Resistance Training Manual Guidelines

Frequency: 2-3 sets
Intensity:
for *strength*: 6 or less reps using a heavier weight
for *size*: 6-12 reps using a moderate weight
for *tone and endurance*: more than 12 reps using a lighter weight
Time: 2-3 days a week for no more than one hour.
Type: 8-10 exercises for your big muscle groups.

Helpful Hints:

- Perform exercises through the full range-of-motion, but be careful not to lock your joints.
- No banging the weights or letting them drop—perform exercises in a controlled manner.
- Don't forget to breathe! Focus on exhaling upon exertion.
- Maintain good form when performing exercises. Good form almost always includes keeping your back and neck straight, but could be more specific depending upon the exercise.
- Give your muscles 48-72 hours of rest between weight lifting sessions.
- Exercise with a training partner for safety and encouragement.

Modifications Key:

 Can also be performed using a barbell.

 Can also be performed on a machine.

 Can also be performed using dumbbells.

 Can also be performed on a stability ball.

Power Clean

Technique:

1. Position yourself in the middle of the bar, feet shoulder width apart, back strait, eyes forward. Use a pronated grip to grasp the bar, slightly wider than shoulder width.





2. Extend your hips and knees explosively at the same time to lift weight off the ground. Keep bar close to shins and knees without touching them.
3. Without stopping the bars momentum fully extend the hips and knees, then plantar flex the ankles.
4. Keep the bar close to your body as your quickly shrug the shoulders upward.
5. When shoulders reach maximum height begin to flex elbows and pull your body under the bar (With practice you will apply enough force to where your feet leave the ground in this stage).
6. Once body is under the bar quickly snap elbows out in front of you (you should end up the front squat starting position).
7. Slowly lower the bar back down to the thighs, cushioning its impact by flexing the hips and knees.
8. Squat bar back down to the floor to complete the exercise

Common Errors: Lifting weight with your back instead of legs, allowing the bar to be too far away from your body, and/or using a "reverse curl" technique to move the bar to the front squat position.

Precautions:

1. If you suffer from lower back pain it is recommended that you wear a lifting belt while performing this exercise.
2. It is always best to have spotters available while you are performing any exercise.

Special Thanks To:

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The Human Performance Lab's

Resistance Training Manual



Resistance training helps build your muscles by isolating them and requiring them to work against a force. This generates muscle and nerve cells to help your body adapt to the increased workload. Resistance training can provide an array of benefits beyond just strength gains: it has been shown to reduce the risk factors associated with coronary heart disease, non-insulin dependent diabetes, and colon cancer. It can also prevent osteoporosis and promote weight loss. Read on to learn about our favorite weight training exercises!

Leg Curl

Sit on apparatus with back against padded back support. Place back of lower leg on top of lower padded lever with knee pushing on uppermost padded lever. Grasp handles on lap support. Pull lever to back of thighs by flexing knees. Return lever until knees are straight. Repeat.



Calves

Dumbbell Single-Leg Calf Raise

Grasp dumbbell in one hand to side. Position toes and balls of feet flat on floor (shown) or on block with arches and heels extending off. Place hand on support for balance. Raise heels by extending ankles as high as possible. Lower heels by bending ankles until calves are stretched. Repeat.

Modifications:





Neck

Wall Sit

Sit on the floor with back against as tight against a wall as possible. Bend at the knees if necessary. Bring upper arms up so that they lie against the wall, parallel to the floor and bend 90° at the elbow so fingers point upwards. Press shoulder blades against the wall and hold

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Upper Back

Dumbbell Shrug

Stand holding dumbbell to side. Elevate shoulder as high as possible. Lower and repeat.

Modifications:





Dumbbell Bent-Over Row

Kneel over side of bench with arm and leg to side. Grasp dumbbell. Pull dumbbell to side until upper arm is just beyond horizontal or height of back. Return until arm is extended and shoulder is stretched forward. Repeat. Continue with opposite arm.

Modifications:





Arms

Biceps

Dumbbell Biceps Curl

Position dumbbell to side with palm facing body and arm straight. With elbows to the sides, raise one dumbbell and rotate forearm until forearm is vertical and palm faces shoulder. Lower to original position and repeat. Continue with opposite arm.

Modifications:  



Dumbbell Hammer Curl

Position two dumbbells to sides, palms facing body, arms straight. With elbows to the sides, raise one dumbbell until forearm is vertical and the thumb faces the shoulder. Lower to original position and repeat. Continue with opposite arm.



Wrist

Barbell Reverse Wrist Curl

Sit and grasp bar with narrow to shoulder width overhand grip. Rest forearms on thighs with wrists just beyond knees. Hyperextend wrist and return until wrist are fully flexed. Repeat.

Modifications: 



Leg Extension

Sit on apparatus with back against padded back support. Place front of lower leg under padded lever. Position knee articulation at same axis as lever fulcrum. Grasp handles to sides for support. Move lever forward by extending knees until leg are straight. Return lever to original position by bending knees. Repeat.



Hamstrings

Barbell Deadlift

With feet flat beneath bar, squat down and grasp bar with a shoulder width or slightly wider over hand or mixed grip. Lift bar by extending hips and knees to full extension. Pull shoulders back at top of lift if rounded. Return and repeat.

Modifications: 





Legs

Quadriceps

Barbell Squat

From a rack with barbell at upper chest height, position barbell on the back of the shoulders and grasp bar to sides. Dismount bar from rack. Descend until knees and hips are fully bent. Extend knees and hips until legs are straight. Return and repeat.

Modifications:





Creating a BLOCK:

- Arch lower back
- Inhale and hold until exertion
- Contract abdominal muscles

Barbell Lunges

From a rack with barbell at upper chest height, position bar on the back of the shoulders and grasp barbell to sides. Dismount bar from rack. Lunge forward with first leg. Land on heal then forefoot. Lower body by flexing knee and hip of front leg until knee of rear leg is almost in contact with floor. Return to original standing position by forcibly extending the hip and knee of the forward leg. Repeat by alternating lunge with opposite leg.

Modifications:



Triceps

Dumbbell Triceps Extension

Position one dumbbell overhead with both hands under inner plate (heart shaped grip). With elbows overhead, lower forearm behind upper arm by flexing elbows. Flex wrists at bottom to avoid hitting dumbbell on back of neck. Raise dumbbell overhead by extending elbows while hyperextending wrists. Return and repeat.

Modifications:



Dumbbell Triceps Kickback

Kneel over bench with arm supporting body. Grasp dumbbell. Position upper arm parallel to floor. Extend arm until it is straight. Return and repeat. Continue with opposite arm.



Shoulders

Dumbbell Shoulder Press

Position dumbbells to each side of shoulders with elbows below wrists. Press dumbbells until arms are extended overhead. Lower and repeat.

Modifications:



Barbell Upright Row

Grasp bar with shoulder width or slightly narrower overhand grip. Pull bar to neck with elbows leading. Allow wrists to flex as bar rises. Lower and repeat.

Modifications: 



Dumbbell Lateral Raise

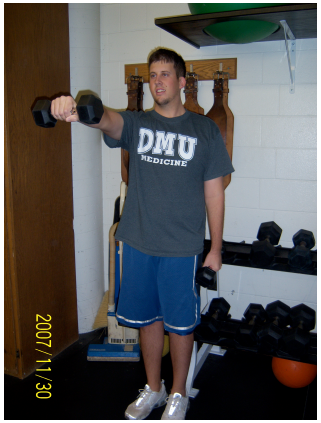
Grasp dumbbells in front of thighs. With elbows slightly bent, raise upper arms to sides until elbows are shoulder height. Maintain elbows' height above or equal to wrists. Lower and repeat.



Dumbbell Front Raise

Grasp dumbbells in both hands. Raise one dumbbell with elbows fixed in a 10° to 30° angle throughout until upper arm is parallel to the floor. Continue with alternate arm.

Modifications: 



Machine Hip Flexion

Stand on platform facing to one side and grasp the bar for support. Adjust roller to the lowest position. Position the front of the leg nearest the machine against the padded roller while standing on other leg. Raise lever by flexing hip until the thigh is just perpendicular to the floor. Return until hip is extended. Repeat. Continue with opposite leg.



Machine Hip Extension

Stand on platform facing to one side and grasp the bar for support. Adjust roller to a mid-number position. Place the leg nearest the machine on the padded roller while standing on other leg. Lower lever by extending hip. Return until knee is higher than hip. Repeat. Continue with opposite leg.



Hips

Machine Hip Abduction

Adjust platform so lever fulcrum is same height as hip joint. Adjust roller in low-number position. Face machine and grasp bars to sides. Place outside of thigh against roller pad and shift body weight to opposite leg. Raise leg against roller pad to side by abducting the hip. Return and repeat. Reposition roller pad lever and continue with opposite leg.



Machine Hip Adduction

Adjust platform so lever fulcrum is same height as hip joint. Adjust roller pad to a mid-number position. Face machine and grasp bars to sides. Place inside of thigh on roller pad and remain standing on supporting leg. Move leg toward and across supporting leg Return and repeat. Reposition roller pad lever and continue with opposite leg.



Chest

Barbell Bench Press

Lie supine on bench. Dismount barbell from rack over the upper chest using a wide oblique overhand grip. Lower weight to upper chest. Press bar until arms are extended. Repeat.

Modifications:





Dumbbell Fly

Grasp two dumbbells. Lie supine on bench. Support dumbbells above the chest with the arms fixed in a slightly bent position and palms facing forward. Internally rotate the elbows while lowering the dumbbells to sides until chest muscles are stretched and elbows flexed. Bring dumbbells back to starting position in a hugging motion. Repeat.



Push-Ups

Lie prone on floor with hands slightly wider than shoulder width. Raise body up off floor by extend arms with body straight. Keeping body straight, lower body to floor by bending arms. Push body up until arms are extended. Repeat.



Abdominals

Sit-up



Lie supine on floor with hips bent and feet hooked under foot brace. Place hands crossed over chest or behind head. Raise the torso from floor by bending the waist and hips (not the neck!). Return until the back of the shoulders contacts the surface. Repeat.

Modifications:

Side Crunch



Lie on one side on floor or mat. With both legs together, knees and hips bent, flex waist by raising upper torso off surface. Return until the back of the shoulders return to surface. Repeat and continue with movement in the opposite position.

Modifications:

Dumbbell Side Bend



Grasp dumbbell with arm straight to side. Bend waist to opposite side of dumbbell. Lower and repeat. Continue with opposite side.

Lower Back

Contralateral Supermans



Come onto all fours on floor or mat with wrists under shoulders and knees under hips. Raise and straighten left arm and right leg. Lower arm and leg to floor. Repeat and continue with opposite side or alternate between opposite sides.

Modifications:

Back Extension

Position thighs prone on large pad and lower leg under padded brace. Place hands crossed over chest or behind head. Raise upper body until hip and waist are fully extended. Lower body by bending hips and waist until fully flexed. Repeat.

Modifications:

