

# Definition of Lifts and Exercises

Please refer to this handbook for instruction on performing the following lifts and exercises effectively and safely. A table of contents is provided for quick reference.

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## **SHOULDERS**

### **Barbell Shoulder Press**

**Muscles Trained:** Anterior Deltoid, Medial Deltoid, Upper Pectorals, Upper Trapezius, Triceps, and Serratus Anterior

**Joint Actions:** Shoulder Abduction, Elbow Extension

#### **Instructions**

- 1) Sit upright, with your back straight, on a bench.
- 2) Grasp the bar with a pronated (overhand) grip, slightly wider than shoulder width apart.
- 3) Rest the bar across the clavicles/anterior deltoids (upper chest/shoulders).
- 4) To begin the movement, press the bar straight upward in front of a face.
- 5) Exhale throughout the upward movement phase.
- 6) Continue movement until elbows are fully extended overhead.
- 7) Lower the bar under control, directly in front of the face until it lightly touches the clavicles/anterior deltoids.
- 8) Inhale throughout the downward movement phase.
- 9) Continue pressing the bar overhead for desired number of repetitions.

#### **Variations**

- 1) Perform exercise standing with shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.
- 2) Take narrow grip (slightly less than shoulder width apart) to primarily work the upper pectorals and anterior deltoids.
- 3) Take wide grip to primarily work the anterior and medial deltoids.

#### **Common Mistakes**

- 1) Allowing hyperextension (arching) of the back during the upward movement phase.
- 2) Lowering the bar too quickly.
- 3) Bouncing the bar on the shoulders.

### **Dumbbell Shoulder Press**

**Muscles Trained:** Anterior Deltoid, Medial Deltoid, Upper Pectorals, Upper Trapezius, Triceps, and Serratus Anterior

**Joint Actions:** Shoulder Abduction, Elbow Extension

#### **Instructions**

- 1) Sit upright, with your back straight, on a bench.
- 2) Grasp dumbbells with a pronated (overhand) grip.
- 3) Rest dumbbells in a neutral position (palms facing each other) at shoulder level.
- 4) To begin the movement, press the dumbbells simultaneously straight upward and slightly toward each other while rotating the palms and wrists to face forward.
- 5) Exhale throughout the upward movement phase.
- 6) Continue movement until elbows are fully extended overhead.
- 7) Lower the dumbbells under control, rotating the palms and wrists back to neutral position on the descent until the dumbbells are at shoulder level.
- 8) Inhale throughout the downward movement phase.
- 9) Continue pressing the dumbbells overhead for desired number of repetitions.

### **Variations**

- 1) Perform exercise standing with shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.
- 2) Begin the exercise with palms facing forward.

### **Common Mistakes**

- 1) Allowing hyperextension (arching) of the back during the upward movement phase.
- 2) Lowering the dumbbells too quickly.
- 3) Bouncing the dumbbells on the shoulders.

## **Rear Dumbbell Lateral Raise**

**Muscles Trained:** Posterior Deltoid, Middle Deltoid, Anterior Deltoid, Trapezius, Rhomboids, Teres Minor, and Infraspinatus

**Joint Action:** Shoulder Horizontal Abduction

### **Instructions**

- 1) Stand in shoulder width stance with knees slightly flexed (bent).
- 2) Bend forward at the hips until back is parallel with the floor (keep back straight).
- 3) Grasp dumbbells in pronated (overhand) grip with palms in neutral (facing each other) position.
- 4) Flex (bend) elbows slightly and maintain this same angle at the elbows throughout the movement.
- 5) To begin the movement, raise dumbbells simultaneously out to the side, maintaining slight bend in the elbows.
- 6) During the upward movement phase the elbows and upper arms should rise ahead and slightly higher than the forearms and wrists.
- 7) Exhale throughout the upward movement phase.
- 8) Continue raising the dumbbells until the upper arms are approximately parallel with the floor.

- 9) In mid-position the pinky finger should be higher than the thumb as if pouring water out of a pitcher with pinky at level of elbow and arm parallel to the floor.
- 10) Lower the dumbbells slowly, maintaining the slight bend in the elbows until the dumbbells are touching each other.
- 11) Inhale throughout the downward movement phase.
- 12) Repeat movement for desired number of repetitions.

### **Variations**

- 1) Perform exercise sitting on a bench with back parallel to the floor by placing the chest on the thighs.

### **Common Mistakes**

- 1) Allowing flexion (bending forward) of the back throughout the movement.
- 2) Changing the angle of the elbow joints by flexing (bending) the elbows during the upper movement phase.
- 3) Lowering the dumbbells too quickly.

## **Dumbbell Lateral Raise**

**Muscles Trained:** Medial Deltoid, Anterior Deltoid, Posterior Deltoid, and Trapezius

**Joint Action:** Shoulder Abduction

### **Instructions**

- 1) Stand in shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.
- 2) Grasp dumbbells in pronated (overhand) grip with palms in neutral (facing each other) position.
- 3) Place dumbbells in front of thighs with elbows slightly flexed (bent).
- 4) To begin the movement, raise dumbbells simultaneously upward and to the side, maintaining the slight bend in the elbows.
- 5) Exhale throughout the upward movement phase.
- 6) Continue to raise the arms until the dumbbells are at shoulder level.
- 7) In mid-position the pinky finger should be higher than the thumb as if pouring water out of a pitcher with pinky at level of elbow and arm parallel to the floor.
- 8) Lower the dumbbells slowly until they are in front of the thighs.
- 9) Inhale throughout the downward movement phase.
- 10) Repeat movement for desired number of repetitions.

### **Variations**

- 1) Begin and finish the exercise with the dumbbells behind the gluteus maximus (buttocks).
- 2) Perform the exercise alternating one arm at a time.

### **Common Mistakes**

- 3) Changing the angle of the elbow joints by flexing (bending) the elbows during the upper movement phase.
- 4) Lowering the dumbbells too quickly.

## **Single Dumbbell Front Raise**

**Muscles Trained:** Anterior Deltoids, Middle Deltoids, Pectoralis Major (clavicular portion), Infraspinatus

**Joint Action:** Shoulder Extension

### **Instructions**

- 1) Stand in shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.
- 2) Grasp dumbbells with pronated (overhand) grip and elbows extended (straight).
- 3) Place the dumbbells behind the gluteus maximus (buttocks).
- 4) To begin the movement, raise one dumbbell upward, keeping the elbow extended and back straight.
- 5) Exhale throughout the upward movement phase.
- 6) Continue to raise the dumbbell until it reaches eye level.
- 7) Lower the dumbbell slowly until it reaches the starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat movement for the other arm.
- 10) Repeat the movement, alternating arms, for desired number of repetitions.

### **Variations**

- 1) Begin and finish the movement with the dumbbells in front of the thighs.

### **Common Mistakes**

- 1) Allowing hyperextension (arching) of the back during the upward movement phase.
- 2) Only raising the dumbbell to shoulder level.
- 3) Lowering the dumbbell too quickly.

## **Narrow Grip Upright Row**

**Muscles Trained:** Trapezius, Middle Deltoid, Anterior Deltoid, Posterior Deltoid, Biceps, and Forearms

**Joint Actions:** Shoulder Abduction, Elbow Flexion

### **Instructions**

- 1) Stand in shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.

- 2) Grasp bar with pronated (overhand) grip with hands 1-2 inches apart.
- 3) Let bar hang down in front of the body.
- 4) To begin the movement, raise the bar straight upwards toward the chin.
- 5) Exhale throughout upward movement phase.
- 6) Continue to raise the bar until the forearms are parallel to the floor and lying across the top of the bar.
- 7) Lower the bar slowly, extending (straightening) the arms until the bar reaches the starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat movement for desired number of repetitions.

### **Common Mistakes**

- 1) Allowing hyperextension (arching) of the back during the upward movement phase.
- 2) Lowering the bar before the elbows are parallel with the floor.
- 3) Holding the bar too far from the body during the upward movement phase.

## **Barbell Front Raise**

**Muscles Trained:** Anterior Deltoids, Middle Deltoids, Pectoralis Major (clavicular portion), Infraspinatus

**Joint Action:** Shoulder Extension

### **Instructions**

- 1) Stand in shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.
- 2) Grasp bar with pronated (overhand) grip with hands placed shoulder width apart.
- 3) Let bar hang down in front of the body, elbows extended (straight).
- 4) To begin the movement, raise the bar upward, keeping the elbows extended and back straight.
- 5) Exhale throughout the upward movement phase.
- 6) Continue to raise the bar until it reaches eye level.
- 7) Lower the bar slowly until it reaches the starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat movement for desired number of repetitions.

### **Variations**

- 1) May perform same exercise on low cable pulley with straight bar attachment.

### **Common Mistakes**

- 4) Allowing hyperextension (arching) of the back during the upward movement phase.
- 5) Only raising the bar to shoulder level.
- 6) Lowering the bar too quickly.

## Wide Grip Upright Row

**Muscles Trained:** Trapezius, Middle Deltoid, Anterior Deltoid, Posterior Deltoid, Biceps, and Forearms

**Joint Actions:** Shoulder Abduction, Elbow Flexion

### Instructions

- 1) Stand in shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.
- 2) Grasp bar with pronated (overhand) grip with hands 6-8 inches apart.
- 3) Let bar hang down in front of the body.
- 4) To begin the movement, raise the bar straight upwards toward the chin.
- 5) Exhale throughout upward movement phase.
- 6) Continue to raise the bar until it reaches the chin, with the forearms higher than parallel with the floor.
- 7) Lower the bar slowly, extending (straightening) the arms until the bar reaches the starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat movement for desired number of repetitions.

### Common Mistakes

- 10) Allowing hyperextension (arching) of the back during the upward movement phase.
- 11) Lowering the bar before it reaches the chin.
- 12) Holding the bar too far from the body during the upward movement phase.

## Partial Clean

**Muscles Trained:** Anterior Deltoids, Middle Deltoids, Posterior Deltoid, Pectoralis Major (clavicular portion), Infraspinatus, Trapezius, Biceps, Forearms

**Joint Actions:** Shoulder Extension, Elbow Flexion

### Instructions

- 1) Stand in shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.
- 2) Grasp bar with pronated (overhand) grip with hands 6-8 inches apart.
- 3) Let bar hang down in front of the body, with elbows extended (straight).
- 4) To begin the movement, raise the bar upward away from the body while simultaneously flexing the elbows.

- 5) Bar should make an arc motion until it reaches the clavicle/anterior deltoid (shoulder) region.
- 6) Exhale throughout the upward movement phase.
- 7) Lower the bar close to the body, until the elbows are fully extended (straight).
- 8) Inhale throughout the downward movement phase.
- 9) Repeat movement for desired number of repetitions.

### **Common Mistakes**

- 1) Splitting the exercise into two separate joint actions: shoulder extension and elbow flexion. Instead of performing the joint actions simultaneously.
- 2) Letting elbows drop at top of movement. Keep elbow high throughout.
- 3) Allowing hyperextension (arching) of the back during the upward movement phase.

## **Dumbbell Front Raise**

**Muscles Trained:** Anterior Deltoids, Middle Deltoids, Pectoralis Major (clavicular portion), Infraspinatus

**Joint Action:** Shoulder Extension

### **Instructions**

- 1) Stand in shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.
- 2) Grasp dumbbells with pronated (overhand) grip and elbows extended (straight).
- 3) Place the dumbbells behind the gluteus maximus (buttocks).
- 4) To begin the movement, raise dumbbells upward, keeping the elbows extended and back straight.
- 5) Exhale throughout the upward movement phase.
- 6) Continue to raise the dumbbells until they reach eye level.
- 7) Lower the dumbbells slowly until they reach the starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat the movement for desired number of repetitions.

### **Variations**

- 1) Begin and finish the movement with the dumbbells in front of the thighs.

### **Common Mistakes**

- 1) Allowing hyperextension (arching) of the back during the upward movement phase.
- 2) Only raising the dumbbells to shoulder level.
- 3) Lowering the dumbbell too quickly.

## One Arm Cable Lateral Raise

**Muscles Trained:** Medial Deltoid, Anterior Deltoid, Posterior Deltoid, and Trapezius

**Joint Action:** Shoulder Abduction

### Instructions

- 1) Stand in shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.
- 2) Grasp the cable with one hand pronated (overhand) grip with palm facing inward.
- 3) Place body parallel to the cable.
- 4) Allow low cable pulley to cross the body, hand resting in front of the opposite thigh with elbow slightly bent.
- 5) To begin the movement, raise the cable upward and to the side, maintaining the slight bend in the elbow.
- 6) Exhale throughout the upward movement phase.
- 7) Continue to raise the arms until the cable is at shoulder level.
- 8) In mid-position the pinky finger should be higher than the thumb as if pouring water out of a pitcher with pinky at level of elbow and arm parallel to the floor.
- 9) Lower the cable slowly until it is in front of the opposite thigh.
- 10) Inhale throughout the downward movement phase.
- 11) Repeat movement for desired number of repetitions.
- 12) Switch arms and repeat movement for equal number of repetitions as before.

### Common Mistakes

- 1) Changing the angle of the elbow joints by flexing (bending) the elbows during the upper movement phase.
- 2) Lowering the cable too quickly.

## Single Rear Cable Lateral Raise

**Muscles Trained:** Posterior Deltoid, Middle Deltoid, Anterior Deltoid, Trapezius, Rhomboids, Teres Minor, and Infraspinatus

**Joint Action:** Shoulder Horizontal Abduction

### Instructions

- 1) Stand in shoulder width stance with knees slightly flexed (bent).
- 2) Bend forward at the hips until back is parallel with the floor (keep back straight).
- 3) Grasp cable in pronated (overhand) grip with palm facing inward.
- 4) Place body parallel to the cable, allowing the cable to cross the body.
- 5) Flex (bend) elbow slightly and maintain this same angle at the elbows throughout the movement.
- 6) To begin the movement, raise cable out to the side, maintaining slight bend in the elbow.

- 7) During the upward movement phase the elbow and upper arm should rise ahead and slightly higher than the forearm and wrist.
- 8) Exhale throughout the upward movement phase.
- 9) Continue raising cable until the upper arm is approximately parallel with the floor.
- 10) Lower the cable slowly, maintaining the slight bend in the elbow until the cable is in the middle of the body.
- 11) Inhale throughout the downward movement phase.
- 12) Repeat movement for desired number of repetitions.
- 13) Switch to opposite arm and repeat movement for equal amount of repetitions as before.

### **Common Mistakes**

- 1) Allowing flexion (bending forward) of the back throughout the movement.
- 2) Changing the angle of the elbow joints by flexing (bending) the elbows during the upper movement phase.
- 3) Lowering the cable too quickly.

## **Cable Upright Row**

**Muscles Trained:** Trapezius, Middle Deltoid, Anterior Deltoid, Posterior Deltoid, Biceps, and Forearms

**Joint Actions:** Shoulder Abduction, Elbow Flexion

### **Instructions**

- 1) Stand in shoulder width stance with knees slightly flexed (bent) to take pressure off lower back.
- 2) Grasp cable with pronated (overhand) grip with hands 1-2 inches apart.
- 3) Place body perpendicular to the cable.
- 4) Let bar hang down in front of the body.
- 5) To begin the movement, raise the bar straight upwards toward the chin.
- 6) Exhale throughout upward movement phase.
- 7) Continue to raise the bar until the forearms are parallel to the floor and lying across the top of the bar.
- 8) Lower the bar slowly, extending (straightening) the arms until the bar reaches the starting position.
- 9) Inhale throughout the downward movement phase.
- 10) Repeat movement for desired number of repetitions.

### **Common Mistakes**

- 1) Allowing hyperextension (arching) of the back during the upward movement phase.
- 2) Lowering the bar before the elbows are parallel with the floor.
- 3) Holding the bar too far from the body during the upward movement phase.

## **BACK**

### **Chin Up**

**Muscles Trained:** Latissimus Dorsi, Teres Major, Trapezius (inferior portion), Biceps, Brachialis, Brachioradialis, and Pectoralis Major

**Joint Actions:** Shoulder Adduction, Elbow Flexion

#### **Instructions**

- 1) Grasp a hanging bar with a pronated (overhand) grip slightly wider than shoulder width apart.
- 2) Extend (straighten) the arms, hanging from the bar.
- 3) To begin the movement, pull yourself upward, flexing (bending) the elbows until your chin is at the level of the bar.
- 4) Exhale throughout the upward movement phase.
- 5) Lower your body in a controlled fashion.
- 6) Inhale throughout downward movement phase.
- 7) Repeat movement for desired number of repetitions.

#### **Variation**

- 1) Perform exercise with a wide, greater than shoulder width grip.

#### **Common Mistake**

- 1) Kicking legs for momentum at the beginning of the upward movement phase.

### **Reverse Chin Up**

**Muscles Trained:** Latissimus Dorsi, Teres Major, Trapezius (inferior portion), Biceps, Brachialis, Brachioradialis, and Pectoralis Major

**Joint Actions:** Shoulder Flexion, Elbow Flexion

#### **Instructions**

- 1) Grasp a hanging bar with a supinated (underhand) grip shoulder width apart.
- 2) Extend (straighten) the arms, hanging from the bar.
- 3) To begin the movement, pull yourself upward, flexing (bending) the elbows until your chin is at the level of the bar.
- 4) Exhale throughout the upward movement phase.
- 5) Lower your body in a controlled fashion.
- 6) Inhale throughout downward movement phase.
- 7) Repeat movement for desired number of repetitions.

#### **Variation**

- 1) Perform exercise with a wide, slightly greater than shoulder width grip.

**Common Mistake**

- 1) Kicking legs for momentum at the beginning of the upward movement phase.

**Barbell Bent Row**

**Muscles Trained:** Latissimus Dorsi, Rhomboid, Trapezius, Teres Major, Posterior Deltoid, Biceps, Brachialis, and Brachioradialis.

**Joint Actions:** Shoulder Horizontal Abduction, Elbow Flexion

**Instructions**

- 13) Stand in shoulder width stance with knees slightly flexed (bent).
- 14) Bend forward at the hips until back is parallel with the floor (keep back straight).
- 15) Grasp bar with pronated (overhand) grip, with the hands placed wider than shoulder width apart.
- 16) Keep your eyes straight ahead and let your arms hang down to the ground with your elbows extended (straight).
- 17) To begin the movement, pull the bar off the ground towards your abdominal region while flexing (bending) the elbows.
- 18) Exhale during the upward movement phase.
- 19) Pull bar upward until it reaches the abdominals while squeezing the scapulas (shoulder blades) together.
- 20) Lower the bar slowly by extending (straightening) the elbows and return to starting position.
- 21) Inhale throughout the downward movement phase.
- 22) Repeat movement for desired number of repetitions.

**Common Mistake**

- 1) Raising torso to an erect position during the upward movement phase in order to gain momentum.

**Reverse Grip Barbell Bent Row**

**Muscles Trained:** Latissimus Dorsi, Rhomboid, Trapezius, Teres Major, Posterior Deltoid, Biceps, Brachialis, and Brachioradialis.

**Joint Actions:** Shoulder Horizontal Abduction, Elbow Flexion

**Instructions**

- 1) Stand in shoulder width stance with knees slightly flexed (bent).
- 2) Bend forward at the hips until back is parallel with the floor (keep back straight).
- 3) Grasp bar with supinated (underhand) grip, with the hands placed wider than shoulder width apart.

- 4) Keep your eyes straight ahead and let your arms hang down to the ground with your elbows extended (straight).
- 5) To begin the movement, pull the bar off the ground towards your abdominal region while flexing (bending) the elbows.
- 6) Exhale during the upward movement phase.
- 7) Pull bar upward until it reaches the abdominals while squeezing the scapulas (shoulder blades) together.
- 8) Lower the bar slowly by extending (straightening) the elbows and return to starting position.
- 9) Inhale throughout the downward movement phase.
- 10) Repeat movement for desired number of repetitions.

### **Common Mistake**

- 1) Raising torso to an erect position during the upward movement phase in order to gain momentum.

## **One –Arm Dumbbell Row**

**Muscles Trained:** Latissimus Dorsi, Rhomboid, Trapezius, Teres Major, Posterior Deltoid, Biceps, Brachialis, and Brachioradialis.

**Joint Actions:** Shoulder Flexion, Elbow Flexion

### **Instructions**

- 1) Grasp the dumbbell with a pronated (overhand) grip with palm in a neutral (facing inwards) position.
- 2) Place the opposite hand and leg on the bench with the back straight and parallel to the floor.
- 3) Keep your eyes straight ahead and let your arm hang down to the side with your elbow extended (straight).
- 4) To begin the movement, pull the dumbbell upwards towards the side of the body while flexing (bending) the elbow.
- 5) Exhale during the upward movement phase.
- 6) Pull dumbbell upward until it reaches the sides of the abdominals while squeezing the scapula (shoulder blade) inward.
- 7) Slightly rotate the torso the same direction as the movement of the weight.
- 8) Lower the dumbbell slowly by extending (straightening) the elbow and return to starting position.
- 9) Inhale throughout the downward movement phase.
- 10) Repeat movement for desired number of repetitions.
- 11) Switch weight into opposite hand along with switching the support leg and arm.
- 12) Repeat exercise for opposite side for desired number of repetitions.

### **Common Mistakes**

- 1) Moving elbow away from the body in the upper movement phase instead of keeping it close to the side.
- 2) Lowering the weight too quickly.

## **Dumbbell Pullover**

**Muscles Trained:** Pectoralis Major, Triceps, Teres major, Latissimus Dorsi, and Serratus Anterior

**Joint Actions:** Shoulder Flexion

### **Instructions**

- 1) Lie in a supine (facing up) and perpendicular position to a flat bench with scapulas (shoulder blades) supporting the body.
- 2) Grasp head of single dumbbell with two hands making a diamond shape.
- 3) Allow hips to flex (sink towards the floor).
- 4) Extend (straighten) arms above the head and keep elbows flexed (bent) throughout the movement.
- 5) To begin the movement, simultaneously pull dumbbell upward and extend (straighten) hips.
- 6) Exhale throughout upward movement phase.
- 7) Continue upward motion of the weight in a shape of an arc until the weight is in line with the eyes.
- 8) Slowly lower the weight back overhead and simultaneously flex (bend) the hips.
- 9) Inhale throughout the lowering movement phase.
- 10) Return to starting position while allowing the weight to stretch the torso.
- 11) Repeat the movement for desired number of repetitions.

### **Variations**

- 1) Perform exercise with barbell.

### **Common Mistakes**

- 1) Changing the degree of flexion of the elbow throughout the movement.
- 2) Inhibiting the stretch provided by the weight in the starting position.

## **Straight Arm Lat Pull Down**

**Muscles Trained:** Latissimus Dorsi, Teres Major, and Triceps

**Joint Action:** Shoulder Flexion

### **Instructions**

- 1) Stand facing perpendicular to a high cable pulley in shoulder width stance with knees slightly flexed (bent).

- 2) Grasp the bar with a pronated (overhand grip) with the hands shoulder width apart.
- 3) Extend (straighten) elbows overhead with a slight bend in the torso.
- 4) Focus eyes straight ahead.
- 5) To begin the movement, simultaneously pull arms downward towards the body, and extend (straighten) the torso.
- 6) Exhale throughout the downward movement phase.
- 7) Continue pulling downwards until the bar reaches the front of the thighs.
- 8) Slowly raise the bar and return to starting position.
- 9) Inhale throughout the upward movement phase.
- 10) Repeat movement for desired number of repetitions.

### **Variation**

- 1) Take a wide grip, greater than shoulder width.

### **Common Mistakes**

- 1) Flexing (bending) elbows too much.
- 2) Leaning forward during the downward movement phase instead of extending your torso.

## **Wide Grip Lat Pull Down**

**Muscles Trained:** Latissimus Dorsi, Teres Major, Trapezius (lower portion), Rhomboids, Biceps, Brachialis, and Brachioradialis

**Joint Actions:** Shoulder Adduction, Elbow Flexion

### **Instructions**

- 1) Sit facing the machine and place legs under the restraint pad with feet flat on the floor.
- 2) Grasp the bar with a pronated (overhand) grip wider than shoulder width apart (right outside the bend of the bar).
- 3) Extend (straighten) arms overhead with the torso in an erect position.
- 4) To begin the movement, pull the bar down in front of the body toward the upper chest, simultaneously leaning backward away from the machine.
- 5) Exhale throughout the downward movement phase.
- 6) Continue to pull the bar downward until it touches the top of the chest at level of the clavicle.
- 7) Slowly raise the bar until the arms are extended (straight) while allowing the torso to return to an erect position.
- 8) Inhale throughout the upward movement phase.
- 9) Repeat the movement for desired number of repetitions.

### **Variation**

- 1) Take a narrow grip, slightly wider than shoulder width apart.

**Common Mistakes**

- 1) Leaning too far back during the downward movement phase, using the momentum of the body instead of the back muscles.
- 2) Lowering the bar to the chin instead of the upper chest.

**Reverse Grip Lat Pull Down**

**Muscles Trained:** Latissimus Dorsi, Teres Major, Trapezius (lower portion), Rhomboids, Biceps, Brachialis and Brachioradialis

**Joint Actions:** Shoulder Adduction, Elbow Flexion

**Instructions**

- 1) Sit facing the machine and place legs under the restraint pad with feet flat on the floor.
- 2) Grasp the bar with a supinated (underhand) grip slightly wider than shoulder width apart.
- 3) Extend (straighten) arms overhead with the torso in an erect position.
- 4) To begin the movement, pull the bar down in front of the body toward the lower chest, simultaneously leaning backward away from the machine.
- 5) Exhale throughout the downward movement phase.
- 6) Continue to pull the bar downward until it touches the bottom of the chest, with arms against torso and elbows behind plane of torso.
- 7) Slowly raise the bar until the arms are extended (straight) while allowing the torso to return to an erect position.
- 8) Inhale throughout the upward movement phase.
- 9) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Leaning too far back during the downward movement phase, using the momentum of the body instead of the back muscles.
- 2) Lowering the bar to the chin instead of the upper chest.

**One Arm Lat Pull Down**

**Muscles Trained:** Latissimus Dorsi, Teres Major, Trapezius (lower portion), Rhomboids, Biceps, Brachialis and Brachioradialis

**Joint Actions:** Shoulder Adduction, Elbow Flexion

**Instructions**

- 1) Sit facing the machine and place legs under the restraint pad with feet flat on the floor.
- 2) Grasp the handle with a pronated (overhand) grip slightly wider than shoulder width apart.
- 3) Extend (straighten) arm overhead with the torso in an erect position.
- 4) Face the palm forward, away from the body.
- 5) To begin the movement, pull the handle down in front of the body toward the upper chest, simultaneously leaning backward away from the machine and rotating the palm to the neutral (facing inward) position. Pull elbow close to torso and lean slightly toward arm pulling down.
- 6) Exhale throughout the downward movement phase.
- 7) Continue to pull the handle downward until it is level with the top of the chest.
- 8) Slowly raise the handle until the arm is extended (straight) while allowing the torso to return to an erect position and the palm faces forward.
- 9) Inhale throughout the upward movement phase.
- 10) Repeat the movement for desired number of repetitions.

### **Common Mistakes**

- 1) Leaning too far back during the downward movement phase, using the momentum of the body instead of the back muscles.
- 2) Lowering the handle to the chin instead of the upper chest.

## **Low Pulley Row**

**Muscles Trained:** Rhomboids, Latissimus Dorsi, Teres Major, Posterior Deltoid, Trapezius, Biceps, Brachialis, and Brachioradialis

**Joint Actions:** Shoulder Horizontal Abduction, Elbow Flexion

### **Instructions**

- 1) Sit facing the machine and place both feet against the foot stops with knees slightly bent.
- 2) Lean forward and grasp the bar with a pronated (overhand) grip with the palms in a neutral (facing inward) position.
- 3) To begin the movement, pull the weight backward toward the abdominals while bending the elbows and keeping them close to the side.
- 4) Simultaneously, slowly lean the torso backward.
- 5) Exhale throughout the pulling movement phase.
- 6) Continue to pull until the torso has a slight angle leaning back and the scapulas (shoulder blades) are pinched together.
- 7) Slowly allow the weight to move forward while extending (straightening) the elbows and leaning the torso forward.
- 8) Inhale throughout the forward movement phase.
- 9) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Leaning too far back in the pulling movement phase, therefore using the momentum of the body instead of the back muscles.
- 2) Pulling the elbows outward instead of keeping them close to the body.

**Wide Grip Low Pulley Row**

**Muscles Trained:** Rhomboids, Latissimus Dorsi, Teres Major, Posterior Deltoid, Trapezius, Biceps, Brachialis, and Brachioradialis

**Joint Actions:** Shoulder Horizontal Abduction, Elbow Flexion

**Instructions**

- 1) Sit facing the machine and place both feet against the foot stops with knees slightly bent.
- 2) Lean forward and grasp the bar in a pronated (overhand) position with the hands slightly wider than shoulder width apart.
- 3) To begin the movement, pull the weight backward toward the abdominals while bending the elbows and keeping the forearms parallel to the floor.
- 4) Simultaneously, slowly lean the torso backward.
- 5) Exhale throughout the pulling movement phase.
- 6) Continue to pull until the torso has a slight angle leaning back and the scapulas (shoulder blades) are pinched together.
- 7) Slowly allow the weight to move forward while extending (straightening) the elbows and leaning the torso forward.
- 8) Inhale throughout the forward movement phase.
- 9) Repeat the movement for desired number of repetitions.

**Common Mistake**

- 1) Leaning too far back in the pulling movement phase, therefore using the momentum of the body instead of the back muscles.

**High Pulley Row**

**Muscles Trained:** Rhomboids, Latissimus Dorsi, Teres Major, Posterior Deltoid, Trapezius, Biceps, Brachialis, and Brachioradialis

**Joint Actions:** Shoulder Horizontal Abduction, Elbow Flexion

**Instructions**

- 1) Sit facing the machine and place both feet against the foot stops with knees slightly bent.
- 2) Lean forward and grasp the bar in a pronated (overhand) position with the hands slightly wider than shoulder width apart.

- 3) To begin the movement, pull the weight backward toward the chest while bending the elbows and keeping the forearms parallel to the floor.
- 4) Simultaneously, slowly lean the torso backward.
- 5) Exhale throughout the pulling movement phase.
- 6) Continue to pull until the torso has a slight angle leaning back and the scapulas (shoulder blades) are pinched together.
- 7) Slowly allow the weight to move forward while extending (straightening) the elbows and leaning the torso forward.
- 8) Inhale throughout the forward movement phase.
- 9) Repeat the movement for desired number of repetitions.

### **Common Mistake**

- 1) Leaning too far back in the pulling movement phase, therefore using the momentum of the body instead of the back muscles.

## **One Arm Cable Row**

**Muscles Trained:** Rhomboids, Latissimus Dorsi, Teres Major, Posterior Deltoid, Trapezius, Biceps, Brachialis, and Brachioradialis

**Joint Actions:** Shoulder Horizontal Abduction, Elbow Flexion

### **Instructions**

- 1) Sit facing the machine and place both feet against the foot stops with knees slightly bent.
- 2) Lean forward and grasp the handle with one hand with a pronated (overhand) grip.
- 3) To begin the movement, pull the weight backward toward the abdominals while bending the elbow and keeping them close to the side.
- 4) Simultaneously, slowly lean the torso backward and rotate the palm to the neutral (facing inward) position.
- 5) Exhale throughout the pulling movement phase.
- 6) Continue to pull until the torso has a slight angle leaning back and is open to the side of the body performing the exercise
- 7) Slowly allow the weight to move forward while extending (straightening) the elbow and leaning the torso forward.
- 8) Inhale throughout the forward movement phase.
- 9) Repeat the movement for desired number of repetitions.
- 10) Switch hands and repeat the exercise for equal number of repetitions.

### **Common Mistakes**

- 1) Leaning too far back in the pulling movement phase, therefore using the momentum of the body instead of the back muscles.
- 2) Pulling the elbows outward instead of keeping them close to the body.

## **CHEST**

### **Decline Dumbbell Press**

**Muscles Trained:** Pectoralis Major (primarily lower portion), Triceps, and Anterior Deltoid

**Joint Actions:** Shoulder Horizontal Adduction, Elbow Extension

#### **Instructions**

- 1) Lie supine (facing upward) on a decline bench with a set angle between 20 and 45 degrees.
- 2) Anchor feet to prevent from slipping off the bench.
- 3) Grasp dumbbells with a pronated (overhand) grip and place the weight slightly wider than shoulder width at the nipple level.
- 4) To begin the movement, press the weight upward away from the body and head.
- 5) Exhale throughout the upward movement phase.
- 6) Continue the movement until the arms are extended (straight) and the dumbbells are touching each other.
- 7) Lower the weight in a controlled fashion down to starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat the movement for desired number of repetitions.

#### **Common Mistakes**

- 1) Pushing the weight at an angle towards the head in the upward movement phase instead off away from the head.
- 2) Keeping the arms uneven throughout the movement instead of moving them simultaneously.
- 3) Bouncing weight at bottom of movement to initiate return to start position.

### **Decline Fly**

**Muscles Trained:** Pectoralis Major

**Joint Action:** Shoulder Horizontal Adduction

#### **Instructions**

- 1) Lie supine (facing upward) on a decline bench with an angle between 20 and 45 degrees
- 2) Anchor your feet to prevent slipping off a bench.
- 3) Grasp the dumbbells with a pronated (overhand) grip.
- 4) Extend (straighten) the arms over the chest and place the palms in a neutral (facing inward) position.
- 5) Flex (bend) elbows slightly and keep this angle at the elbows throughout the movement.

- 6) To begin the movement, lower the weight in a controlled fashion by opening the arms away from each other.
- 7) Inhale throughout the downward movement phase.
- 8) Keep upper arms high and perpendicular to the body.
- 9) Continue the movement until the dumbbells are at body level.
- 10) Lift the weight upward and inward in order to return to starting position.
- 11) Exhale throughout the upper movement phase.
- 12) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Changing the angle of the elbows throughout the movement instead of keeping the angle constant.
- 2) Lowering the upper arms throughout the downward movement phase instead of keeping them high and perpendicular to the body.

**Dumbbell Press**

**Muscles Trained:** Pectoralis Major (primarily middle portion), Triceps, and Anterior Deltoid

**Joint Actions:** Shoulder Horizontal Adduction, Elbow Extension

**Instructions**

- 1) Lie supine (facing upward) on a flat bench with feet flat on the floor.
- 2) Grasp dumbbells with a pronated (overhand) grip and place the weight slightly wider than shoulder width at the middle chest level.
- 3) To begin the movement, press the weight upward away from the body.
- 4) Exhale throughout the upward movement phase.
- 5) Continue the movement until the arms are extended (straight) and the dumbbells are touching each other.
- 6) Lower the weight in a controlled fashion down to starting position.
- 7) Inhale throughout the downward movement phase.
- 8) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Forgetting to breathe properly.
- 2) Keeping the arms uneven throughout the movement instead of moving them simultaneously.
- 3) Bouncing weight off of chest at bottom of movement.

## **Dumbbell Fly**

**Muscles Trained:** Pectoralis Major

**Joint Action:** Shoulder Horizontal Adduction

### **Instructions**

- 1) Lie supine (facing upward) on a flat bench with your feet flat on the floor.
- 4) Grasp the dumbbells with a pronated (overhand) grip.
- 5) Extend (straighten) the arms over the chest and place the palms in a neutral (facing inward) position.
- 6) Flex (bend) elbows slightly and keep this angle at the elbows throughout the movement.
- 7) To begin the movement, lower the weight in a controlled fashion by opening the arms away from each other.
- 8) Inhale throughout the downward movement phase.
- 9) Keep upper arms high and perpendicular to the body.
- 10) Continue the movement until the dumbbells are at body level.
- 11) Lift the weight upward and inward in order to return to starting position.
- 12) Exhale throughout the upper movement phase.
- 13) Repeat the movement for desired number of repetitions.

### **Common Mistakes**

- 1) Changing the angle of the elbows throughout the movement instead of keeping the angle constant.
- 2) Lowering the upper arms throughout the downward movement phase instead of keeping them high and perpendicular to the body.

## **Barbell Bench Press**

**Muscles Trained:** Pectoralis Major (primarily middle portion), Triceps, and Anterior Deltoid

**Joint Actions:** Shoulder Horizontal Adduction, Elbow Extension

### **Instructions**

- 1) Lie supine (facing upward) on a flat bench with feet flat on the floor.
- 2) Grasp bar with a pronated (overhand) grip with hands slightly wider than shoulder width apart.
- 3) Take the weight off the rack and keep arms extended (straight) with the weight at chest level.
- 4) To begin the movement, lower the weight in a controlled fashion towards the chest by flexing (bending) the elbows.
- 5) Inhale throughout the downward movement phase.
- 6) Continue the movement until the bar lightly touches the chest.

- 7) Push the weight upwards toward the ceiling by extending (straightening) the elbows.
- 8) Exhale throughout the upward movement phase.
- 9) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Forgetting to breathe properly.
- 2) Arching the lower back during the upward movement phase instead of keeping it straight against the bench.
- 3) Bouncing weight off of chest at bottom of movement.

**Decline Barbell Press**

**Muscles Trained:** Pectoralis Major (primarily lower portion), Triceps, and Anterior Deltoid

**Joint Actions:** Shoulder Horizontal Adduction, Elbow Extension

**Instructions**

- 1) Lie supine (facing upward) on a decline bench with an angle between 20 and 45 degrees.
- 2) Anchor feet to prevent slipping off the bench.
- 3) Grasp bar with a pronated (overhand) grip with hands slightly wider than shoulder width apart.
- 4) Take the weight off the rack and keep arms extended (straight) with the weight at chest level.
- 5) To begin the movement, lower the weight in a controlled fashion towards the chest by flexing (bending) the elbows.
- 6) Inhale throughout the downward movement phase.
- 7) Continue the movement until the bar lightly touches the chest.
- 8) Push the weight upwards toward the ceiling by extending (straightening) the elbows.
- 9) Exhale throughout the upward movement phase.
- 10) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Forgetting to breathe properly.
- 2) Arching the lower back during the upward movement phase instead of keeping it straight against the bench.
- 3) Bouncing weight off of chest at bottom of movement.

## **Incline Barbell Press**

**Muscles Trained:** Pectoralis Major (primarily upper portion), Triceps, and Anterior Deltoid

**Joint Actions:** Shoulder Horizontal Adduction, Elbow Extension

### **Instructions**

- 1) Lie supine (facing upward) on an incline bench with an angle less than 60 degrees.
- 2) Place feet flat on the floor.
- 3) Grasp bar with a pronated (overhand) grip with hands slightly wider than shoulder width apart.
- 4) Take the weight off the rack and keep arms extended (straight) with the weight at chest level.
- 5) To begin the movement, lower the weight in a controlled fashion towards the upper chest by flexing (bending) the elbows.
- 6) Inhale throughout the downward movement phase.
- 7) Continue the movement until the bar lightly touches the chest.
- 8) Push the weight upwards toward the ceiling by extending (straightening) the elbows.
- 9) Exhale throughout the upward movement phase.
- 10) Repeat the movement for desired number of repetitions.

### **Common Mistakes**

- 1) Forgetting to breathe properly.
- 2) Arching the lower back during the upward movement phase instead of keeping it straight against the bench.
- 3) Bouncing weight off of chest at bottom of movement.

## **Incline Fly**

**Muscles Trained:** Pectoralis Major

**Joint Action:** Shoulder Horizontal Adduction

### **Instructions**

- 1) Lie supine (facing upward) on an incline bench with an angle less than 60 degrees
- 2) Place feet flat on the floor.
- 3) Grasp the dumbbells with a pronated (overhand) grip.
- 4) Extend (straighten) the arms over the chest and place the palms in a neutral (facing inward) position.
- 5) Flex (bend) elbows slightly and keep this angle at the elbows throughout the movement.

- 6) To begin the movement, lower the weight in a controlled fashion by opening the arms away from each other.
- 7) Inhale throughout the downward movement phase.
- 8) Keep upper arms high and perpendicular to the body.
- 9) Continue the movement until the dumbbells are at body level.
- 10) Lift the weight upward and inward in order to return to starting position.
- 11) Exhale throughout the upper movement phase.
- 12) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Changing the angle of the elbows throughout the movement instead of keeping the angle constant.
- 2) Lowering the upper arms throughout the downward movement phase instead of keeping them high and perpendicular to the body.

**Incline Dumbbell Press**

**Muscles Trained:** Pectoralis Major (primarily upper portion), Triceps, and Anterior Deltoid

**Joint Actions:** Shoulder Horizontal Adduction, Elbow Extension

**Instructions**

- 1) Lie supine (facing upward) on an incline bench with an angle less than 60 degrees.
- 2) Place feet flat on the floor.
- 4) Grasp dumbbells with a pronated (overhand) grip and place the weight slightly wider than shoulder width at the middle chest level.
- 5) To begin the movement, press the weight upward away from the body.
- 6) Exhale throughout the upward movement phase.
- 7) Continue the movement until the arms are extended (straight) and the dumbbells are touching each other.
- 8) Lower the weight in a controlled fashion down to starting position.
- 9) Inhale throughout the downward movement phase.
- 10) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Forgetting to breathe properly.
- 2) Keeping the arms uneven throughout the movement instead of moving them simultaneously.

## Cable Fly

**Muscles Trained:** Pectoralis Major

**Joint Action:** Shoulder Horizontal Adduction

### Instructions

- 1) Lie supine (facing upward) on a flat bench with your feet flat on the floor.
- 2) Grasp the handles with a pronated (overhand) grip.
- 3) Extend (straighten) the arms over the chest and place the palms in a neutral (facing inward) position.
- 4) Flex (bend) elbows slightly and keep this angle at the elbows throughout the movement.
- 5) To begin the movement, lower the weight in a controlled fashion by opening the arms away from each other.
- 6) Inhale throughout the downward movement phase.
- 7) Keep upper arms high and perpendicular to the body.
- 8) Continue the movement until the handles are at body level.
- 9) Lift the weight upward and inward in order to return to starting position.
- 10) Exhale throughout the upper movement phase.
- 11) Repeat the movement for desired number of repetitions.

### Common Mistakes

- 1) Changing the angle of the elbows throughout the movement instead of keeping the angle constant.
- 2) Lowering the upper arms throughout the downward movement phase instead of keeping them high and perpendicular to the body.

## Reduced Push Up

**Muscles Trained:** Pectoralis Major, Anterior Deltoid, and Triceps

**Joint Actions:** Shoulder Horizontal Adduction, Elbow Extension

### Instructions

- 1) Place hands flat on the floor slightly wider than shoulder width apart.
- 2) Place knees and feet on the floor.
- 3) Extend (straighten) arms and keep body flat.
- 4) To begin the movement, lower the body towards the ground by flexing (bending) the elbows.
- 5) Inhale throughout the downward movement phase.
- 6) Continue to lower the body until the nose touches the floor.
- 7) Press upwards by extending (straightening) the elbows while keeping the body straight.
- 8) Exhale throughout the upward movement phase.

- 9) Repeat the movement for desired number of repetitions.

**Variation**

- 1) Take a wide grip, greater than shoulder width apart.

**Common Mistakes**

- 1) Flexing (bending) or extending (sinking) the back throughout the movement instead of keeping the body straight.
- 2) Starting the upward movement phase before the nose has reached the ground.

**Push Up**

**Muscles Trained:** Pectoralis Major, Anterior Deltoid, and Triceps

**Joint Actions:** Shoulder Horizontal Adduction, Elbow Extension

**Instructions**

- 1) Place hands flat on the floor slightly wider than shoulder width apart.
- 2) Place feet on the floor.
- 3) Extend (straighten) arms and keep body flat.
- 4) To begin the movement, lower the body towards the ground by flexing (bending) the elbows.
- 5) Inhale throughout the downward movement phase.
- 6) Continue to lower the body until the nose touches the floor.
- 7) Press upwards by extending (straightening) the elbows while keeping the body straight.
- 8) Exhale throughout the upward movement phase.
- 9) Repeat the movement for desired number of repetitions.

**Variation**

- 1) Take a wide grip, greater than shoulder width apart.

**Common Mistakes**

- 1) Flexing (bending) or extending (sinking) the back throughout the movement instead of keeping the body straight.
- 2) Starting the upward movement phase before the nose has reached the ground.

## **Pull Over Press**

**Muscles Trained:** Triceps, Pectoralis Major, Anterior Deltoid, Teres Major, Latissimus Dorsi, and Serratus Anterior

**Joint Actions:** Elbow Extension, Shoulder Extension, Shoulder Flexion

### **Instructions**

- 1) Lie supine (facing upward) on a flat bench with feet flat on the floor.
- 2) Grasp bar with a pronated (overhand) grip with hands shoulder width apart.
- 3) Extend (straighten) arms above the head and with elbows slightly flexed (bent).
- 4) To begin the movement, pull dumbbell upward towards the ceiling.
- 5) Continue upward motion of the weight in a shape of an arc until the weight is in line with the chest.
- 6) When the weight is directly over the chest, lower the weight in a controlled fashion towards the lower chest by flexing (bending) the elbows.
- 7) Keep the elbows close to the body.
- 8) Inhale throughout the downward movement phase.
- 9) Continue the movement until the bar lightly touches the chest.
- 10) Push the weight upwards toward the ceiling by extending (straightening) the elbows.
- 11) Exhale throughout the upward movement phase.
- 12) Slowly lower the weight back overhead.
- 13) Return to starting position while allowing the weight to stretch the torso.
- 14) Repeat the movement for desired number of repetitions.

### **Common Mistakes**

- 1) Pointing elbows outward throughout the movement instead of keeping the close to the body.
- 2) Arching the lower back during the upward movement phase instead of keeping it straight against the bench.

## **ARMS**

### **Triceps Push Up**

**Muscles Trained:** Triceps, Pectoralis Major, and Anterior Deltoid

**Joint Actions:** Shoulder Horizontal Adduction, Elbow Extension

#### **Instructions**

- 10) Place hands flat on the floor shoulder width apart.
- 11) Place feet on the floor.
- 12) Extend (straighten) arms and keep body flat.
- 13) To begin the movement, lower the body towards the ground by flexing (bending) the elbows.
- 14) Inhale throughout the downward movement phase.
- 15) Keep elbows close to the side of the body.
- 16) Continue to lower the body until the nose touches the floor.
- 17) Press upwards by extending (straightening) the elbows while keeping the body straight.
- 18) Exhale throughout the upward movement phase.
- 19) Repeat the movement for desired number of repetitions.

#### **Common Mistakes**

- 3) Flexing (bending) or extending (sinking) the back throughout the movement instead of keeping the body straight.
- 4) Letting the elbows point outward throughout the movement instead of keeping them close to the body.

### **Barbell Lying Triceps Extension**

**Muscles Trained:** Triceps

**Joint Action:** Elbow Extension

#### **Instructions**

- 1) Lie supine (facing upward) on a flat bench with feet flat on the floor.
- 2) Grasp a bar with a pronated (overhand) grip with the palms 4 to 6 inches apart.
- 3) Extend (straighten) arms so the weight is directly over the chest.
- 4) To begin the movement, lower the weight towards the forehead.
- 5) Keep upper arms stable while flexing (bending) the elbows.
- 6) Inhale throughout the downward movement phase.
- 7) Continue the movement until the bar is almost touching the forehead.
- 8) Press the weight upward by extending (straightening) the arms while keeping the elbows in.

- 9) Exhale throughout the upward movement phase.
- 10) Continue the movement until starting position is reached.
- 11) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Pointing elbows outward throughout the upward movement phase instead of keeping them in.
- 2) Moving the upper arms throughout the movement instead of keeping them stable.

**Lying Dumbbell Triceps Extension**

**Muscles Trained:** Triceps

**Joint Action:** Elbow Extension

**Instructions**

- 1) Lie supine (facing upward) on a flat bench with feet flat on the floor.
- 2) Grasp the dumbbells with a pronated (overhand) grip with the palms in a neutral (facing inward) position.
- 3) Extend (straighten) arms so the weight is directly over the chest.
- 4) To begin the movement, lower the weight above, yet towards the head.
- 5) Keep upper arms stable while flexing (bending) the elbows.
- 6) Inhale throughout the downward movement phase.
- 7) Continue the movement until the dumbbells are even with the head.
- 8) Press the weight upward by extending (straightening) the arms while keeping the elbows in.
- 9) Exhale throughout the upward movement phase.
- 10) Continue the movement until starting position is reached.
- 11) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Pointing elbows outward throughout the upward movement phase instead of keeping them in.
- 2) Moving the upper arms throughout the movement instead of keeping them stable.

## Narrow Grip Bench Press

**Muscles Trained:** Triceps, Pectoralis Major (primarily middle portion), and Anterior Deltoid

**Joint Actions:** Elbow Extension, Shoulder Extension

### Instructions

- 1) Lie supine (facing upward) on a flat bench with feet flat on the floor.
- 2) Grasp bar with a pronated (overhand) grip with hands shoulder width apart.
- 3) Take the weight off the rack and keep arms extended (straight) with the weight at chest level.
- 4) To begin the movement, lower the weight in a controlled fashion towards the lower chest by flexing (bending) the elbows.
- 5) Keep the elbows close to the body.
- 6) Inhale throughout the downward movement phase.
- 7) Continue the movement until the bar lightly touches the chest.
- 8) Push the weight upwards toward the ceiling by extending (straightening) the elbows.
- 9) Exhale throughout the upward movement phase.
- 10) Repeat the movement for desired number of repetitions.

### Common Mistakes

- 1) Pointing elbows outward throughout the movement instead of keeping them close to the body.
- 2) Arching the lower back during the upward movement phase instead of keeping it straight against the bench.

## Triceps Kickback

**Muscles Trained:** Triceps

**Joint Action:** Elbow Extension

### Instructions

- 1) Grasp one dumbbell with a pronated (overhand) grip and place palm in a neutral (facing inward) position.
- 2) Place opposite hand and leg on flat bench for support.
- 3) Place upper arm parallel with the body and flex (bend) the elbow so the lower arm is perpendicular to the body.
- 4) To begin the movement, extend (straighten) the elbow while keeping the upper arm stationary.
- 5) Exhale throughout the upward movement phase.
- 6) Continue the movement until the arm is fully extended (straight).
- 7) Lower the weight to starting position by flexing (bending) the elbow.

- 8) Inhale throughout the downward movement phase.
- 9) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Moving the upper arm throughout the movement instead of keeping it stable.
- 2) Lowering the weight before the elbow (arm) is fully extended (straight).

**One Hand Cable Triceps Extension**

**Muscles Trained:** Triceps

**Joint Action:** Elbow Extension

**Instructions**

- 1) Stand erect in shoulder width stance with knees flexed (bent) slightly and eyes straight ahead.
- 2) Face away from the machine underneath a high cable pulley.
- 3) Grasp the handle with one hand in pronated (overhand) grip.
- 4) Place upper arms parallel to the body and allow the elbow to flex (bend) fully,
- 5) To begin the movement, press the weight toward the floor by extending (straightening) the arm.
- 6) Exhale throughout the downward movement phase.
- 7) Continue the movement until the arm is fully extended (straight).
- 8) Allow weight to slowly return to starting position by flexing (bending) the arm.
- 9) Inhale throughout the upward movement phase.
- 10) Repeat movement for desired number of repetitions.

**Common Mistakes**

- 1) Leaning forward throughout the downward movement phase in order to assist the triceps with shoulder support.
- 2) Letting the weight rise too rapidly.

**Rope Triceps Extension**

**Muscles Trained:** Triceps

**Joint Action:** Elbow Extension

**Instructions**

- 1) Stand erect in shoulder width stance with knees flexed (bent) slightly and eyes straight ahead.
- 2) Face away from the machine underneath a high cable pulley.
- 3) Grasp the rope with both hands in pronated (overhand) grip and place palms in a neutral (facing inward) position.

- 4) Place upper arms parallel to the body and allow the elbows to flex (bend) fully.
- 5) To begin the movement, press the weight toward the floor by extending (straightening) the arms.
- 6) Exhale throughout the downward movement phase.
- 7) The palms should rotate toward a pronated (facing body) position.
- 8) Continue the movement until the arms are fully extended (straight).
- 9) Allow weight to slowly return to starting position by flexing (bending) the arms.
- 10) Inhale throughout the upward movement phase.
- 11) Repeat movement for desired number of repetitions.

**Common Mistakes**

- 1) Leaning forward throughout the downward movement phase in order to assist the triceps with shoulder support.
- 2) Letting the weight rise too rapidly.

**Under Hand Triceps Extension**

**Muscles Trained:** Triceps

**Joint Action:** Elbow Extension

**Instructions**

- 1) Stand erect in shoulder width stance with knees flexed (bent) slightly and eyes straight ahead.
- 2) Face away from the machine underneath a high cable pulley.
- 3) Grasp the handle with both hands in a supine (underhand) grip.
- 4) Place upper arms parallel to the body and allow the elbows to flex (bend) fully.
- 5) To begin the movement, press the weight toward the floor by extending (straightening) the arms.
- 6) Keep the wrists straight.
- 7) Exhale throughout the downward movement phase.
- 8) Continue the movement until the arms are fully extended (straight).
- 9) Allow weight to slowly return to starting position by flexing (bending) the arms.
- 10) Inhale throughout the upward movement phase.
- 11) Repeat movement for desired number of repetitions.

**Common Mistakes**

- 1) Leaning forward throughout the downward movement phase in order to assist the triceps with shoulder support.
- 2) Letting the weight rise too rapidly.

## Triceps Pushdown

**Muscles Trained:** Triceps

**Joint Action:** Elbow Extension

### Instructions

- 1) Stand erect in shoulder width stance with knees flexed (bent) slightly and eyes straight ahead.
- 2) Face away from the machine underneath a high cable pulley.
- 3) Grasp the handle with both hands in pronated (overhand) grip.
- 4) Place upper arms parallel to the body and allow the elbows to flex (bend) fully.
- 5) To begin the movement, press the weight toward the floor by extending (straightening) the arms.
- 6) Exhale throughout the downward movement phase.
- 7) Continue the movement until the arms are fully extended (straight).
- 8) Allow weight to slowly return to starting position by flexing (bending) the arms.
- 9) Inhale throughout the upward movement phase.
- 10) Repeat movement for desired number of repetitions.

### Common Mistakes

- 1) Leaning forward throughout the downward movement phase in order to assist the triceps with shoulder support.
- 2) Letting the weight rise too rapidly.

## Bench Dip

**Muscles Trained:** Triceps, Pectoralis Major, and Anterior Deltoid

**Joint Actions:** Elbow Extension, Shoulder Extension

### Instructions

- 1) Place hands on a flat bench with the body perpendicular to the bench.
- 2) Place heel of feet on another bench, which results in a torso to leg angle of 90 degrees.
- 3) Extend (straighten) the arms.
- 4) To begin the movement, lower the body by flexing (bending) the elbows.
- 5) Keep elbows in, close to the body.
- 6) Inhale throughout the downward movement phase.
- 7) Continue to lower the body until the elbows have a 90 degree angle.
- 8) Push the body upward by extending (straightening) the elbow.
- 9) Exhale throughout the upward movement phase.
- 10) Return to starting position.
- 11) Repeat the movement for desired number of repetitions.

**Variations**

- 1) Add weight plates to the thighs to increase resistance.
- 2) Perform exercise on two bars slightly wider than shoulder width apart.

**Common Mistakes**

- 1) Pointing elbows outward instead of keeping them in.
- 2) Putting the two benches too far apart causing a torso to leg angle of greater than 90 degrees.

**Concentration Dumbbell Curl**

**Muscles Trained:** Biceps, Brachialis, and Brachioradialis

**Joint Action:** Elbow Flexion

**Instructions**

- 1) Sit on the end of a bench with the legs placed wide apart and feet flat on the floor.
- 2) Grasp a dumbbell with a supinated (underhand) grip and place the elbow of that same arm inside the thigh.
- 3) Place the hand of the other arm on the knee for support.
- 4) To begin the movement, curl the dumbbell upwards by flexing (bending) the elbow.
- 5) Exhale throughout the upward movement phase.
- 6) Continue the movement until the elbow can no longer flex (bend).
- 7) Slowly lower the arm to the start position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat movement for desired number of repetitions.

**Common Mistake**

- 1) Lowering the dumbbell too quickly.

**Dumbbell Curl**

**Muscles Trained:** Biceps, Brachialis, Brachioradialis, and Anterior Deltoid

**Joint Action:** Elbow Flexion

**Instructions**

- 1) Stand with feet shoulder width apart and the knees slightly flexed (bent).
- 2) Grasp the dumbbells with a supinated (underhand) grip while placing the palms in a neutral (facing inward) position.
- 3) Hang arms by the side of the body with elbows extended (straightened).

- 4) To begin the movement, simultaneously curl the weight by flexing the elbow and rotating the palms to the supinated (underhand) position from the neutral (facing inward) position – facing your shoulder.
- 5) Exhale throughout the upward movement phase keeping the elbows in the side of the body.
- 6) Continue to lift the weight until the elbow can no longer flex (bend).
- 7) Lower the weight slowly by extending (straightening) the elbow and rotating the forearms back to neutral position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat the movement for desired number of repetitions.

### **Variations**

- 1) Perform the exercise alternating arms.
- 2) Start and finish the exercise with the palms in the supinated (underhand) position.
- 3) Perform exercise sitting on a bench.

### **Common Mistakes**

- 1) Leaning backward during the upward movement phase to increase leverage instead of letting the biceps do all the work.
- 2) Extending the shoulder to help the biceps lift the weight.
- 3) Lowering the weight too quickly.

## **Barbell Curl**

**Muscles Trained:** Biceps, Brachialis, Brachioradialis, and Anterior Deltoid

**Joint Action:** Elbow Flexion

### **Instructions**

- 1) Stand with feet shoulder width apart and the knees slightly flexed (bent).
- 2) Grasp the bar with a supinated (underhand) grip while placing the hands shoulder width apart.
- 3) Extend (straighten) the elbows and let bar hang in front of the thighs.
- 4) To begin the movement, curl the weight upward by flexing the elbow.
- 5) Exhale throughout the upward movement phase keeping the elbows in the side of the body.
- 6) Continue to lift the weight until the elbows can no longer flex (bend).
- 7) Lower the bar slowly by extending (straightening) the elbow.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat the movement for desired number of repetitions.

### **Variations**

- 1) Use narrow grip in order to emphasize biceps long head.
- 2) Use wide grip in order to emphasize short head.

**Common Mistakes**

- 1) Leaning backward during the upward movement phase to increase leverage instead of letting the biceps do all the work.
- 2) Extending the shoulder to help the biceps lift the weight.
- 3) Lowering the weight too quickly.

**Reverse Barbell Curl**

**Muscles Trained:** Brachioradialis, Brachialis, Biceps, and Wrist Extensors

**Joint Action:** Elbow Flexion

**Instructions**

- 1) Stand with feet shoulder width apart and the knees slightly flexed (bent).
- 2) Grasp the bar with a pronated (overhand) grip while placing the hands shoulder width apart.
- 3) Extend (straighten) the elbows and let bar hang in front of the thighs.
- 4) To begin the movement, curl the weight upward by flexing the elbow while keeping the wrists extended (straight).
- 5) Exhale throughout the upward movement phase keeping the elbows in the side of the body.
- 6) Continue to lift the weight until the elbows can no longer flex (bend).
- 7) Lower the bar slowly by extending (straightening) the elbow.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat the movement for desired number of repetitions.

**Common Mistakes**

- 1) Flexing (bending) the wrist throughout the upward movement phase.
- 2) Leaning backward during the upward movement phase to increase leverage instead of letting the biceps do all the work.
- 3) Extending the shoulder to help the biceps lift the weight.
- 4) Lowering the weight too quickly.

**Hammer Curl**

**Muscles Trained:** Brachioradialis, Biceps, Brachialis, and Anterior Deltoid

**Joint Action:** Elbow Flexion

**Instructions**

- 1) Stand with feet shoulder width apart and the knees slightly flexed (bent).
- 2) Grasp the dumbbells with a supinated (underhand) grip while placing the palms in a neutral (facing inward) position.

- 3) Hang arms by the side of the body with elbows extended (straightened).
- 4) To begin the movement, curl the weight upward by flexing the elbow and keep the palm in a neutral position.
- 5) Exhale throughout the upward movement phase keeping the elbow in the side of the body.
- 6) Continue to lift the weight until the elbow can no longer flex (bend).
- 7) Lower the weight slowly by extending (straightening) the elbow.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat the movement with opposite arm.
- 10) Repeat the movement for desired number of repetitions.

### **Variations**

- 1) Perform the exercise with both arms simultaneously.
- 2) Perform exercise sitting on a bench.

### **Common Mistakes**

- 1) Leaning backward during the upward movement phase to increase leverage instead of letting the biceps do all the work.
- 2) Extending the shoulder to help the biceps lift the weight.
- 3) Lowering the weight too quickly.

## **Dumbbell Partial (Supination/Pronation) Curl**

**Muscles Trained:** Wrist Extensors, Biceps, Brachialis, Brachioradialis, and Anterior Deltoid

**Joint Actions:** Elbow Flexion, Wrist Supination, Wrist Pronation.

### **Instructions**

- 10) Stand with feet shoulder width apart and the knees slightly flexed (bent).
- 11) Grasp the dumbbells with a neutral (overhand) grip while placing the palms in a neutral (facing inward) position.
- 12) Hang arms by the side of the body with elbows extended (straightened).
- 13) To begin the movement, simultaneously curl the weight by flexing the elbow and rotating the palms to the supinated (underhand) position from the neutral (facing inward) position.
- 14) Exhale throughout the upward movement phase keeping the elbows in the side of the body.
- 15) Continue to lift the weight until the upper arm to lower arm angle is 90 degrees.
- 16) From the supinated position, rotate the wrists to a pronated position, and then back to a neutral position.
- 17) Lower the weight slowly by extending (straightening).
- 18) Inhale throughout the downward movement phase.
- 19) Repeat the movement for desired number of repetitions.

**Variations**

- 4) Perform the exercise alternating arms.
- 5) Perform exercise sitting on a bench.

**Common Mistakes**

- 4) Leaning backward during the upward movement phase to increase leverage instead of letting the biceps do all the work.
- 5) Lowering the weight too quickly.

**Barbell Wrist Curl**

**Muscles Trained:** Wrist Flexors

**Joint Action:** Wrist Flexion

**Instructions**

- 1) Sit on a bench and lay forearms on the bench in a supine (facing upward) position.
- 2) Grasp a bar with a supine (underhand) grip and place palms 4 to 6 inches apart.
- 3) Allow weight to extend the wrists and roll into the fingertips.
- 4) To begin the movement, curl the bar upward by flexing (bending) the wrists and allowing the bar to roll back to the middle of the palm.
- 5) Exhale throughout the upward movement phase.
- 6) Lower the weight to starting position.
- 7) Inhale throughout the downward movement phase.
- 8) Repeat movement for desired number of repetitions.

**Common Mistake**

- 1) Inhibiting the bar from rolling to the finger tips during the downward movement phase.

**Dumbbell Wrist Curl**

**Muscles Trained:** Wrist Flexors

**Joint Action:** Wrist Flexion

**Instructions**

- 1) Sit on a bench and lay forearm on the bench in a supine (facing upward) position.
- 2) Grasp a dumbbell with a supine (underhand) grip.
- 3) Rest opposite hand on the thigh for support.
- 4) Allow weight to extend the wrist and roll into the fingertips.
- 5) To begin the movement, curl the dumbbell upward by flexing (bending) the wrist and allowing the bar to roll back to the middle of the palm.
- 6) Exhale throughout the upward movement phase.

- 7) Lower the weight to starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat movement for desired number of repetitions.

**Common Mistake**

- 1) Inhibiting the dumbbell from rolling to the finger tips during the downward movement phase.

**Wrist Extension**

**Muscles Trained:** Wrist Extensors

**Joint Action:** Wrist Extension

**Instructions**

- 2) Sit on a bench and lie forearms on the bench in a prone (facing downward) position.
- 3) Grasp a bar with a pronated (overhand) grip and place palms 4 to 6 inches apart.
- 4) Allow weight to flex the wrists.
- 5) To begin the movement, curl the bar upward by hyper extending (straightening) the wrists.
- 6) Exhale throughout the upward movement phase.
- 7) Continue the movement until the wrists are fully hyper extended.
- 8) Lower the weight to starting position.
- 9) Inhale throughout the downward movement phase.
- 10) Repeat movement for desired number of repetitions.

**Variation**

- 1) Perform exercise with a dumbbell, one arm at a time.

**Common Mistake**

- 1) Using too much weight, therefore inhibiting the ability of the wrists to hyperextend.

## **LEGS**

### **Dumbbell Squat**

**Muscles Trained:** Rectis Femoris, Vastus Lateralis, Vastus Intermedius, Vastus Medialis, Gluteus Maximus, Gluteus Minimus, and Biceps Femoris.

**Joint Actions:** Hip Extension, Knee Extension

#### **Instructions**

- 1) Stand with your feet slightly wider than shoulder width apart with a slight flex (bend) in the knees.
- 2) Grasp the dumbbells with a pronated (overhand) grip and let them hang at your sides in a neutral (facing inward) position.
- 3) Focus eyes straight ahead.
- 4) To begin the movement, squat down as far as possible while keeping the back straight.
- 5) Inhale throughout the downward movement phase.
- 6) Raise the body by extending (straightening) the hips and the knees.
- 7) Exhale throughout the upward movement phase.
- 8) Repeat movement for desired number of repetitions.

#### **Common Mistakes**

- 1) Flexing (bending) the torso during the movement instead of keeping the back straight the entire time.
- 2) Looking down at the ground instead of looking straight ahead.

### **Front Barbell Squat**

**Muscles Trained:** Rectis Femoris, Vastus Lateralis, Vastus Intermedius, Vastus Medialis, Gluteus Maximus, Gluteus Minimus, and Biceps Femoris.

**Joint Actions:** Hip Extension, Knee Extension

#### **Instructions**

- 1) Stand with your feet slightly wider than shoulder width apart with a slight flex (bend) in the knees.
- 2) Rest the bar across the anterior deltoid (shoulder) region with arms crossed and a pronated (overhand) grip.
- 3) Raise upper arms to parallel with the floor and maintain this position throughout the entire movement.
- 4) Focus eyes straight ahead.
- 5) To begin the movement, squat down as far as possible while keeping the back straight.

- 6) Inhale throughout the downward movement phase.
- 7) Raise the body by extending (straightening) the hips and the knees.
- 8) Exhale throughout the upward movement phase.
- 9) Repeat movement for desired number of repetitions.

**Common Mistakes**

- 1) Dropping upper arms to below parallel with the ground throughout the movement.
- 2) Flexing (bending) the torso during the movement instead of keeping the back straight the entire time.
- 3) Looking down at the ground instead of looking straight ahead.

**Back Barbell Squat**

**Muscles Trained:** Rectis Femoris, Vastus Lateralis, Vastus Intermedius, Vastus Medialis, Gluteus Maximus, Gluteus Minimus, and Biceps Femoris.

**Joint Actions:** Hip Extension, Knee Extension

**Instructions**

- 1) Stand with your feet slightly wider than shoulder width apart with a slight flex (bend) in the knees.
- 2) Rest the bar across the trapezius (upper back) with palms wider than shoulder width apart.
- 3) Take a pronated (overhand) grip.
- 4) Focus eyes straight ahead.
- 5) To begin the movement, squat down as far as possible while keeping the back straight.
- 6) Inhale throughout the downward movement phase.
- 7) Raise the body by extending (straightening) the hips and the knees.
- 8) Exhale throughout the upward movement phase.
- 9) Repeat movement for desired number of repetitions.

**Common Mistakes**

- 1) Flexing (bending) the torso during the movement instead of keeping the back straight the entire time.
- 2) Looking down at the ground instead of looking straight ahead.

## Lunge

**Muscles Trained:** Rectis Femoris, Vastus Lateralis, Vastus Intermedius, Vastus Medialis, Gluteus Maximus, Gluteus Minimus, and Biceps Femoris.

**Joint Actions:** Hip Extension, Knee Extension

### Instructions

- 1) Stand with your feet shoulder width apart with a slight flex (bend) in the knees.
- 2) Rest the bar across the trapezius (upper back) with palms wider than shoulder width apart.
- 3) Take a pronated (overhand) grip.
- 4) Focus eyes straight ahead.
- 5) To begin the movement, step forward with one leg and flex (bend) the knee while lowering the body toward the floor.
- 6) Step far enough in order to keep the lead knee behind the lead foot.
- 7) Keep the opposite foot on the ground, allowing the back leg to flex (bend) until it reaches 1 to 2 inches above the ground.
- 8) Inhale throughout the downward movement phase.
- 9) Raise the body by extending (straightening) the hips and the knees.
- 10) Return to starting position.
- 11) Exhale throughout the upward movement phase.
- 12) Repeat movement for desired number of repetitions.

### Variation

- 1) Perform exercise while holding dumbbells that can hang down by your side.

### Common Mistakes

- 1) Stepping too short therefore allowing the lead knee to pass the lead foot during the downward movement phase.
- 2) Flexing (bending) the torso during the movement instead of keeping the back straight the entire time.
- 3) Looking down at the ground instead of looking straight ahead.

## Reverse Lunge

**Muscles Trained:** Vastus Lateralis, Rectis Femoris, Vastus Intermedius, Vastus Medialis, Gluteus Maximus, Gluteus Minimus, and Biceps Femoris.

**Joint Actions:** Hip Extension, Knee Extension

### Instructions

- 1) Stand with your feet shoulder width apart with a slight flex (bend) in the knees.

- 2) Rest the bar across the trapezius (upper back) with palms wider than shoulder width apart.
- 3) Take a pronated (overhand) grip.
- 4) Focus eyes straight ahead.
- 5) To begin the movement, step backward with one leg and flex (bend) the knee while lowering the body toward the floor.
- 6) Step at an angle in order to slightly cross your legs allowing an emphasis on the vastus lateralis (outer quadriceps).
- 7) Keep the hips facing straight ahead.
- 8) Keep the opposite foot on the ground, allowing the front leg to flex (bend).
- 9) Continue movement until the back reaches 1 to 2 inches above the ground.
- 10) Inhale throughout the downward movement phase.
- 11) Raise the body by extending (straightening) the hips and the knees.
- 12) Return to starting position.
- 13) Exhale throughout the upward movement phase.
- 14) Repeat movement for desired number of repetitions.
- 15) Switch to the opposite leg and repeat the movement for desired number for repetitions

### **Variation**

- 1) Perform exercise while holding dumbbells that can hang down by your side.

### **Common Mistakes**

- 1) Rotating the hips outward in attempt to cross the legs too much during the downward movement phase.
- 2) Flexing (bending) the torso during the movement instead of keeping the back straight the entire time.
- 3) Looking down at the ground instead of looking straight ahead.

### **Step Up Exercise**

**Muscles Trained:** Rectis Femoris, Vastus Lateralis, Vastus Intermedius, Vastus Medialis, Gluteus Maximus, Gluteus Minimus, and Biceps Femoris.

**Joint Actions:** Hip Extension, Knee Extension

### **Instructions**

- 1) Stand with your feet shoulder width apart with a slight flex (bend) in the knees.
- 2) Rest the bar across the trapezius (upper back) with palms wider than shoulder width apart.
- 3) Take a pronated (overhand) grip.
- 4) Focus eyes straight ahead.
- 5) To begin the movement, step up onto a step (6-18 inches) with one leg and lift your body off the ground.

- 6) Continue movement by extending (straightening) the hip and knee of the lead leg.
- 7) Exhale throughout the upward movement phase.
- 8) Raise the body until both feet are even.
- 9) Lower the non-lead leg to the ground.
- 10) Inhale throughout the downward movement phase.
- 11) Repeat movement for desired number of repetitions.
- 12) Switch lead legs and repeat the movement for desired number of repetitions.

### **Variation**

- 1) Perform exercise while holding dumbbells that can hang down by your side.

### **Common Mistakes**

- 1) Only partially extending the leg on the upward movement phase.
- 2) Flexing (bending) the torso during the movement instead of keeping the back straight the entire time.

## **Glutes/Hamstrings Back Extension**

**Muscles Trained:** Gluteus Maximus, Biceps Femoris, and Erector Spinae

**Joint Action:** Back Extension

### **Instructions**

- 1) Lie prone (facing downward) on an exercise ball with the feet anchored between the floor and the wall.
- 2) Place the ball beneath the hips and keep the back extended (straight).
- 3) Place the hands behind the head.
- 4) To begin the movement, flex (bend) the hips allowing the back to move forward.
- 5) Inhale throughout the downward movement phase.
- 6) Continue to lower the body until the torso is parallel with the floor.
- 7) Raise the body back to starting position.
- 8) Exhale throughout the upward movement phase.
- 9) Repeat the movement for desired number of repetitions.

### **Common Mistake**

- 1) Letting the back arch instead of keeping it straight throughout the movement.

## **Cable Kickback**

**Muscles Trained:** Gluteus Maximus and Biceps Femoris

**Joint Action:** Hip Extension

### **Instructions**

- 1) Stand shoulder width apart with knees slightly flexed (bent).
- 2) Strap a cable around one of your ankles and stand facing the machine.
- 3) To begin the movement, hyperextend (move backward) the leg while keeping it straight.
- 4) Exhale throughout the upward movement phase.
- 5) Continue to raise the leg as far as possible.
- 6) Return the leg to starting position slowly.
- 7) Inhale throughout the downward movement phase.
- 8) Repeat the movement for desired number of repetitions.
- 9) Switch to opposite leg and repeat movement for desired number of repetitions.

### **Common Mistakes**

- 1) Letting the leg flex (bend) instead of keeping it straight throughout the movement.
- 2) Leaning forward during the upward movement phase instead of stand erect.

## **Good Morning Exercise**

**Muscles Trained:** Gluteus Maximus, Biceps Femoris, and Erector Spinae

**Joint Action:** Back Extension

### **Instructions**

- 1) Stand shoulder width apart with knees slightly flexed (bent)
- 2) Place the bar on the trapezius (upper back) and take a pronated (overhand) grip wider than shoulder width apart.
- 3) To begin the movement, flex (bend) the back forward.
- 4) Inhale throughout the downward movement phase.
- 5) Continue to lower the body until the torso is parallel with the floor.
- 6) Raise the body back to starting position.
- 7) Exhale throughout the upward movement phase.
- 8) Repeat the movement for desired number of repetitions.

### **Common Mistake**

- 1) Letting the back arch instead of keeping it straight throughout the movement.

## **Stiff Leg Dead Lift**

**Muscles Trained:** Gluteus Maximus, Biceps Femoris, and Erector Spinae

**Joint Action:** Back Extension

### **Instructions**

- 1) Stand shoulder width apart with knees slightly flexed (bent)
- 2) Grasp the bar with a pronated (overhand) grip shoulder width apart.
- 3) Stand up straight on a box (4-12 inches).
- 4) To begin the movement, flex (bend) the back forward.
- 5) Inhale throughout the downward movement phase.
- 6) Continue to lower the body until the torso is parallel with the floor.
- 7) Raise the body back to starting position.
- 8) Exhale throughout the upward movement phase.
- 9) Repeat the movement for desired number of repetitions.

### **Common Mistake**

- 1) Letting the back arch instead of keeping it straight throughout the movement.

## **Standing One Leg Hamstring Curl**

**Muscles Trained:** Biceps Femoris, Semitendinosus, and Semimembranosus

**Joint Action:** Knee Flexion

### **Instructions**

- 1) Stand shoulder width apart with knees slightly flexed (bent).
- 2) Strap a cable around one of your ankles and stand facing the machine.
- 3) To begin the movement, flex (bend) your leg away from the machine.
- 4) Exhale throughout the upward movement phase.
- 5) Continue to raise the leg as far as possible.
- 6) Return the leg to starting position slowly.
- 7) Inhale throughout the downward movement phase.
- 8) Repeat the movement for desired number of repetitions.
- 9) Switch to opposite leg and repeat the movement for desired number of repetitions.

### **Common Mistake**

- 1) Leaning forward during the upward movement phase instead of standing erect.

## Pelvic Tilt (Bridging)

**Muscles Trained:** Gluteus Maximus and Biceps Femoris

**Joint Actions:** Hip Extension

### Instructions

- 1) Lie supine (facing upward) on the floor.
- 2) Place legs at a 90-degree angle with feet flat on the floor shoulder width apart.
- 3) Place hands and arms at your side on the floor.
- 4) To begin the movement, extend (straighten) the trunk upward.
- 5) Exhale during the upward movement phase.
- 6) Continue the movement until the body is straight.
- 7) Pause at the top of the movement.
- 8) Lower the body slowly to starting position.
- 9) Inhale throughout the downward movement phase.
- 10) Keep the same pace throughout the entire movement.
- 11) Repeat movement for desired number of repetitions.

### Variation

- 1) Place feet on a bench or gym ball.

### Common Mistake

- 1) Mistaking this exercise for an abdominal exercise because in many aerobic and yoga classes the pelvic tilt movement is performed along with abdominal exercises in the belief they train similar muscle groups. While they do assist to strengthen muscles of the "core" the focus is primarily on the glutes & hamstrings.

## Quads

### Leg Extension

**Muscles Trained:** Rectis Femoris, Vastus Lateralis, Vastus Medialis, and Vastus Intermedius

**Joint Action:** Knee Extension

### Instructions

- 1) Stand shoulder width apart with knees slightly flexed (bent)
- 2) Strap a cable around one of your ankles and stand facing away from the machine.
- 3) Let high cable pulley flex (bend) the lower leg back while keeping the upper leg parallel with the body.
- 4) To begin the movement, extend (straighten) your leg away from the machine.
- 5) Exhale throughout the downward movement phase.

- 6) Continue to extend the leg until it is completely straight.
- 7) Return the leg to starting position slowly.
- 8) Inhale throughout the upward movement phase.
- 9) Repeat the movement for desired number of repetitions.
- 10) Switch to opposite leg and repeat the movement for desired number of repetitions.

**Common Mistake**

- 1) Moving the upper leg instead of keeping it stable throughout the movement.

**Calves**

**Standing Calf Raise**

**Muscles Trained:** Gastrocnemius and Soleus

**Joint Actions:** Ankle Plantar Flexion (Extension)

**Instructions**

- 1) Stand on both feet and place the balls of your feet on an elevated step.
- 2) Grasp one dumbbell with a pronated (overhand) grip and let the weight hang down by your side.
- 3) Use the other hand to hold onto something for added balance.
- 4) Let ankles dorsiflex (bend) as far as possible.
- 5) To begin the movement, raise up onto the toes by plantar flexing (straightening) the foot.
- 6) Exhale throughout the upward movement phase.
- 7) Lower the ankles to starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat movement for desired number of repetitions.

**Variation**

- 1) Perform exercise one leg at a time.

**Common Mistake**

- 1) Inhibiting the stretch provided in the starting position of the exercise.

**Bent Knee Standing Calf Raise**

**Muscles Trained:** Soleus and Gastrocnemius

**Joint Action:** Ankle Plantar Flexion (Extension)

**Instructions**

- 1) Stand on both feet and place the balls of the feet on an elevated step.

- 2) Grasp one dumbbell with a pronated (overhand) grip and let the weight hang down by your side.
- 3) Use the other hand to hold onto something for added balance.
- 4) Let ankles dorsiflex (bend) as far as possible and bend the knees so the upper to lower leg angle is 60 degrees.
- 5) To begin the movement, raise up onto the toes by plantar flexing (straightening) the foot.
- 6) Exhale throughout the upward movement phase.
- 7) Lower the ankles to starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat movement for desired number of repetitions.

#### **Common Mistake**

- 1) Inhibiting the stretch provided in the starting position of the exercise.

### **Toe In/Out Standing Calf Raise**

**Muscles Trained:** Gastrocnemius and Soleus

**Joint Action:** Ankle Plantar Flexion (Extension)

#### **Instructions**

- 1) Stand on both feet and place the balls of the feet on an elevated step.
- 2) Grasp one dumbbell with a pronated (overhand) grip and let the weight hang down by your side.
- 3) Use the other hand to hold onto something for added balance.
- 4) Let ankles dorsiflex (bend) as far as possible.
- 5) Point toes out to emphasize the medial head of the gastrocnemius.
- 6) To begin the movement, raise up onto the toes by plantar flexing (straightening) the foot.
- 7) Exhale throughout the upward movement phase.
- 8) Lower the ankles to starting position.
- 9) Inhale throughout the downward movement phase.
- 10) Repeat movement for desired number of repetitions.
- 11) Switch toes angle to point inward in order to emphasize the lateral head of the gastrocnemius and repeat the exercise for desired number of repetitions.

#### **Common Mistake**

- 1) Inhibiting the stretch provided in the starting position of the exercise.

## **Abduction/Adduction Cable Hip Abduction**

**Muscles Trained:** Gluteus Maximus, Gluteus Medius, Gluteus Minimus, and Tensor Fascia Latae

**Joint Action:** Hip Abduction

### **Instructions**

- 1) Stand shoulder width apart with knees slightly flexed (bent).
- 2) Stand parallel to the machine.
- 3) Strap a cable around the ankle furthest from the machine.
- 4) To begin the movement, abduct (open) the leg while keeping it straight.
- 5) Exhale throughout the upward movement phase.
- 6) Continue to raise the leg as far as possible.
- 7) Return the leg to starting position slowly.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat the movement for desired number of repetitions.
- 10) Switch to opposite leg and repeat movement for desired number of repetitions.

### **Common Mistakes**

- 1) Letting the leg flex (bend) instead of keeping it straight throughout the movement.
- 2) Leaning towards the machine during the upward movement phase instead of standing erect.

## **Cable Hip Adduction**

**Muscles Trained:** Pectineus, Adductor Longus, Adductor Magnus, and Gracilis

**Joint Action:** Hip Adduction

### **Instructions**

- 1) Stand shoulder width apart with knees slightly flexed (bent).
- 2) Stand parallel to the machine.
- 3) Strap a cable around the ankle closest to the machine.
- 4) Move away from the machine allowing the cable to stretch the leg outward away from the body.
- 5) To begin the movement, adduct (close) the leg while keeping it straight.
- 6) Exhale throughout the downward movement phase.
- 7) Continue to pull the leg inward until it is even with the stationary leg.
- 8) Return the leg to starting position slowly.
- 9) Inhale throughout the upward movement phase.
- 10) Repeat the movement for desired number of repetitions.
- 11) Switch to opposite leg and repeat movement for desired number of repetitions.

**Common Mistakes**

- 1) Letting the leg flex (bend) instead of keeping it straight throughout the movement.
- 2) Leaning towards the machine during the downward movement phase instead of standing erect.

**ABDOMEN****Stability Ball Crunch**

**Muscles Trained:** Rectus Abdominis and External Oblique

**Joint Action:** Trunk Flexion

**Instructions**

- 12) Lie supine (facing upward) on a gym ball.
- 13) Place ball directly beneath the scapulas (shoulder blades) with feet flat on the floor shoulder width apart.
- 14) Place hands behind your head.
- 15) To begin the movement, lift the shoulder blades off the ball by flexing (bending) the trunk.
- 16) Exhale throughout the upward movement phase.
- 17) Continue the movement until the scapulas are off the ball.
- 18) Lower the body slowly to starting position.
- 19) Inhale throughout the downward movement phase.
- 20) Keep the same pace throughout the entire movement.
- 21) Repeat movement for desired number of repetitions.

**Common Mistakes**

- 1) Pulling on the head with the hands.
- 2) Forgetting to support the head with the hands.

**Stability Ball Crunch Intense**

**Muscles Trained:** Rectus Abdominis and External Oblique

**Joint Action:** Trunk Flexion

**Instructions**

- 1) Lie supine (facing upward) on a gym ball.
- 2) Place ball directly beneath the lower back (at level of lumbar curve) with feet flat on the floor shoulder width apart.
- 3) Place hands behind your head.
- 4) To begin the movement, flex (bend) the trunk upward.

- 5) Exhale throughout the upward movement phase.
- 6) Continue the movement until the trunk has reached a 30 degree angle with the floor.
- 7) Lower the body slowly to starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Keep the same pace throughout the entire movement.
- 10) Repeat movement for desired number of repetitions.

**Common Mistakes**

- 1) Pulling on the head with the hands.
- 2) Forgetting to support the head with the hands.

**Crunches**

**Muscles Trained:** Rectus Abdominis and External Oblique

**Joint Action:** Trunk Flexion

**Instructions**

- 1) Lie supine (facing upward) on the floor.
- 2) Place legs at a 90-degree angle with feet flat on the floor shoulder width apart.
- 3) Place hands behind your head.
- 4) To begin the movement, flex (bend) the trunk upward.
- 5) Exhale throughout the upward movement phase.
- 6) Continue the movement until the scapulas (shoulder blades) have left the floor.
- 7) Lower the body slowly to starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Keep the same pace throughout the entire movement.
- 10) Repeat movement for desired number of repetitions.

**Common Mistakes**

- 1) Raising the feet off the floor.
- 2) Pulling on the head with the hands.
- 3) Forgetting to support the head with the hands.

**Crunches Intense**

**Muscles Trained:** Rectus Abdominis and External Oblique

**Joint Action:** Trunk Flexion

**Instructions**

- 1) Lie supine (facing upward) on the floor.
- 2) Place legs at a 90-degree angle with feet flat on the floor shoulder width apart.

- 3) Place hands behind your head.
- 4) To begin the movement, flex (bend) the trunk upward.
- 5) Exhale throughout the upward movement phase.
- 6) Continue the movement until the trunk makes a 30-degree angle with the floor.
- 7) Lower the body slowly to starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Keep the same pace throughout the entire movement.
- 10) Repeat movement for desired number of repetitions.

**Common Mistakes**

- 1) Raising the feet off the floor.
- 2) Pulling on the head with the hands.
- 3) Forgetting to support the head with the hands.

**Reverse Crunch**

**Muscles Trained:** Rectus Abdominis and External Oblique

**Joint Action:** Trunk Flexion

**Instructions**

- 1) Lie supine (facing upward) on the floor.
- 2) Place legs at a 90-degree angle with feet in the air.
- 3) Place hands and arms on the floor next to the body.
- 4) To begin the movement, flex (bend) the trunk upward by pulling the legs toward the forehead.
- 5) Do not change the 90-degree angle of the legs.
- 6) Pull the legs toward the head by contracting the abdominal muscles.
- 7) Exhale throughout the upward movement phase.
- 8) Continue the movement until the gluteus maximus (buttocks) is off the floor.
- 9) Lower the body slowly to starting position.
- 10) Inhale throughout the downward movement phase.
- 11) Keep the same pace throughout the entire movement.
- 12) Repeat movement for desired number of repetitions.

**Common Mistake**

- 1) Changing the angle of the hips & legs in order to bring them toward the head instead of using the abdominal muscles.

## High Cable Crunch

**Muscles Trained:** Rectus Abdominis and External Oblique

**Joint Action:** Trunk Flexion

### Instructions

- 1) Kneel down with the body facing away from the machine.
- 2) Grasp the bar behind your head with a pronated (overhand) grip.
- 3) To begin the movement, flex (bend) the trunk toward the ground.
- 4) Exhale throughout the downward movement phase.
- 5) Continue the movement until the trunk is completely flexed.
- 6) Return to starting position by extending (straightening) the trunk.
- 7) Inhale throughout the upward movement phase.
- 8) Maintain a constant pace throughout the movement.
- 9) Repeat the movement for desired number of repetitions

### Common Mistake

- 1) Flexing the hips during the downward movement phase instead of the trunk.

## Bicycle Crunch

**Muscles Trained:** Rectus Abdominis and External Oblique

**Joint Action:** Trunk Flexion

### Instructions

- 1) Lie supine (facing upward) on the floor.
- 2) Place legs straight with feet 2 to 3 inches off the floor.
- 3) Place hands behind the head
- 4) To begin the movement, twist the trunk upward and to the left, simultaneously flexing (bending) the left leg toward the body.
- 5) Exhale during the upward movement phase.
- 6) Continue the movement until the shoulder blades are off the floor and the leg is completely flexed (bent).
- 7) Lower the body slowly to starting position.
- 8) Inhale throughout the downward movement phase.
- 9) Repeat the movement twisting the other way toward the opposite leg.
- 10) Keep the same pace throughout the entire movement.
- 11) Repeat movement for desired number of repetitions.

### Common Mistake

- 1) Forgetting to raise the scapulas off the floor.

## **Pelvic Thrust**

**Muscles Trained:** Rectus Abdominis, External Oblique, and Rectus Femoris

**Joint Actions:** Hip Extension, Isometric Trunk Extension

### **Instructions**

- 1) Lie supine (facing upward) on a bench with legs together and body parallel to the floor.
- 2) Grasp underneath the bench with your hands directly below your ears.
- 3) Raise legs to a 90-degree angle with the bench.
- 4) Inhale before the movement begins.
- 5) To begin the movement, extend (straighten) the hips and raise the body off the bench.
- 6) Continue to raise the hips until the body is completely straight and makes a 45-degree angle with the bench.
- 7) Pause for one second in this position.
- 8) Lower the body by flexing (bending) the hips and return to starting position.
- 9) Exhale throughout the downward movement phase.
- 10) Repeat movement for desired number for repetitions.

### **Common Mistake**

- 1) Making a greater than 45 degree angle with the bench at the top of the movement when the body is straight.
- 2) Not fully extending the hip or posteriorly tilting the pelvis.

## **Planche**

**Muscles Trained:** Rectus Abdominis, External Oblique, and Rectus Femoris

**Joint Actions:** Hip Extension, Isometric Trunk Extension

### **Instructions**

- 1) Lie supine (facing upward) on a bench with legs together and body parallel to the floor.
- 2) Grasp underneath the bench with your hands directly below your ears.
- 3) Inhale before the movement begins.
- 4) To begin the movement, raise legs to a 90-degree angle with the bench.
- 5) Then extend (straighten) the hips and raise the body off the bench.
- 6) Continue to raise the hips until the body is completely straight and makes a 60 to 75-degree angle with the bench.
- 7) Pause for one second in this position.
- 8) Lower the body while keeping hips extended (straight) until torso and legs are close to level of the bench.
- 9) Exhale at the bottom of the downward movement phase.

- 10) Repeat movement for desired number for repetitions.
- 11) In the advanced variation raise and lower body with torso fully extended and hips in posterior pelvic tilt.

**Common Mistakes**

- 1) Making a greater than 75 degree angle with the bench at the top of the movement when the body is straight.
- 2) Lowering the body too rapidly on the downward movement phase.