

**HYPERTROPHY
TRAINING
PROGRAM DESIGN:
*THE ALTERNATE-
UNDULATE METHOD***



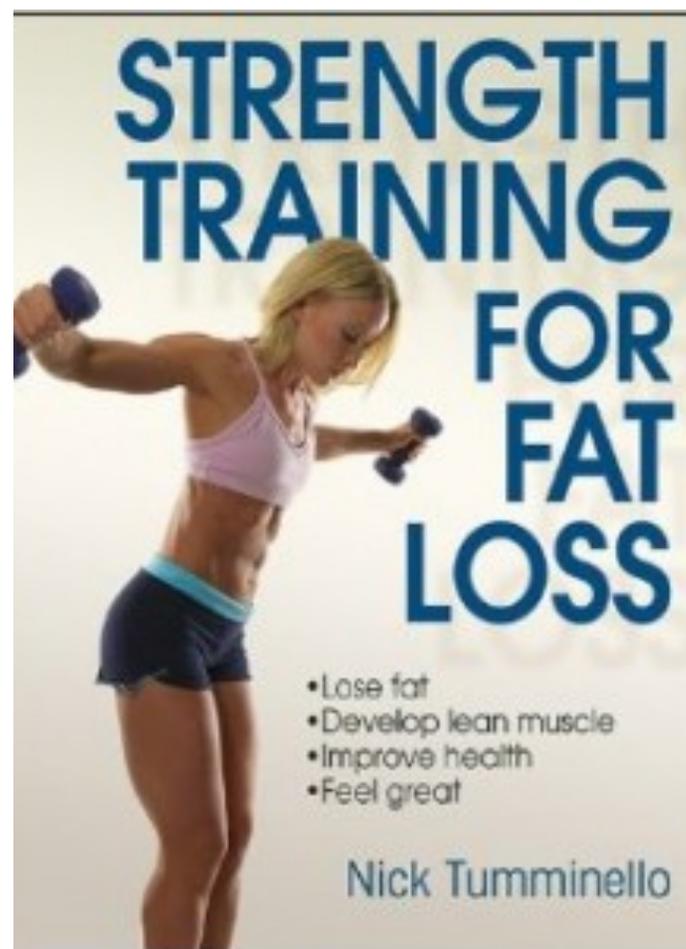
OBJECTIVES

- To learn the Performance U Alternate-Undulate method for designing hypertrophy (i.e., bodybuilding) programs.
- To provide you with a scientifically-founded, and battle-tested training system that offers you a repeatable and individualizable framework to use with clients looking to maximize muscle growth.

“Training is the art of expressing the science.”

WE DON'T START BEGINNERS WITH THE ALT-UND METHOD

Beginner clients (with no prior training base, or those who're coming off a an extended time away from resistance training) are first placed on a “break-in” program (generally for 2-3 weeks), then on a “Muscle-Base” program (generally for 4-5 weeks) such as the ones found in my *Strength Training For Fat Loss* book.



**“If I want to teach
you nothing, I’ll
try to teach you
everything.” –
Renzo Gracie**



QUICK REVIEW: THE 3 MECHANISMS OF HYPERTROPHY

Muscle Tension: This is the tension exerted on the muscles to reduce, produce or control force. Both lifting heavy loads for lower volumes and lifting lighter loads for higher volumes can bring about muscle tension, and, therefore create a stimulus for muscle growth.

Muscle Damage: This refers to microtears in the muscle tissue (e.g., eccentric overloading), which often lead to delayed-onset of muscle soreness (DOMS) after an intense exercise session. Muscle Damage can occur from either mechanical or chemical stress. From a chemical perspective, during repetitive effort oriented exercise such as high-rep sets, when you're using more oxygen, reactive oxygen species (ROS) or free radicals form. These ROS can cause muscle damage.

Metabolic Stress: Increasing Time Under Tension (TUT) increases metabolic stress and will give you an incredible pump, and this muscle cell swelling (i.e. muscle pump) can cause both an increase in protein synthesis and a decrease in protein breakdown.

The mechanisms of muscle hypertrophy and their application to resistance training.

SETS AND REPS

A 2002 study published in the *Journal of Strength and Conditioning Research* study compared two groups. One group did performed sets of 8 reps during weeks 1-4, 6 reps during weeks 4-8, and 4 reps during weeks 9-12. The other training group did the same exercise, but altered their sets and reps on a daily basis. For the 12-weeks of training, here's what they did: Monday, 8 reps; Wednesday, 6 reps; Friday, 4 reps.

The results of this study showed that ***making set/rep alterations on a daily basis was more effective in eliciting strength gains than doing so every 4 weeks.***

More recent studies have not only also found that **daily intensity and volume (set/rep) variations was more effective than weekly volume variations for increases in maximal strength, but using daily undulating sets/rep scheme also may leads to greater gains in muscle size and thickness.**

THE *PRACTICAL TAKE AWAY*

To build muscle we need to create a training environment that elicits:

Muscle tension via heavy loads and medium loads lifted to fatigue.

Muscle damage by focusing on a controlled eccentric.

Metabolic stress by getting a pump.

AND, we need to provide an *Undulating set/rep scheme*.

Also, we cannot forget about honoring the *principle of progressive overload (i.e., linear progress)*.

Day A	Day B
Glutes/Hams/Abs	Pull Lats, Biceps
<i>RDL x4-5 contrast w/ DL Jump x5-6</i>	<i>Chin-ups x max contrast w/ band Swimmers x12-15</i>
<i>1A Planks 15-20sec es</i>	
	Machine Row (any grip) 1.5s
1L Hip thrust (SOB)	<i>Side Plank w/DB Side Raise x8-10 es</i>
<i>SB Knee Tuck x15-20</i>	
	1A DB Row
45 Degree Hip Extension (Toes Out)	<i>Push Up (to box) 1.5s x6-8</i>
1L DB Standing Calf Raises	
	Rope Biceps Curls 1.5s
SB Triple Threat	Triceps Rope Press-down
<i>Band Tight Rotations x20-24es</i>	

Day C	Day D
Legs/Glutes/Abs	Pull (H),Push, Triceps
<i>DB Step Ups x5 es contrast w/ Bench crossover Jump x5-6es</i>	<i>BB Bo Row x4-5 Contrast w/ Band Speed Row (alt arm) x10sec</i>
<i>Leg Lowering x10-15</i>	Incline DB
<i>DB Squat + RDL x4-5 contrast w/ Squat Jump x5-6</i>	Wide Grip Seated Row 1.5s
<i>SB Stir-the-pot x5-6 es</i>	DB Front Raise Raise 1.5s
DBL Bench Hip Thrust 3x 15-20	Rear-Delt Fly Machine
<i>SB Knee Tuck x15-20</i>	Tricipes Machine
Speed Squats (Arm outs) 2x 30	SB Push Up (HOB) 2x max
Seated Calf Raises	Shoulder L's 2x 15

RED Exercise: Perform Contrast scheme for 5 sets

Black Exercises: Alternate each workout between 3x 12-15 & 4x 6-8

Day A	Day B
Glutes/Hams/Abs	Pull Lats, Biceps
BB GM	Lat Pull Down 747 (W/U/W)
1A Planks 15-20sec es	Machine Row (any grip) 1.5s
1L Hip thrust (SOB)	Side Plank w/DB Side Raise x8-10 es
SB Knee Tuck x15-20	Wide-Grip BB Row
45 Degree Hip Extension (Toes Out)	Push Up (to box) 1.5s x6-8
1L DB Standing Calf Raises	Rope Biceps Curls 1.5s
SB Triple Threat	Triceps Rope Press-down
Band Tight Rotations x20-24es	

Day C	Day D
Legs/Glutes/Abs	Pull (H),Push, Triceps
Lunge 747 (W/R/W)	1A DB Row 747
Leg Lowering x10-15	Incline DB
Goblet Squat 1.5s	Wide Grip Seated Row 1.5s
SB Stir-the-pot x5-6 es	DB Front Raise Raise 1.5s
DBL Bench Hip Thrust 3x 15-20	Rear-Delt Fly Machine
SB Knee Tuck x15-20	Tricpes Machine
Speed Squats (Arm outs) 2x 30	SB Push Up (HOB) 2x max
Seated Calf Raises	Shoulder L's 2x 15

RED Exercise: Perform 747 Rep scheme x3-4 sets

Black Exercises: Alternate each workout between 3x 12-15 & 4x 6-8

PERFORMANCE U SET PROTOCOLS

OVERLOAD PROTOCOLS

Heavy Contrast sets

Heavy sets

Heavy Drop-sets 4+4

Volume Contrasts

Complexes

747 sets

“Intensification Phase” = *Load Phase*

“Accumulation Phase” = *Volume Phase*

SET SPICERS

1.5 sets

Iso-Dynamic sets

PG and GP sets

PGE and GPE sets

FINISHERS

New Type 21s

28's

Iso-Dynamic Countdown sets

Drop sets

Triple Threat sets

REP TEMPO

- I don't get caught up with these three or four digit rep tempos (e.g., 3-2-1 or 3-2-1-1), I've found it confuse and distracts.
- If I want you to lift the load (concentrically) *slower*, I'll give you a *heavier* load. And, if I want you to lift the load (concentrically) *faster*, I'll give you a *lighter* load.
- I always ask clients to demonstrate “deliberate control” on the eccentric portion of each rep.
- On heavy lifts (i.e., lower rep sets of 8 or less), I ask the client to “explode into each concentric.”
- On exercises done for 9 reps or more, I ask the client to perform the concentric in a “normal tempo.”
- Also, on exercises done for 9 reps or more, I generally ask the client to “avoid the lockout.”

Note: Clients who demonstrate hypermobility are always instructed to avoid the lockout in their hyperbole areas.

REST BETWEEN SETS?

- Rest time depends on male or female, one's fitness level and the intensity of the set.
- *“Rest as much as you need, and as little as you have to.”*
- *...In order to perform the next set while displaying good control in the technique and ROM we asked for.*

VOLUME DISTRIBUTION AND FOCUS OF WEEKLY TRAINING SPLIT

We provide *more* volume on (and prioritize) the muscle groups they're looking to “bring up” – most commonly the back, hamstrings and glutes – and spend less volume on (and make less of a priority) their stronger, more developed areas.

WEEKLY WORKOUT SPLITS

- If training 3x per week, we'll use 3 total-body workouts.
- If training 4 or more days per week, we'll use a body-part split.
- If training 5-6x per week, we'll stick with 3-4 different workouts per program, and have the individual cycle through those.

Example of a 3 split performed five days per week:

Mon: Pushing

Tues: Pulling

Wed: Lower-body

Thurs: Rest

Fri: Pushing

Sat: Pulling

Sun: Rest

COACHING TIPS ON HYPERTROPHY- FOCUSED PROGRAMMING:

- **Don't avoid machines!**
- **Limit exercises that involve momentum.**
- **Focus on technique instead of load.**
- **Both horizontal and vertical pulling movements help to develop the lats, but it's horizontal pulling exercises that really develop the mid-back muscles.**
- **Change up the point of maximal muscle loading (see graph on next slide).**

ARE ALL HIP EXTENSION EXERCISES CREATED EQUAL?

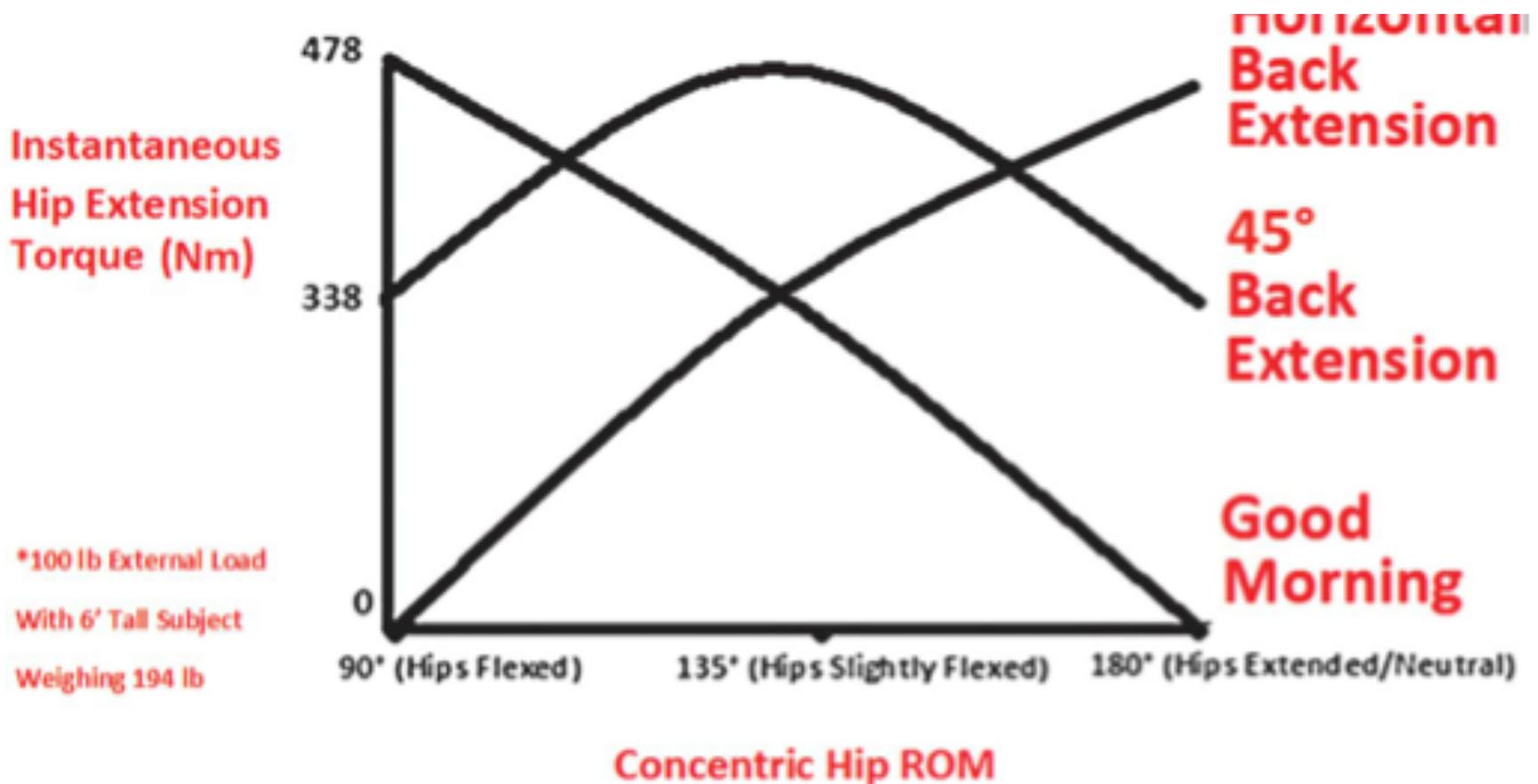


Figure 3. Graph of instantaneous hip extension torque at selected ranges of motion

UNDULATING CARDIO/ CONDITIONING

The Alternate-Undulate method does incorporate SMIT, HIIT and Steady state cardio training when we feel necessary.

Put simply, the type of cardio-conditioning you do corresponds to the set/rep scheme used in the preceding strength training portion of the workout. In other words, the cardio-conditioning is undulated just like the strength training. On the days where your strength training workouts are the longest, your cardio-conditioning activities are the shortest and vice versa. This keeps your workout time consistent, but workout activities highly varied.

THANK YOU!



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