AURUM
Academy.

The 6-Minute Workout

Dose, Intensity, Recovery — The Science of the AURUM Protocol

Overview

What You'll Learn

01

Dose-Response Relationship

Explore how the AURUM protocol targets the precise exercise volume and intensity to maximize strength and hypertrophy without overtraining.

02

The Inroad Concept

Learn about 'inroad' — the deep muscular fatigue essential for growth, achieved through high-intensity controlled movements recruiting all muscle fibers.

03

Single-Set Evidence

Examine research supporting single-set training to near failure as an effective, time-efficient method to stimulate muscle hypertrophy.

04

Time Under Tension Science

Understand the importance of maintaining 60 seconds of muscle tension per set, with the AURUM protocol optimized at 60 seconds per exercise.

05

The Eccentric Advantage

Discover why the controlled eccentric phase (muscle lengthening) produces greater mechanical tension and drives superior muscle growth.

06

Cardiovascular Adaptations

Review how High-Intensity Resistance Training (HIRT) improves vascular function, reduces blood pressure, and enhances aerobic capacity.

Dose-Response

Why More Is Not Always Better

01	**Excess Stress Hinders Recovery**	Too much training volume causes excessive stress, preventing the body from fully recovering and adapting to exercise stimuli.
02	**Adaptation Peaks at Specific Volume**	Research shows muscle and cardiovascular adaptations reach a peak at an optimal training volume, beyond which benefits plateau or decline.
03	**Stamatakis et al. (2022) Findings**	Data indicates maximal fitness gains occur at approximately 60 minutes of exercise per week, with performance plateauing beyond 130 minutes.
04	**Chronic Fatigue from Excess Sessions**	Frequent training beyond the optimal volume leads to chronic fatigue, reducing training quality and increasing injury risk.
05	**AURUM Targets the Peak**	The AURUM protocol precisely targets the dose-response curve peak, maximizing results efficiently without unnecessary overtraining.

How Fatigue Creates the Training Signal

01

Definition of Inroad

Inroad refers to the progressive weakening and fatigue of muscles during exercise, which signals the body to adapt and grow stronger.

02

Full Motor Unit Recruitment

Near failure, the body recruits all available motor units to maintain force, maximizing muscle fiber activation and fatigue.

03

Type IIb Fibre Activation

High-intensity effort recruits Type IIb muscle fibers, which have the greatest potential for hypertrophy and strength gains.

04

Critical Final Repetitions

The last few reps before failure are crucial, as they generate the most significant muscular stress and trigger adaptation.

05

Isokinetic Loading Role

Isokinetic exercise machines maintain constant resistance, ensuring maximal muscle engagement and optimizing inroad throughout the movement.

The Single-Set Evidence

Carpinelli & Otto (1998)

This foundational study found no significant hypertrophy advantage for multiple sets over a single set when training to failure, emphasizing efficiency.

Mitchell et al. (2012)

Their research reinforced that proximity to muscular failure, rather than volume, is the critical factor for maximizing muscle growth.

Proximity to Failure

Training close to failure ensures full motor unit recruitment, which is essential to stimulate hypertrophic adaptations effectively.

Risks of Multiple Sets

Excessive volume can increase injury risk, fatigue, and reduce recovery capacity, potentially negating hypertrophic benefits.

Minimum Effective Dose

Single-set protocols align with the principle of the minimum effective dose, achieving maximal gains with optimal time efficiency.

TUT Science

Why 60 Seconds Per Exercise

01 Definition of TUT

Time Under Tension (TUT) refers to the total duration a muscle is actively under strain during a set, playing a vital role in stimulating muscle hypertrophy.

02 Optimal TUT Range

Research indicates an ideal hypertrophic TUT range between 40 and 70 seconds per set, balancing sufficient stimulus without excessive fatigue.

03 Below 40 Seconds

Sets shorter than 40 seconds may fail to provide enough mechanical stress, limiting muscle growth and adaptation.

04 Above 70 Seconds

Extending TUT beyond 70 seconds risks diminishing returns due to increased fatigue and reduced training quality.

05 AURUM Protocol Formula

The AURUM method prescribes 5 repetitions at 12 seconds each, delivering a precise 60 seconds of TUT per exercise for optimal hypertrophy.

Why the Return Phase Matters More Than the Push

Concentric vs. Eccentric

Concentric contraction involves muscle shortening during the push phase, while eccentric contraction involves muscle lengthening during the return phase under tension.

Greater Mechanical Tension Eccentrically

The eccentric phase produces greater mechanical tension per unit of effort than the concentric phase, making it more effective for stimulating muscle growth.

Primary Hypertrophy Driver

Controlled eccentric movements cause more muscle fiber recruitment and microscopic damage, which are key triggers for hypertrophic adaptations.

Rushing the Return: Common Error

Clients often rush the eccentric phase, losing 40–60% of the training stimulus, which significantly reduces hypertrophic benefits.

AURUM's 4s/2s/6s Tempo Structure

The protocol mandates a strict 4 seconds concentric, 2 seconds hold, and 6 seconds eccentric tempo to maximize time under tension and muscle fatigue.

Why Rest Is Part of the Protocol

Supercompensation Requires Recovery

Muscle growth and strength improvements occur during recovery, not during exercise; without full recovery, supercompensation cannot happen effectively.

5–7 Day Recovery Window

Scientific evidence supports a minimum 5 to 7 days for complete muscular and nervous system recovery between high-intensity sessions.

Risks of Premature Re-Stimulus

Training again too soon disrupts recovery, leading to diminished gains, increased fatigue, and potential overtraining.

Once-Per-Week Frequency

The AURUM protocol's weekly schedule is designed based on evidence to maximize recovery and supercompensation for sustainable strength gains.

Signs of Insufficient Recovery

Indicators include declining force output, muscular asymmetry, and reduced motivation, signaling the need for extended rest.

What the Cardio Argument Gets Wrong

01

General Cardiovascular Adaptation

HIRT improves vascular function and skeletal muscle perfusion, enhancing overall cardiovascular health beyond muscle strength.

02

Systolic Blood Pressure Reduction

Studies show HIRT lowers systolic blood pressure by 6 to 8 mmHg, a clinically meaningful decrease that supports heart health (Cornelissen & Smart, 2013).

03

VO2 Max Improvements

HIRT enhances aerobic capacity, increasing VO2 max, which reflects better oxygen utilization during intense physical activity.

04

Extended EPOC Effect

Excess post-exercise oxygen consumption (EPOC) lasts 24 to 48 hours after a HIRT session, promoting continued calorie burn and cardiovascular benefits.

05

Full-Spectrum Training Stimulus

One AURUM session stimulates multiple systems simultaneously—muscular, cardiovascular, and nervous—delivering comprehensive fitness in minimal time.

Protocol

Structure of a Single AURUM Session

01 Six-Exercise Sequence

The session includes six key compound exercises performed in order: Leg Press, Seated Row, Chest Press, Torso Extension, Pulldown, and Overhead Press, targeting the entire body.

02 Exercise Parameters

Each exercise consists of 5 repetitions, each lasting 12 seconds, performed to near muscular failure for maximum hypertrophic stimulus.

03 Rest Intervals

Rest periods of 90 seconds, allowing sufficient recovery while maintaining workout intensity.

04 Total Session Duration

Active exercise time totals approximately 6 minutes, with total session length including rest around 15 to 20 minutes.

05 Training Frequency

The workout is designed to be performed once per week, ensuring full recovery and optimal supercompensation based on scientific recovery data.

Summary

Key Takeaways

01

Dose-Response Peak

Training volume and intensity are precisely calibrated to hit the optimal point on the dose-response curve, maximizing gains while avoiding overtraining.

02

Inroad as Training Signal

Deep muscular fatigue or 'inroad' signals effective muscle fiber recruitment and adaptation, achieved through high-intensity isokinetic exercise.

03

Single-Set Equivalence

Scientific evidence supports that a single, near-failure set can produce hypertrophic results comparable to multiple sets, saving time without sacrificing effectiveness.

04

60 Seconds TUT Optimality

A Time Under Tension of approximately 60 seconds per exercise optimizes hypertrophic stimulus, balancing mechanical tension and metabolic stress.

05

Eccentric Phase Imperative

Controlled eccentric muscle actions create greater mechanical tension, making this phase critical for stimulating maximal muscle growth.

Next Steps

Up Next — Lesson 3.2: The Big Six

- Comprehensive breakdown of the six foundational exercises in the AURUM protocol.
- In-depth coverage of biomechanics for safe and effective movement execution.
- Key coaching cues to optimize performance and prevent injury.
- Identification and correction of common errors during each exercise.
- Guidance on regressions and progressions to tailor workouts to individual needs.