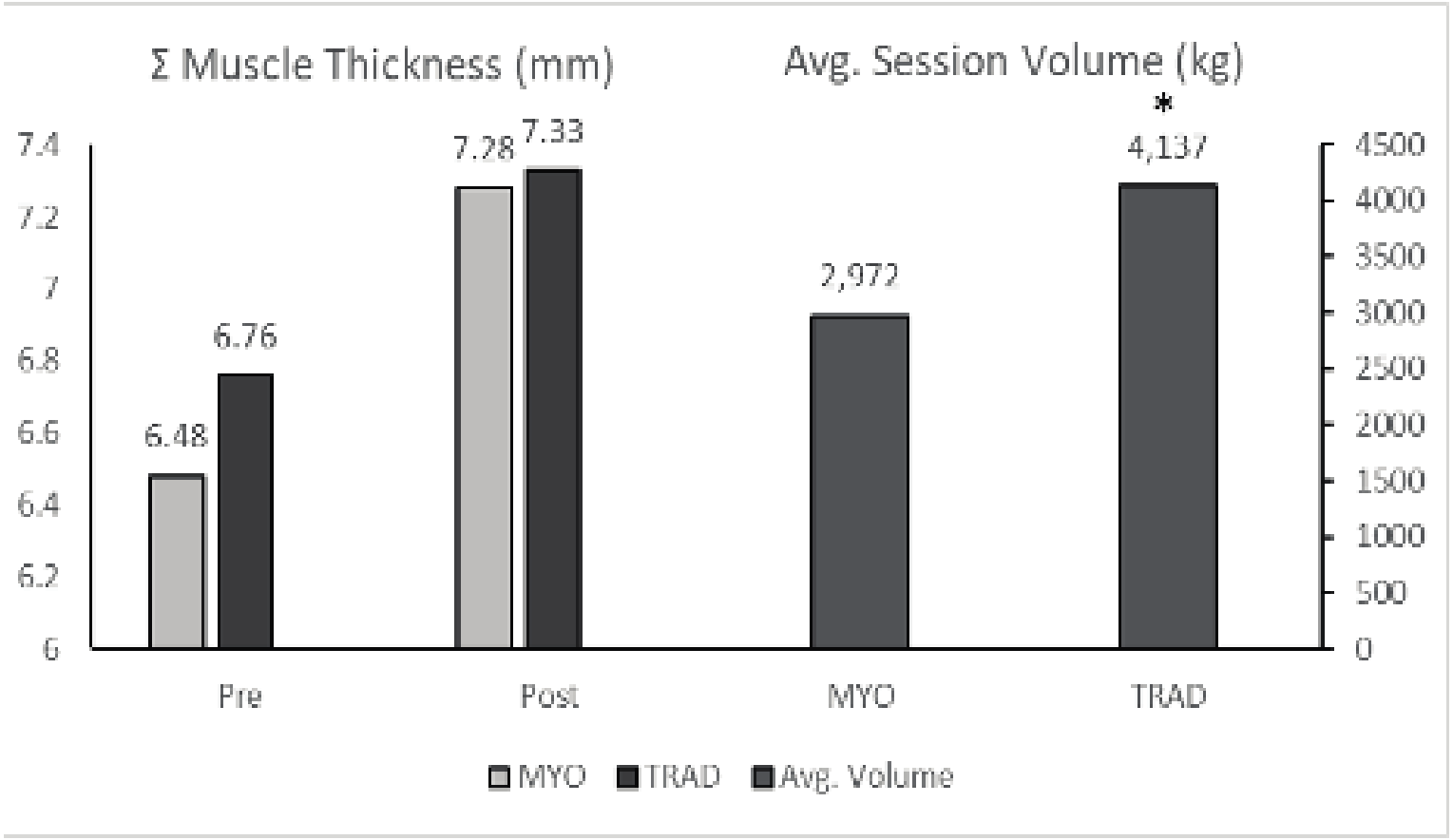
- 1 Myo-rep set = 3-4 normal sets
- 70% less time
- 30% less overall volume



Myo-reps in 2024

70-85% of 1RM

1-2RIR (0RIR or failure on last mini-set optional)

+ 2-5 reps

x 2-5 sets

2-5 deep breaths (up to 10)

Example notation: 10+3332

Myo-reps Volume progression

- 100 x 8
- 100 x 8
- 100 x 7+22
- -> 22 – 32 – 33 effectively the same as 2 sets
- 100 x 9+32

- 120 x 8+33
- 120 x 8+33
- 120 x 8+2222
- -> 222 – 2222 – 333 -> effectively the same as 3 sets
- 120 x 9+332
- Etc

Myo-reps Auto-regulation

Slow-twitch - High work capacity:
11+44444 (20-24 effective)

Submax (2RIR):
10+3333 (15-18 effective)

Fast-twitch - Low work capacity:
7+21 (5-6 effective)

0-1RIR (demands more recovery):
8+32 (9 effective)

Example program A

Chest Press

Narrow Grip Rows

Lateral Raise

Rear Delt Fly

Leg Extension

RDL or Back Extension

Biceps and/or Triceps

Example program B

Shoulder Press Machine

Wide-grip pulldown

Pec-Fly

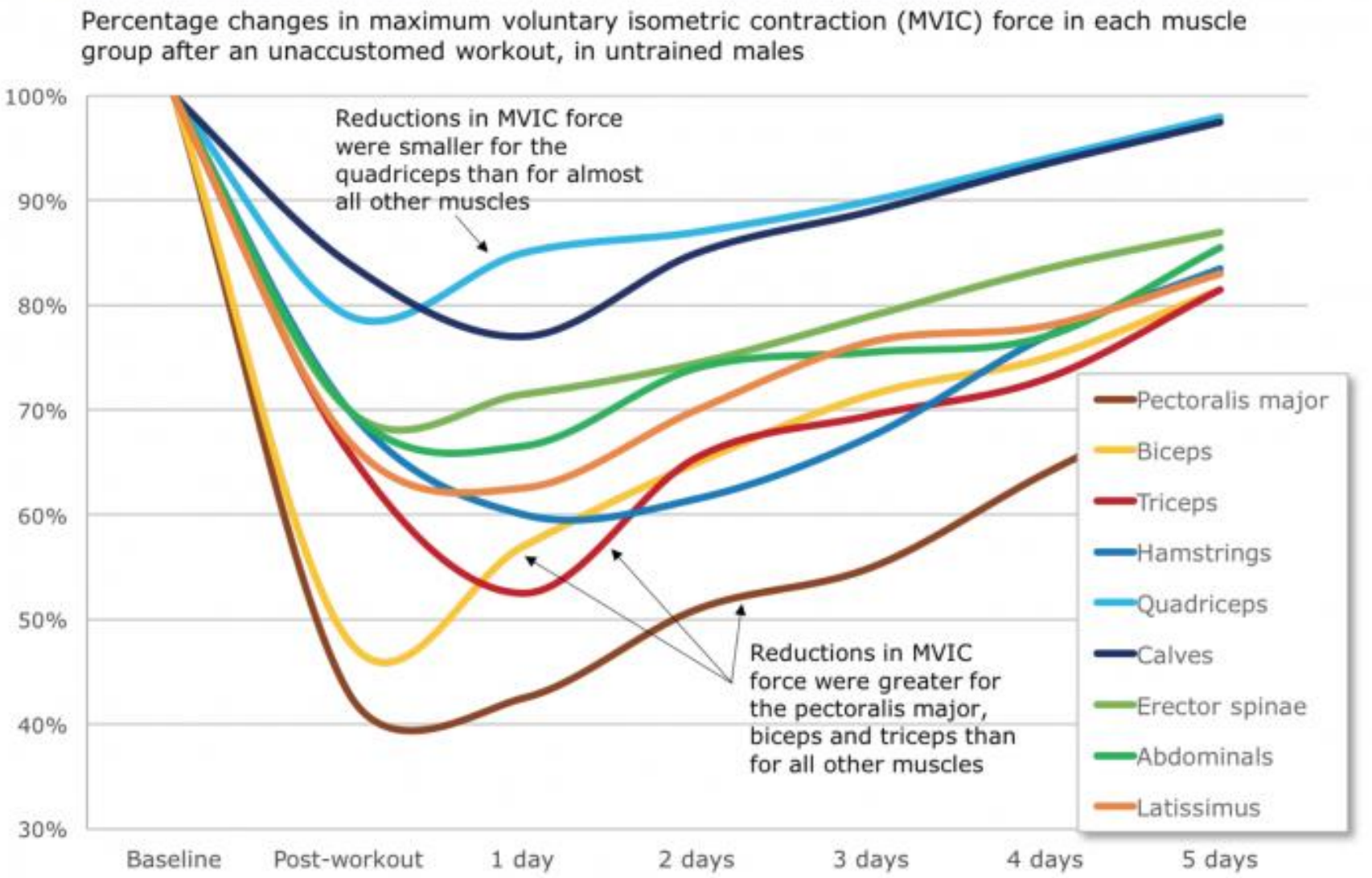
Wide-grip chest-supported Row

Leg press

Seated or Lying Leg Curl

Calf raise and/or Abs

Fiber-type, voluntary activation, overall size

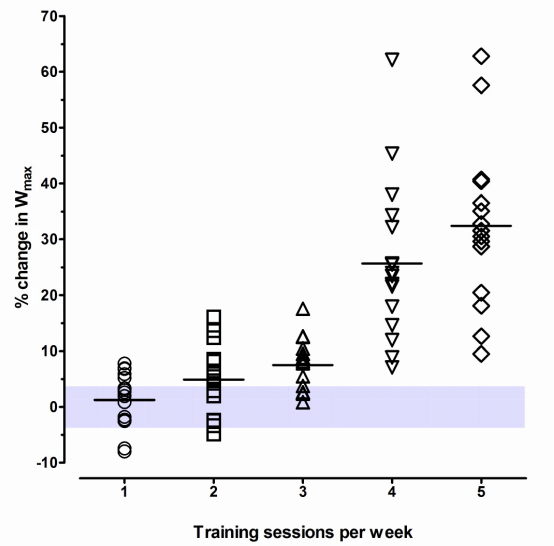


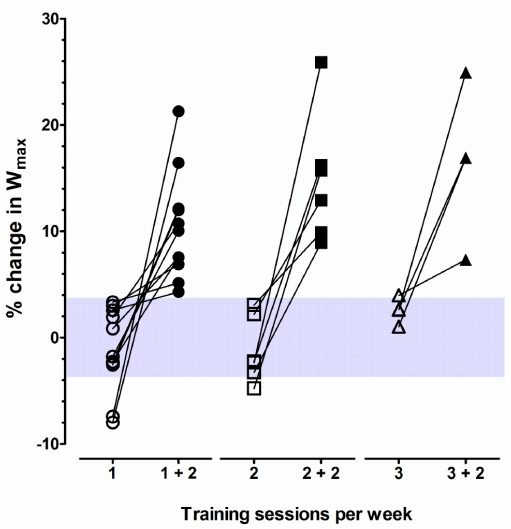
Individualisation

Low responders generate more inflammation

But can seemingly recover faster (activation/RIR?) and can do more volume (or train harder)

Slow twitch fibers recover faster (1RM + 80% test + work capacity)





My recommendations: General

- Lift with an intent to move fast, lower under control
- 2-3+mins of rest between exercises
- 1 set to Failure. Learn to train hard first!
- Then Myo-reps @ 1-2 RIR = faster recovery
- Frequency depends on individual recovery

My recommendations: Programming

- Adjust effort, volume and frequency according to total life stress (mental and physical)
- Myo-reps exclusive program at 1-2x/week optimal
- 3x/week program = high demand on recovery
- I usually program a mix of straight sets and Myo-reps


Q&A