

# UNIVERSITY OF DELAWARE PHYSICAL THERAPY

## Weight Training Modification Handout

### ESTABLISHING ESTIMATED MAXIMUMS

Core Exercises – Calculating Maximums

1. Select weight that can be completed 6 to 10 times.
2. Perform exercise with selected weight and record repetitions.
3. Find weight and repetitions on 3% rule chart. Go to corresponding MAX weight on chart and find calculated 1 repetition maximum.
4. Multiply 1 repetition maximum by percentage for program design for designated step.

Example

Athlete completes 8 repetitions at 125 lbs. Chart projects one repetition maximum at 155 lbs. Multiply 155 by 65% to find target weight for phase 1, step 1

Accessory Exercises

3 sets of 8 repetitions at weight that allows perfect technique

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## Weight Training Modification Handout

### Warm Up

1. Break a sweat
2. Abdominal and low back strengthening exercises
3. Upper Extremity Stretches
4. Sport Specific Activities

### Soreness Rules

#### Criterion

1. Soreness during warm-up that continues
2. Soreness during warm-up that goes away
3. Soreness during warm-up that goes away but redevelops during session
4. Soreness the day after lifting (Not muscle soreness)
5. No Soreness

### Cool Down

5. Abdominal and low back strengthening exercises
6. Rotator cuff strengthening
7. UE and LE stretches
8. Ice down 20 minutes

#### Action

- 2 days off, drop down 1 step  
Stay at step that led to soreness  
2 days off, drop down 1 step
- 1 day off, do not advance program to the next step

Advance one step per week or as instructed by healthcare professional

### FRONT SHOULDER PRESS PROGRESSION

Step 1. Isolated Shoulder Motions  
Front Deltoid Raises to Shoulder Level (**follow program design recommendations for repetitions**).  
Lateral Raises to Shoulder Level (**follow program design recommendations for repetitions**).

Step 2. Multi Angle Isometrics  
Using a squat rack or Smith Machine, lock bar in front shoulder press position in place so elbows are below shoulder level and perform isometric contractions (30 times contract 5 seconds). Move bar up so elbows are even with shoulders and perform isometric contractions (30 times contract 5 seconds).

Step 3. Partial Shoulder Press  
Using a squat rack or Smith Machine place the bar in a starting position for the front shoulder press position. Press the bar from the starting position until equal with the top of the forehead. Return to starting position. (**Follow program design recommendations for repetitions**.)

Step 4. Shoulder Press Lockout  
Using squat rack or Smith Machine, secure the bar in a front shoulder press **starting position** equal to forehead height. Press from forehead height until arms are fully locked out. Return to starting position.  
(**Follow program design recommendations for repetitions**.)

Step 5. Full Shoulder Press  
Using a squat rack or Smith Machine place the bar at normal starting position for the front shoulder press. Press to full overhead position and return to start. (**Start normal workout repetitions per strength and conditioning coach**.)

### LATISSIMUS DORSI PULLDOWN PROGRESSION

Step 1. Lat Pull Down Shrugs with underhand grip  
Assume normal front lat pulldown position. Take shoulder width grip in underhand position (palms facing upward). Lean back to a comfortable position. Lock elbows and wrists. Squeeze shoulder blades together and pull bar down with just upper back muscles. Elbows and wrists remain locked. (**Follow program design recommendations for repetitions**.)

Step 2. Lat Pull Down Shrugs with overhand grip  
Assume normal front lat pulldown position. Take shoulder width grip in overhand position (palms facing downward). Lean back to a comfortable position. Lock elbows and wrists. Squeeze shoulder blades together and pull bar down with just upper back muscles. Elbows and wrists remain locked. (**Follow program design recommendations for repetitions**.)

Step 3. Partial Lat Pull Down with underhand grip  
Place a 6 inch towel roll under T shirt before assuming normal lat pulldown position. Assume an underhand grip (palms turned upward) with hands slightly less than shoulder width apart. Lean back to a comfortable position. Initiate movement by squeezing shoulder blades together then pull bar down until it touches the towel roll. Return to starting position. (**Follow program design recommendations for repetitions**.)

Step 4. Partial Lat Pulldown with overhand grip  
Place a 6 inch towel roll under T shirt before assuming normal lat pulldown position. Assume an overhand grip (palms turned downward) with hands slightly less than shoulder width apart. Lean back to a comfortable position. Initiate movement by squeezing shoulder blades together then pull bar down until it touches the towel roll. Return to starting position. (**Follow program design recommendations for repetitions**.)

Step 5. Full Lat Pulldown with overhand grip

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Assume normal lat pulldown position. Assume an overhand grip (palms turned downward) with hands slightly less than shoulder width apart. Lean back to a comfortable position. Initiate movement by squeezing shoulder blades together then pull bar down until it touches your chest. Return to starting position. **(Follow program design recommendations for repetitions.)**

## **BENCH PRESS PROGRESSION**

### **A mandatory lift off is required for all steps in the progression.**

#### Step 1. Bench Press Shrugs

Receive the bar in a normal bench press position (hands slightly less than shoulder width apart) with the elbows locked. Push the bar straight up using the shoulder and chest and round the shoulders (**no bending elbows or wrists**). Movement range is small. Alternate an overhand (palms turned downward) grip with an underhand grip (palms turned upward) every other set. **(Follow program design recommendations for repetitions.)**

#### Step 2. Partial Bench Press using underhand grip

Place a 6 inch towel roll under T shirt before assuming normal bench press position. Assume a underhand grip (palms turned upward) with hands slightly less than shoulder width apart. The bar is lowered until it touches the towel then pressed to the starting position. See instructions for underhand bench pressing below. **(Follow program design recommendations for repetitions.)**

#### Step 3. Partial Bench Press using overhand grip (normal grip)

Place a 6 inch towel roll under T shirt before assuming normal bench press position. Assume an overhand grip (normal grip) with hands slightly less than shoulder width apart. The bar is lowered until it touches the towel then pressed to the starting position. **(Follow program design recommendations for repetitions.)**

#### Step 4. Full Bench Press using underhand grip

Assume an underhand grip (palms turned upward) with hands slightly less than shoulder width apart. Complete full bench press using an underhand grip. Concentrate on keeping arms close to the sides. See instructions for underhand bench pressing below. **(Follow program design recommendations for repetitions.)**

#### Step 5. Full Bench Press using overhand grip (normal grip)

Assume an overhand grip (normal grip) with hands slightly less than shoulder width apart. Complete full bench press using an overhand grip. Concentrate on keeping arms close to the side. Do not allow weight to bounce off chest. **(Start normal workout repetitions as per strength and conditioning coach.)**

## **TIPS FOR REVERSE (UNDERHAND) GRIP BENCH PRESS**

Because most athletes have not been exposed to the reverse grip bench press a list of tips is printed below. These tips are meant to increase efficiency and produce the desired results for this step of the functional progression.

1. Expect to feel uncomfortable with the grip for the first 8-10 sessions.
2. Always have spotter.
3. The bar should rest in the hand in line with the wrists (generally just at or slightly above the thumb). The

thumb should be wrapped around the bar.

4. During the descent phase (lowering the bar) emphasis should be placed on keeping the elbows close to the torso.
5. The bar should touch at the highest point on the chest or just slightly below it depending on the athlete's preference. This spot tends to be closer to the lower ribs than the overhand grip.
6. During the ascent phase the bar is pressed straight up from the chest. The bar should not move back towards the spotter.

## **POWER CLEAN PROGRESSION**

### **Step 1 - Power Shrug**

Lift bar off a waist-level rack using a power clean grip. Lower the bar to mid thigh with the knees bent and shoulders slightly in front of the bar. Extend the legs and back, then shrug the bar with a quick powerful motion. The elbows remain straight throughout the movement. **(Follow program design recommendations for repetitions.)**

### **Step 2 - Power Pull from above the knee**

Lift bar off a waist-level rack using a power clean grip. Lower the bar to a position just above the knees with the shoulders slightly in front of the bar. Extend the legs and back, shrug the bar with a quick powerful motion, then complete the shrug by pulling the bar into an upright row position. **(Follow program design recommendations for repetitions.)**

### **Step 3 - Power pull from the floor**

Begin with the bar at mid shin level\*\*\* using a power clean grip. During the initial phase the bar is lifted from the floor and the athlete moves through a normal power clean motion finishing in an upright row position. **Do not rack the bar. (Follow program design recommendations for repetitions.)**

\*\*\* Mid shin level should be attained through the use of bumper plates or wooden practice plates

### **Step 4 - Hang Clean from power position\*\***

Lift bar off a waist-level rack using a power clean grip. Lower the bar to mid thigh with the knees bent and the shoulders slightly in front of the bar. Clean the bar from this position concentrating on proper timing and rack position. Avoid letting the bar "crash" on the shoulders. **(Follow program design recommendations for repetitions.)**

### **Step 5 - Hang Clean from above the knee\*\***

Lift bar off a waist-level rack using a power clean grip. Lower the bar to a position just above the knees with the shoulders slightly in front of the bar. Clean the bar from this position concentrating on proper timing and rack position. Avoid letting the bar "crash" on the shoulders. **(Follow program design recommendations for repetitions.)**

### **Step 6 - Power Clean from the floor\*\***

Resume normal power clean from the floor with emphasis on timing, bar path and proper rack position. Keep the bar close to the body and do not allow the bar to "crash" on the shoulders. In addition, the athlete should be taught to absorb the impact of the bar by bending the knees as the bar is racked on the shoulders. **(Follow program design recommendations for repetitions.)**

\*\* Athletes should drop the bar after each clean. Hands should be kept on the bar, but only to control the bar not decelerate it. \*\*