

Resistance & Cardiovascular Exercise Recommendations

Resistance Training

Benefits: Improves cognitive function + Increases muscular strength, size, and endurance + Decreases risk of injury + Strengthens bones and connective tissue + Increases lean mass + Reduce blood pressure (if high) + Helps control type 2 diabetes + Improves self-esteem + helps to manage stress + Boosts metabolism + Increases motor unit firing rate + Prevents osteoporosis + Offsets age related muscle loss + many more!

Types of Resistance Training: 1. Free weights (dumbbells and barbells) 2. Machines 3. Suspension Training / TRX 4. Gravity / Body weight training 5. Fit Balls and resistance bands 6. Kettlebells

Guidelines: These guidelines are to be used as a general recommendation, and do not include all necessary information for a complete resistance training program.

Beginner: 2 to 3 days per week - full body training every session

Intermediate: 3 days for full body training or 4 days per week of a split routine (ex. upper / lower)

Advanced: 4 to 6 days per week - split routine (ex. push / pull / lower)

*Always give yourself at least 48-72 hours rest between training same muscle group *

Progression - 2 for 2 Rule: If you are able to complete 2 extra reps on the last set of a given exercise, 2 training days in a row, increase the weight by 5-10 lbs for upper body, and 10-20 lbs for lower body.

The goals of resistance training: Endurance, Hypertrophy, and Strength

Endurance: 12-15 reps / 2-3 sets per exercise / $\leq 65\%$ 1RM (1 rep max) / ≤ 30 seconds rest

Hypertrophy: 6-12 reps / 3-5 sets per exercise / 67-85% 1RM / 30-90 seconds rest

Strength: 1-6 reps per set / 2-6 sets per exercise / $\geq 85\%$ 1RM / 2-5 minutes rest

Cardiovascular Training

Benefits: Decreases fat mass + Increases strength of connective tissue + Increases total blood volume + Increases VO_{2max} + Increases red blood cell volume + Improves lactate threshold + Decreases blood pressure + Lowers heart rate + Increases heart stroke volume + Increases capillary and mitochondria density + Increases glycogen stores + Contributes to prevention of CVD, cancer, and diabetes + Improves aerobic power + Reduces depression and anxiety + Improves cholesterol and lowers LDL + many more!

Types of Cardio: 1. LSD (Long slow distance) 2. Pace/tempo training 3. Interval training 4. Cross-training 5. Circuit training 6. Fartlek training 7. Repetition training

Guidelines: Five components exist on the programming of a cardiovascular exercise program.

Mode - Specific activity performed. (e.x. run, swim, bike, etc.) Mix it up! Pick 2-3 and alternate days.

Intensity - main determinant of frequency and duration. too little = no benefits / too hard = overtraining. Generally, healthy adults should exercise between 50-85% of their heart rate reserve (HRR).

Frequency - How many times per week? – Surgeon General recommends cardio exercise on all or most days of the week. ACSM states 3-5 days per week for general fitness goals.

Duration - How long per session? ACSM recommends from 20-60 minutes of continuous or intermittent bouts of exercise per day. Surgeon General recommendation is at least 30 minutes/day.

Progression - Dependent upon improvement or maintenance. Increase of frequency intensity or duration of 10% is required for improvement. This should only be done after the body has adapted to the program. No fewer than 2 sessions per week should be done on a maintenance program, and the previous duration and intensity must be kept.

To find your Heart Rate Reserve (HRR), use the following equation:

Karvonen Formula: $HRR = (220 - \text{age} - \text{resting heart rate}) \times \text{intensity}\% + \text{resting heart rate}$

*For Informational Purposes Only. This is not a training plan and certain training may not be right for you. For more information, consult a physician or NSCA, ACSM, or NASM Certified Personal Trainer.



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