RESISTANCE TRAINING AND BODY COMPOSITION

By Adrian Salazar & Ulises Rivas
WHAT IS RESISTANCE TRAINING?

- ACSM Definition of Resistance Training
  - Resistance training is designed to improve muscular fitness by exercising a muscle or a muscle group against external resistance
BENEFITS OF RESISTANCE TRAINING

- Improved muscular strength
- Weight management
- Greater stamina
- Prevent or control of chronic diseases
- Improved mobility and balance
- Decrease risk of injury
- Increased bone density
RESISTANCE TRAINING AND SKELETAL MUSCLE

- Our skeletal muscle becomes more efficient at performing tasks
- Muscular Endurance
- Hypertrophy
- Muscular Strength
- Power
EFFECTS OF AGING ON SKELETAL MUSCLE

- As we age, our muscular strength decreases due to a loss of lean muscle

- Inactivity contributes to sarcopenia

- Engaging in regular physical activity is essential to avoiding loss of lean muscle mass
TIPS FOR SUCCESS

► What is a Repetition (Rep)?
  ► A repetition is the number of times you perform a specific exercise.

► What is a Set?
  ► A set is a group of repetitions.
WARM UP

- Before starting any workout it is important to have a proper warm-up.
- 5 to 10 minutes
- Increases blood flow to the muscles
- Includes aerobic or muscular endurance activities
MUSCULAR ENDURANCE

- It is recommended for beginners to start off with endurance training

- This type of training focuses on lighter weights and high repetitions

- Protocols
  - Load: 15-20RM
  - Volume: 2-4 Sets of 15-20 Repetitions
  - Rest Period: 30-60 seconds between each set
MUSCULAR HYPERTROPHY

- Building lean muscle mass

- This type of training focuses on higher volumes and lower repetitions

- Protocols
  - Load: 8-12RM
  - Volume: 1-3 sets of 8-12 repetitions
  - Rest Period: 30 seconds to 90 seconds between sets
MUSCULAR STRENGTH

- Strength training results in producing more force

- Heavier weight, fewer reps

- Protocols
  - Load: Beginners 8-12RM & Advanced 1-6RM
  - Volume: 1-3 sets of 8-12 for novice or intermediate

- Rest Period: 2-5 minutes
MUSCULAR POWER

- The ability to generate as much force as fast as possible
- Differs from strength

Protocols
- Load: 3-6RM
- Volume: 1-3 sets of 3-6 repetitions
- Rest period: 2-5 minutes
WHICH PHASE IS RIGHT FOR ME?

- We reap benefits in all four areas regardless of the phase we are in.

- Typically doing 2-4 weeks per phase is ideal.

- Beauty of working with a personal fitness trainer.
HOW OFTEN SHOULD I DO RESISTANCE TRAINING?

- It is recommended to resistance train the major muscle groups 2 to 3 days per week.

- At least 48 hours of rest should separate training sessions that work the same major muscle group.
RECOVERY & OVERTRAINING

- Signs of overtraining:
  - Fatigued
  - Exhausted
  - Exceedingly sore
  - Pain
  - Restless

- Vary your workouts

- Work different muscle groups on different days
WHAT IS BODY COMPOSITION?

- Body composition can be defined as the relative proportion of fat and fat-free tissue in the body.

Body Composition > Weight
- In regard to overall health, body composition has a bigger impact on health than weight

- Our focus should be on tracking body composition rather than moving the numbers on the scale
RESISTANCE TRAINING & ITS EFFECTS ON BODY COMPOSITION

- Resistance training helps increase the amount of lean body mass and reduce the amount of fat mass.
- Muscle requires more energy to be maintained, thus burning more calories.
- Bodybuilder vs Overweight Individual
WAYS TO RESISTANCE TRAIN

- Free-Weight Training
- Machine-Based training
- Body Weight Training
- Resistance Bands
TYPES OF TRAINING

- Common methods to resistance training:
  - Full Body
  - Upper/Lower Body Split
  - Push – Pull
  - Circuit Training
CORE EXERCISES

- Involve two or more primary joints, and engages large muscles while activating synergistic muscles.

- Core exercises are also better for improving body composition.
ACCESSORY EXERCISES

- Involve one primary joint
- Target one specific muscle

Examples:
- Bicep Curl
- Triceps Extension
- Leg Extension
- Leg Curl
EXERCISES FOR YOUR CHEST

- Free Weight
  - Supine Bench press

- Machine-Based
  - Seated Chest Press

- Body Weight
  - Push-ups*
EXERCISES FOR YOUR BACK

- Free Weight
  - Bent-over Barbell Row

- Machine-Based
  - Lat-Pulldown

- Body Weight
  - Pull-ups

- Resistance Band
  - Band Fly*
EXERCISES FOR YOUR SHOULDER

- Free Weight
  - Dumbbell Lateral Raise*

- Machine Based
  - Shoulder Press

- Body Weight
  - Arm Circles
EXERCISES FOR YOUR BICEPS

- Free Weight
  - Dumbbell Curls*

- Machine Based
  - Cable Curls

- Body Weight
  - Chin-Ups
EXERCISES FOR YOUR TRICEPS

- Free Weight
  - Dumbbell Kickbacks*

- Machine Based
  - Press Downs

- Body Weight
  - Dips
EXERCISE FOR YOUR ABDOMEN

- Free Weights
  - Weighted Crunches
- Machine Based
  - Seated Abs Machine
- Body Weight
  - Plank*
EXERCISES FOR YOUR QUADRICEPS

- Free Weight
  - Squats*

- Machine Based
  - Leg Extension

- Body Weight
  - Lunges
EXERCISES FOR YOUR HAMSTRINGS

- **Free Weight**
  - Stiff-leg Deadlifts*

- **Machine Based**
  - Leg Curls

- **Body Weight**
  - Leg Curls w/ Stability Ball
WRAP UP

- Train, its good for you
QUESTIONS?

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REFERENCES