THE SHELTON SYSTEM * BODY SHAPING SERIES

THE ART OF SCULPT: SCIENCE OF A MUSCLE MAKEOVER

I. OVERVIEW

A. What is a 'Sculpt Artist?'

B. Why Assess and How to Use the Findings: Tools of the Trade

C. Six Important Reasons to do Resistance Training

1. Increase bone density>>osteoporosis prevention
2. Influence metabolic function
3. Improve functional strength
4. Improve core strength and intrinsic tensile strength
5. Improve Posture, muscle balance and stabilization which may reduce injury risk
6. Has a direct link to prevention, decreasing or eliminating lifestyle disease risk factors

D. Resistance Training Benefits: What people want/is it really what they get?

1. Muscle hypertrophy and/or muscle endurance
2. Muscle tone/definition
3. Alter lean body/fat mass ratio, provide weight management
4. Increase fiber recruitment and efficiency through training
5. Improve neuromuscular and cognitive function
6. Improve athletic ability
7. Increase joint mobility, dynamic flexibility and range of motion

II. RESISTANCE TRAINING PRINCIPLES

A. Overload and Overload Variables

1. P.R.E. [Progressive Resistive Exercise]
2. Reps and Sets
3. Applied Resistance
4. Additional Overload Variables (when PRE is NOT an option)
   - Gravity
   - Speed of contraction
   - Range-of-motion
   - Exercise selection
   - Exercise sequencing

B. Busting a Plateau

C. Periodization Training

D. Stabilization: Crucial vs. Inconsequential

E. Stimulation Principle and Neuromuscular Training

III. RESISTANCE RESEARCH TO BE AWARE OF:

A. Fleck's Undulating Periodization

Vary reps and weight on a weekly basis for continual improvement in strength:

12 -15 reps for 2-3 sets
8 -10 reps for 2-3 sets
4 - 6 reps for 2-3 sets

B. Wescott's Strength/Stretch to Improve Strength

Stretching after strength work will improve strength gains by up to 19%.

C. One Set Training vs. Multi-set Training

Research suggests untrained individuals increase strength gains proportionately using 1 set per exercise vs. multi-set. For trained individuals, at least 2 sets is still the most recommended protocol. High intensity training (using drop sets or a slower eccentric phase) has been proven to be effective with 1-set training.

D. Training Frequency: 2 vs. 3 times per week training

Research suggests that performing strength exercises 3 times a week yields l0% increase in results compared to twice per week frequency in untrained individuals.

E. HIT, MCT Research as it relates to lifestyle disease, calorie burn and results

F. ACSM Guidelines for Resistance Training

The current ACSM Guidelines recommend the following:

- 8 to l0 separate exercises to train all major muscle groups
- Perform 8 to 15 reps of each exercise to the point of temporary muscle fatigue
- Perform strength-training exercises 2 to 3 days per week

IV. FACTORS INFLUENCING STRENGTH & DEFINTION DEVELOPMENT

A. Anatomical and Physiological Factors

1. Musculoskeletal Considerations
    - Frame size

- Muscle size
- Muscle length
- Tendon Insertion Point

2. Muscle fiber
   - Type: Fast twitch vs. Slow
   - Fiber Type Ratio
   - Fiber arrangement
3. Joint Flexibility Limitations
   - Extensibility of connective tissue surrounding the joint [tissue visco-elasticity]
   - Soft tissue restrictions on joint flexibility [e.g., body fat accumulation]
   - Bone and ligament structure of the joint
   - Freedom of movement between fibers [lack of scar tissue]
4. Energy transfer system efficiency
   - Efficiency of aerobic/anaerobic systems to function successfully based on E requirement.
   - Developed through training
5. Age
6. Sex and hormone function
7. Somatotype
   - Endomorph-rounded, breasts/hips, easier fat accumulation, difficult to develop muscle
   - Mesomorph-muscular, well balanced muscles, stocky, less amount of fat
   - Ectomorph- slender, less fat, less muscle

B. Mechanical Factors Affecting Muscular Contraction

1. Lever Length: ROM, Speed & Power vary, depending on weight load moved by lever
2. Angle of pull: Force of the muscle applied directly to the bone
3. Relationship between tension and muscle length
4. Speed of muscle shortening**:** Speed varies with load, speed effects external output
5. Joint Receptors
6. Muscle spindles
7. Golgi Tendon Organs

C. Psycho-Neural and Learned Response Factors

1. Pain tolerance
2. Concentration-focus ability
3. Coordination
4. Desire

D. External and Environmental Factors

1. Equipment
2. Temperature/humidity, precipitation
3. Training Techniques

V. EVALUATIONS

I. Evaluate your Body Type:

A. Endomorph
B. Mesomorph

C. Ectomorph
D. Combination

I am: _____

II. Evaluate your Lever Length:

Part One

A. Long lever
B. Medium lever
C. Short lever

Upper limbs _____ *Torso* _____ *Lower limbs* _____

Part Two

A. Long tendon/short muscle
B. Short tendon/long muscle
C. Medium tendon/medium muscle

Upper body _____ *Lower body* _____

III. Evaluate your Joint Flexibility:

A. On a scale of I to 5, with 5 being the most flexible, evaluate you ROM
- *Shoulder joint* _____
- *Hip joint* _____
- *Ankle joint* _____
- *Spine* _____

B. Does your flexibility inhibit you from performing any movements? Yes No
If yes, how?_____

C. Do you have more ROM in some joints than others? Yes No
Describe: _____

D. Are you bilaterally flexible with equal ROM at the same joint? Yes No

IV. Evaluate you Posture and Alignment

A. Where do you naturally carry your body weight: [1] over toes, [2] toward heels; [3] over arch? _____
B. Finding stable spine position
C. Ab bracing: 'cinch in your center'
D. Finding UB balance: engage UB stabilizers
E. Moving with a dynamic spine

VI. APPLYING RESITANCE TRAINING PRINCIPLES

A. Overload Methodology

1. Apply P.R.E. to each of your classes and re-adjust weight as necessary.

2. Adding the element of constant "surprise" to training will stimulate muscular improvement (particularly when increasing weight is not an overload alternative).
4. The indefinite use of one training program can lead to training plateaus and overtraining.
5. Optimal gains achieved through mixed programming & manipulating training variables.
6. Varied positions will create a positive stress and overload on muscles being worked.

B. Selecting and Achieving Overload

1. Resistance equipment: DB, tube, bar, balls, step
2. Amount of weight for each muscle group will determine reps
3. Type of Sequencing/Progression

C. Speed and Resistance Relationship

1. "Use speed, lose resistance"
2. Recommended BPM is 112-116; or 118-120 without added weight

D. Muscle Balancing

1. Bone up on your Anatomy—joint action, agonists, antagonists, assistors, stabilizers
2. Functional approach to training
3. Multi-muscle, tri-planar work vs. isolation
4. Engage Stabilizers
5. Determine postural divergences; incorporate prescriptive exercise

E. Biomechanical advantage of gravity

1. Gravity assistive
2. Gravity resistive

F. Stabilization: Exercise Selection Determinant

1. Torso stabilization
2. Pelvic stabilization
3. Scapular stabilization
4. Stabilizer fatigue

VI. SETTING UP YOUR RESISTANCE PROGRAM: A + B = C

A. Determine program goals: class or client

B. Assess the given

1. Clientele: fitness level, assessment results, resistance training experience, physical limitations
2. Frequency and time allotted for training (availability)
3. Equipment available
4. Variables that effect program and exercise sequencing technique: amount of resistance potential, stabilizer fatigue, ROM, bio-mechanical considerations

C. Choose your program design

VII. TEACHING METHODOLOGY

- ✓ Always warm-up and cool-down without weights
- ✓ Do a workout specific warm-up
- ✓ Have an understanding of joint action and primary movers responsible for each exercise
- ✓ Always maintain good posture and body alignment

- ✓ Set position first, then stabilize the body BEFORE you actively perform the any exercise
- ✓ Choose exercises in positions that can most effectively utilize gravity
- ✓ Work through the full range of motion for each exercise
- ✓ Vary activities to avoid overuse, particularly to the shoulder joint; avoid over- fatiguing deltoids
- ✓ Work each muscle group to temporary muscle fatigue utilizing appropriate reps, sets, resistance and sequencing

VIII. THE FINESSE OF BEING A SCULPT ARTIST

A. Fine-tuning
B. Definition/exercise selection with purpose
C. Find the joy of simple, imaginative combinations and sequencing

IX. TRAINING METHODOLOGY

A. "The Basic 12" (Staples of any Program Design)

1. Squat
2. Lunge
3. Chest press
4. Lat row or pull-down
5. Overhead press
6. Lateral raise
7. Biceps curl
8. Triceps extension
9. Back extension
10. Ab Crunch
11. Spine rotation
12. Core, i.e. plank

B. Repeated Sets with Active Rest (Circuit-style)

1. Moderate weight
2. Alternating upper and lower body work
3. Movement combinations
4. Built-in rest period

C. HIT (High Intensity Training)

1. Combination of cardio and muscle resistance training in the same workout.
2. With a combination workout, you both save time and use your energy wisely.
3. EPOC rate significantly higher than for steady state cardio training or resistance training alone.
4. Similar guidelines to circuit

D. Superset

1. 2-3 exercises per set
2. Moderate to heavy weight
3. Multi-muscle/isolation combinations
4. Pre-fatigue assistor muscles

E. Compound - Isolation Sets

1. 2-3 exercises per set
2. Heavy to moderate weight
3. Multi-joint/multi-muscle exercise to fatigue, followed by specific isolation exercises

F. Drop Setting

1. 2 to 3 weight changes per set
2. Max weight for 10 reps, drop 10-20% for 5 to 8 reps
3. Advantage of muscle fiber recruitment

G. Pyramiding

1. Multiple sets while increasing or decreasing weight
2. Fatigues same muscle group[s], results in maximum muscle innervation
3. Fiber recruitment specificity
3. Torso stabilization
4. ROM adaptations

H. Fatigue Formulas

1. Breakdown: Moderate-heavy weight to fatigue, lighten resistance for 3-4 reps
2. Bi-set: 2 successive exercises for the same muscle group to change fiber stimulus
3. Finishing move: finish set with final peak move to full fatigue of chosen muscle at a specific angle

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Thank you for your time, interest and attention. I wish you great success as a sculpt artist and in your resistance training programming!

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