

PROGRAMMING FOR HYPERTROPHY

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1) Outside the gym

a) SLEEP

b) Stress

i) Stults-Kohleneman studies

c) Body composition

i) Get lean first (roughly $\frac{1}{3}$ fat $\frac{2}{3}$ lean for lean people, and vice versa for overweight people)

d) Nutrition

i) How fast you should gain/lose weight

ii) Calorie intake/protein/macros you should shoot for

iii) Meal frequency/timing/food quality/etc.

iv) Supplements

- v) Eating the same macros every day versus having some variation (both for bulking and cutting)
- e) What you're doing outside the gym dictates how hard you can train and how well you can recover
- f) Fatigue
 - i) More perceptual than anything else
 - ii) MPS usually back to baseline within 48 hours, and recovery of muscle function usually within 48 hours unless you just do something crazy – overtraining from inflammation, depletion of serotonin, etc. Chilling out, eating enough, and sleeping enough fixes that

2) Basic introduction to 2-factor model.

- a) Example of “just right,” training too hard to recover, training too soon after one session, and waiting too long to training after a session.

3) Exercise Selection

- a) ROM first and foremost; you can take it through a long ROM safely without pain
- b) Exercise most likely to be limited by target muscle, not another muscle (i.e. squats can be limited by back for some people, so good quad exercise for some and not for others), or balance (i.e. split squats are decent, but squats or leg press tend to be better)
- c) Compound vs. isolation lifts (compound may build muscle just as well without as much time needed to recover - Gentil's pullups vs. biceps curls studies); mostly compound, but don't shy away from isolation for muscles you can't feel well with compounds, or muscles that aren't likely to limit you in compounds.
- d) Variety
 - i) Important to stick with lifts for long enough - not much growth in first couple of weeks as your nervous system learns the movement; you're not taxing muscles to a very high degree because movement is still inefficient.
 - ii) Variety important for overall hypertrophy – studies showing different parts of a muscle more active, or get

better hypertrophy with diff movements targeting same muscle.

- iii) General recommendation - stick with a movement for at least 6-8 weeks, but cycle it when you hit a hard strength plateau.

4) Intensity

- a) Bro definition of intensity - how hard you push a set; training to failure is generally a good thing for lifts that safely let you train to failure (i.e. DB press til you're about to die, but probably leave some in the tank on squat or DL); MU recruitment – Henneman's size principle
- b) % 1rm - all of them!
 - i) Mechanisms of hypertrophy - damage roughly the same (more stressful eccentrics with heavier loading, but more total eccentrics with lighter loading), metabolic stress greater with lighter loads, tension greater with heavier loads.

- ii) In general: $\frac{1}{4}$ of your work lighter than 65% (15rm), $\frac{1}{2}$ of your work between 65-80% (15rm-8rm), and $\frac{1}{4}$ heavier than 80%(8rm-3rm mostly)
- c) Self-experimentation - see what loading range allows you to handle the most volume

5) Volume

- a) More is better until it isn't.
- b) Two ways to approach it - minimum volume necessary for growth and increase as necessary, or maximum possible, and pull back when necessary
 - i) Likely faster progress with the second option, but high risk; largely depends how much you have invested in it.
- c) Simple decision tree for increasing/decreasing volume
- d) "Hard sets within 1-2 reps of failure," not volume load.

6) Training splits/frequency

- a) 2-3x/week generally better than 1x/week. Past that, probably not a load of difference.

- b) Whole body daily, upper lower splits, push pull legs, etc. All viable.
- c) Bro tip - have some “flow” to the week; i.e. don’t put your hardest squat and deadlift workouts back to back.
- d) Some cool stuff about two-a-days; one gym session and one bodyweight session at home may be worth trying.

7) Periodization

- a) Purely for hypertrophy, it doesn’t matter all that much.
- b) Variation (or lack thereof) primarily for psychological reasons.

8) Bringing up lagging muscles

- a) Side to side: don’t slack with your strong side; do extra for your weak side
- b) Lagging muscle on both sides - murder for 4-6 weeks, back off for 4-6 weeks and train it normally, repeat

9) Progressing:

- a) Take regular pictures and measurements

- b) Most objective way - try to get stronger in movements that target each major muscle
- c) Ramp up volume when bulking, and try to increase strength. Decrease volume ONLY AS NEEDED when cutting; smaller decrease with small deficit, and larger decrease with larger deficit. If small deficit, keep trying to get stronger, and if large deficit, try to maintain strength.

10) Experience level

- a) Newbies - need more protein, take some HMB, frequency can be a little lower, primarily just focus on mastering lifts
- b) Intermediate - build base; increase strength on all major movements, build work capacity and training volume.
- c) Advanced - More attention to specific weaknesses, and prioritize health/longevity. Maybe decrease frequency because of how much you can stress your body with each workout.