WEIGHT LIFTING PROGRESSION

ROTATOR CUFF TENDINITIS / IMPINGEMENT/ DISTAL CLAVICLE OSTEOLYSIS (NON- OPERATIVE)

A. CONTRAINDICATED EXERCISES (ILLUSTRATED BELOW)
   - Overhead or military press, dumbbell press, push press
   - Behind the neck lat pull down, pullovers, and pull ups
   - Seated overhead tricep extensions, French Curls, and Dips

<table>
<thead>
<tr>
<th>DO NOT DO:</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Military Press</td>
<td>Dumbbell Press</td>
<td>Behind the neck LPD</td>
</tr>
<tr>
<td>Pull ups</td>
<td>Pullovers</td>
<td>Overhead tricep ext</td>
</tr>
<tr>
<td>Dips</td>
<td>French Curls</td>
<td></td>
</tr>
</tbody>
</table>
B. **MODIFIED CORE EXERCISES (ILLUSTRATED BELOW)**
- Bench Press
- Front Lat Pull down
- Power clean
- Back squat
- Shoulder Press

<table>
<thead>
<tr>
<th>Bench Press</th>
<th>Front Lat Pull Down</th>
<th>Power Clean</th>
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<tbody>
<tr>
<td>Back Squat</td>
<td>Shoulder Press</td>
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</table>

**Accessory Exercises**

<table>
<thead>
<tr>
<th>Chest Flys</th>
<th>Straight Arm Lat Pulldown</th>
<th>Seated Rows</th>
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<tr>
<td></td>
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</tr>
<tr>
<td>Triceps Ext</td>
<td>Deltoid Raise</td>
<td>Concentration Curls</td>
</tr>
</tbody>
</table>
Calculating 1 Rep Maximums

1. Select a weight that can be completed with proper form 6 to 10 times for a given exercise.
2. Perform the exercise with the selected weight and record the number of performed repetitions (the last repetition should be challenging but with good form).
3. On the 3% rule chart pictured below, find the number of repetitions performed in the max reps row. Scroll down inside the chart and find the weight closest to the weight you performed for the given exercise (the exact weight may not be available).
4. Your estimated 1 rep maximum for that given exercise is the load associated with the 100% 1RM column of that same row.
5. Multiply the estimated 1 rep maximum by the percentage for the designated step to determine the prescribed weight for the given exercise.

**EXAMPLE:** Bench Press - performed 6 repetitions at 120 lbs
Approximated 1 rep max = 140 lbs
65% 1 RM for Bench Press (140 x 0.65) = 91 lbs

![3% Rule Chart](image-url)
**Phase I – Exercises**

**Goals Phase I:** Full ROM Bench Press, Lat Pull Down, High Pulls

**Time Frame:** 2.5 to 5 weeks (Lift 2-3 X/week; 1-2 days rest between workouts; follow soreness rules on page 13)

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Accessory Exercises</th>
</tr>
</thead>
</table>
| **Core Exercise** | **Straight Arm Lat Pulldown**  
**Straight Arm Bench Press**  
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.  
**Straight Arm Lat Pull Down**  
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.  
**Power Clean**  
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.  
**Back Squat**  
High bar squat, modified center of gravity bar or stingray  
**Shoulder Press**  
Functional Isometrics at 60 and 90 degrees  
Using a squat rack or Smith Machine, lock bar | **Seated Rows**  
**Tricep Extensions using lat pull down machine**  
**Lateral and Front Deltoid Raises**  
**Concentration Curls**  
**Program Design** – 3 sets x 8 reps |
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).

**Program Design** – 3 sets x 10 reps at 65% of 1 Rep Max

<table>
<thead>
<tr>
<th>Step 2</th>
<th>Core Exercises</th>
<th>Accessory Exercises</th>
</tr>
</thead>
</table>
|        | **Partial Bench Press with underhand grip** (Always warm up with straight arm bench press)  
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.  
**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.  
**Power Clean – 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.  
**Back Squat** – High bar squat, modified center of gravity bar or stingray | **Straight Arm Lat Pulldown**  
**Seated Rows**  
**Tricep Extensions with lat pull down machine**  
**Lateral and Front Deltoid Raises**  
**Concentration Curls** | **Program Design** – 3 sets x 8 reps |
<table>
<thead>
<tr>
<th>Shoulder Press – Functional Isometrics at 60 and 90 degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>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).</td>
</tr>
</tbody>
</table>

**Program Design** – 4 sets x 10 reps at 65% of 1 Rep Max

<table>
<thead>
<tr>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Exercises</strong></td>
</tr>
</tbody>
</table>
| Partial Bench Press using normal grip  
* (Always warm up with straight arm bench press)*  
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.  
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.  
Power Clean  
Begin with the bar at mid shin level. Mid shin level should be attained through the use of bumper plates or wooden practice plates 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.**  
Back Squat  
High bar squat, modified center of gravity bar or stingray |
| **Accessory Exercises** |
| Straight Arm Lat Pulldown  
Seated Rows  
Tricep Extensions with lat pull down machine  
Lateral and Front Deltoid Raises  
Concentration Curls |

**Program Design** – 3 sets x 8 reps
**Shoulder Press – Functional Isometrics at 60, 90 and 120 degrees**

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).

**Program Design** – 5 sets x 10 reps at 65% of 1 Rep Max

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**Step 4**

**Core Exercises**

**Full Bench Press using underhand grip** *(Always warm up with straight arm bench press)*

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.

**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.

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

**Back Squat**

High bar squat, modified center of gravity bar or stingray

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**Accessory Exercises**

- Chest Flys
- Straight Arm Lat Pulldown
- Seated Rows
- Tricep Extensions with lat pull down machine
- Lateral and Front Deltoid Raises
- Bicep Curls

**Program Design** – 3 sets x 8 reps
**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.

**Incline Bench Press**
Receive the bar in an incline 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.

**Program Design** – 4 sets x 10 reps at 70% of 1 Rep Max

**Step 5**

**Core Exercises**

**Full Bench Press using normal grip**
*(Always warm up with straight arm bench press)*
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.

**Full Lat Pulldown with overhand grip**
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.

**Power Clean – 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.

**Accessory Exercises**

- Chest Flys
- Straight Arm Lat Pulldown
- Seated Rows
- Tricep Extensions with lat pull down machine
- Lateral and Front Deltoid Raises
- Concentration Curls

**Program Design** – 3 sets x 8 reps
<table>
<thead>
<tr>
<th><strong>Back Squat</strong></th>
<th>High bar squat, modified center of gravity bar or stingray</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shoulder Press – Shoulder Press Lockout</strong></td>
<td>Using squat rack or Smith Machine, secure the bar in a front shoulder press <strong>starting position</strong> equal to forehead height. Press from forehead height until arms are fully locked out. Return to starting position.</td>
</tr>
<tr>
<td><strong>Partial Incline Bench Press using underhand grip</strong></td>
<td>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.</td>
</tr>
</tbody>
</table>

**Program Design** – 5 sets x 10 reps at 70% of 1 Rep Max
ROTATOR CUFF TENDINITIS / IMPINGEMENT/ DISTAL CLAVICLE OSTEOLYSIS (NON-OPERATIVE)

Phase II – Exercises  *(following completion of phase I)*

**Goals Phase II**: Full ROM Shoulder Press and Power Clean

**Time Frame**: 2 to 4 weeks (Lift 3 X/week with 1 day of rest between workouts; follow soreness rules on page 13)

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**Core Exercises**

**Standard Bench Press**

**Standard Lat Pull Down**

**Standard Power Clean**

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.

**Back Squat**

High bar squat, modified center of gravity bar or stingray

**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.

**Partial Incline Bench Press using Normal Grip**

Place a 6 inch towel roll under T shirt before assuming normal bench press position. Assume a 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.

**Program Design** – 5 sets x 10 reps at 70% *(H)*

4 sets x 10 reps at 60% *(L)*

*(H) - Heavy Day* with emphasis on increased repetitions and increase percentage of (1) repetition maximum.

*(L) - Light Day* with emphasis on decreased repetitions and decreased percentage of (1) repetition maximum. The rationale is to allow the muscle tissue to rest and recover for the next heavy session.

If the athlete lifts two days per week he/she should complete one heavy and one light day. If the athlete lifted three days per week, here is a sample alternate heavy /light schedule.
<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 3</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 1</strong></td>
<td>Heavy</td>
<td>Heavy</td>
<td>Light</td>
</tr>
<tr>
<td><strong>Week 2</strong></td>
<td>Light</td>
<td>Light</td>
<td>Heavy</td>
</tr>
</tbody>
</table>

**Accessory Exercises**

- Chest Flys
- Straight Arm Lat Pulldown
- Seated Rows
- Tricep Extensions with lat pull down machine
- Lateral and Front Deltoid Raises
- Concentration Curls

**Program Design** – 3 sets x 8 reps

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**Step 7**  
**Core Exercises**

- Standard Bench Press
- Standard Lat Pull down
- Power Clean  
  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.
- Back Squat  
  High bar squat, modified center of gravity bar or stingray
- Standard Shoulder Press
- Full Incline 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.

**Program Design** – 5 sets x 8 reps at 75% (H)  
4 sets x 8 reps at 65% (L)

**Accessory Exercises**

- Chest Flys
- Straight Arm Lat Pulldown
- Seated Rows
- Tricep Extensions with lat pull down machine
- Lateral and Front Deltoid Raises
- Concentration Curls

**Program Design** – 3 sets x 8 reps
<table>
<thead>
<tr>
<th><strong>Step 8</strong></th>
<th><strong>Accessory Exercises</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Exercises</strong></td>
<td><strong>Program Design</strong> – 3 x 8</td>
</tr>
<tr>
<td>Standard Bench Press</td>
<td>Chest Fly</td>
</tr>
<tr>
<td>Standard Lat Pull down</td>
<td>Straight Arm Lat Pulldown</td>
</tr>
<tr>
<td>Standard Power Clean</td>
<td>Seated Rows</td>
</tr>
<tr>
<td>Back Squat</td>
<td>Tricep Extensions with lat pull down machine</td>
</tr>
<tr>
<td>High bar squat, modified center of gravity bar or stingray</td>
<td>Lateral and Front Deltoid Raises</td>
</tr>
<tr>
<td><strong>Standard Shoulder Press</strong></td>
<td>Concentration Curls</td>
</tr>
<tr>
<td>Full Incline Bench Press using (normal grip)</td>
<td><strong>Program Design</strong> – 3 x 8</td>
</tr>
<tr>
<td>Assume normal grip with hands slightly less than shoulder width apart. Complete full bench press using an overhand grip (towel is not needed on chest). Concentrate on keeping arms close to the side. Do not allow weight to bounce off chest.</td>
<td></td>
</tr>
<tr>
<td><strong>Program Design</strong> – 4 sets x 6 reps at 80% (H)</td>
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</tr>
<tr>
<td>4 sets x 6 reps at 70% (L)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Step 9</strong></th>
<th><strong>Accessory Exercises</strong></th>
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<tbody>
<tr>
<td><strong>Core Exercises</strong></td>
<td><strong>Program Design</strong> – 3 sets x 8 reps</td>
</tr>
<tr>
<td>Standard Bench Press</td>
<td>Chest Fly</td>
</tr>
<tr>
<td>Standard Lat Pull down</td>
<td>Straight Arm Lat Pulldown</td>
</tr>
<tr>
<td>Power Clean</td>
<td>Seated Rows</td>
</tr>
<tr>
<td>Full ROM from the floor</td>
<td>Tricep Extensions with lat pull down machine</td>
</tr>
<tr>
<td>Back Squat</td>
<td>Lateral and Front Deltoid Raises</td>
</tr>
<tr>
<td>High bar squat, modified center of gravity bar or stingray</td>
<td>Concentration Curls</td>
</tr>
<tr>
<td><strong>Standard Shoulder Press</strong></td>
<td><strong>Program Design</strong> – 3 sets x 8 reps</td>
</tr>
<tr>
<td><strong>Standard Incline Bench Press</strong></td>
<td></td>
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| Program Design – 4 sets x 5 reps at 85% (H) | |
| 3 sets x 5 reps at 75% (L) | |
## Soreness Rules

<table>
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<tr>
<th>Criterion</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Soreness during warm-up that continues</td>
<td>2 days off, drop down 1 step</td>
</tr>
<tr>
<td>2. Soreness during warm-up that goes away</td>
<td>Stay at step that led to soreness</td>
</tr>
<tr>
<td>3. Soreness during warm-up that goes away but redevelops during session</td>
<td>2 days off, drop down 1 step</td>
</tr>
<tr>
<td>4. Soreness the day after lifting (Not muscle soreness)</td>
<td>1 day off, do not advance program to the next step</td>
</tr>
<tr>
<td>5. No soreness</td>
<td>Advance 1 step per week or as instructed by healthcare professional</td>
</tr>
</tbody>
</table>

*This Clinical Guideline may need to be modified to meet the needs of a specific patient. The model should not replace clinical judgment.*