Postural Correction for Neck and Back

Purpose of Program:
Although you may not be familiar with the term Upper Crossed Syndrome, you’ve probably seen it in students, office workers, and anyone who spends a lot of time sitting or driving. Upper Crossed Syndrome, more commonly known as ‘bad posture’, is signified by a forward head position, forwardly rolled shoulders, abnormal arch in the neck - either too much arch or too little arch, and an exaggerated upper back curve giving the back a hump like appearance.

People with this condition frequently complain of stiffness in the neck, headaches, tension and soreness along the slope of the shoulder, front of shoulder, and tight, sore, upper back. It may also result in neurological problems (from tingling or pins and needles to shooting pain and numbness) extending into the arms, hands, and fingers.

Upper Crossed Syndrome is named because there is a pattern of tightness (over-activation) of certain muscles and weakness (inhibiting) of other muscles; this creates predictable muscle imbalance in a cross like pattern. The purpose of this program is to correct this muscle imbalance by strengthening the inhibited muscles (most important), and stretching the tight muscles (less important). This condition shouldn’t be left untreated. It is often a chronic issue that leads to faulty mechanics and can predispose you to recurrent back and neck pain.

Target Muscles: The muscle groups targeted in this condition program includes

<table>
<thead>
<tr>
<th>Typical Muscle Imbalances in the UPPER CROSSED SYNDROME</th>
<th>TIGHT, FACILITATED</th>
<th>WEAK, INHIBITED</th>
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</thead>
<tbody>
<tr>
<td>Pectorals</td>
<td>Longus Capititis</td>
<td></td>
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<tr>
<td>Upper Trapezius</td>
<td>Longus Coli</td>
<td></td>
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<tr>
<td>Levator Scapula</td>
<td>Hyoids</td>
<td></td>
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<tr>
<td>Sternocleidomastoid</td>
<td>Serratus Anterior</td>
<td></td>
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<tr>
<td>Suboccipitals</td>
<td>Rhomboids</td>
<td></td>
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<tr>
<td>Subscapularis</td>
<td>Lower Trapezius</td>
<td></td>
</tr>
<tr>
<td>Latissimus Dorsi</td>
<td>Posterior Rotator Cuff</td>
<td></td>
</tr>
<tr>
<td>Arm Flexors</td>
<td>Arm Extensors</td>
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</tbody>
</table>

Length of Program: This postural correction program should be continues for 4 to 6 weeks, unless otherwise specified by our office. After your recovery, these exercises can be continued as a maintenance program for lifelong protection and health. Performing the exercises three days a week will maintain strength and range of motion in your neck.

Getting Started:
Warm Up: Before doing the following exercises, warm up with 5 to 10 minutes of low impact activity, like walking, riding a bike, gentle shoulder rolls and leg swings.

Stretch: After the warm-up, do the stretching exercises shown on page 1 and 2 before moving on to the strengthening exercises. When you have completed the strengthening exercises, repeat the stretching exercises to end the program.

Do not ignore pain: You should not feel pain during an exercise. Talk to your doctor, chiropractor, or physical therapist if you have any pain while exercising.

Ask Questions: If you are not sure how to do an exercise, or how often to do it.


Postural Strengthening:

Chin Tuck Exercise

One of the most effective postural exercises for combating neck pain is the chin tuck exercise. This exercise not only helps strengthen the muscles that pull the head back into alignment over the shoulders (upper thoracic extensors) but it also stretches the scalene and suboccipital muscles. The chin tuck exercise can be done numerous times throughout the day, such as while sitting in the car or at the desk at work. The repetition of this exercise throughout the day also helps develop good postural habits.

To perform the exercise for the first time it is often recommended that patients stand with the spine up against a surface like a door jam or wall and the feet out about 3 inches from the bottom. Keeping the spine against the surface, pull the upper back and head back until the back of the head touches. It is important to make sure that the chin is down so that the head is pulled straight back and is not looking up. Hold the head back for 5 seconds. Repeat this ten times. After performing this exercise about ten times, start doing the exercise in standing or sitting without a door jamb or wall. The exercise can be done 5 to 7 times per day.

**TIP:** Try doing these exercises at red lights, it can help you remember to do chin tucks daily and it’s no time wasted. When in the car, use the headrest as a point to aim for when pulling the head back.

To progress this exercise try to do the exercise on the floor against gravity:

First perform the chin tilt. Then, gently lift your head off the floor the bed keeping the chin tucked in. Hold this position for a few breaths and gently lower to the ground. Repeat continuously for a minute.

Wall Angels

Another important postural exercise is the wall angel exercise. This exercise is done standing with the back up against a large flat wall and the feet about 4 inches out from the bottom of the wall. Assume the same position as the chin tuck exercise with the back of the head against the wall. Bring your arms as far back to the wall as possible, so both arms are at a 90-degree angle. Lock the shoulder blades back and down (think of putting your shoulders in your back pocket). Slide arms over the head, while never allowing arms to lift off of the wall. Once overhead, bring your arms down so the elbows are flush against the side of your body, never allowing them to come off of the wall. Keep the shoulder blades squeezed back and down. The movement is slow and deliberate. Repeat this 10 times, 3 to 5 times per day.
Blackburn Exercises:
Blackburn exercises are designed to condition the muscles between the shoulder blades to pull your shoulders back into 'ideal' posture. Be careful to avoid shrugging your shoulders (aka lifting your shoulders towards your ears) while doing these exercises, we want to avoid activation of the upper fibers of trapezius which contributes to postural imbalance. To avoid trap activation aim to squeeze your shoulder blades together and toward your back pant pocket.

A: Prone Horizontal Abduction (Neutral)
- Lie on the table, face down, with arms hanging straight down to the floor and palms facing down
- Raise arms out to the side, parallel to the floor
- Hold for 2 seconds and lower slowly

B: Prone Horizontal Abduction (Full ER)
- Lie on the table, face down, with arms hanging straight to the floor, and thumbs rotated up (hitch-hiker position)
- Raise arms out to the side with slightly in front of shoulder, parallel to the floor
- Hold for 2 seconds and lower slowly

C: Prone Horizontal Scaption (Neutral)
- Lie on the table, face down, with arms hanging straight down to the floor and palms facing down
- Raise your arms to the side but slightly forward by about 30° compared to horizontal abduction
- Hold for 2 seconds and lower slowly

D: Prone Horizontal Scaption (Full ER)
- Lie on the table, face down, with arms hanging straight to the floor, and thumbs rotated up (hitch-hiker position)
- Raise your arms to the side but slightly forward by about 30° compared to horizontal abduction
- Hold for 2 seconds and lower slowly

E: Prone Horizontal External Rotation
- Lie on the table, face down, with arms abducted horizontal to side and elbows bent 90° pointing down
- Rotate arms externally so that forearms come parallel to ground point forward
- Hold for 2 seconds and lower slowly

F: Prone Horizontal Extension
- Lie on the table, face down, with arms hanging straight down to the floor and palms facing forward
- Raise your arms to the horizontal parallel the thorax
- Hold for 2 seconds and lower slowly

Aim to perform each exercise 10 - 20 times using a bench or large therapy ball. Start with no weight. Progress to light free weight (1-3lbs) when you can do the full circuit start to finish 2-3 times.
The Seated Row is another effective exercise to help correct rounded shoulders. Like the Backburn exercises it works by strengthening the muscles that pull the shoulders back (Shoulder retractors).

The exercise can be performed with a light or medium resistance band, or with a cable system at the gym. Start with palms facing each other, back straight with chest sticking out. While keeping your torso stationary, pull the band/cable back towards your torso. Breathe out as you perform that movement. The focus should be on squeezing the shoulder blade together. Hold that contraction for 1s and slowly go back to the original position while breathing in. Repeat for 12 reps, 3 sets.

**Arm Extensors**

<table>
<thead>
<tr>
<th>Repetitions</th>
<th>3 sets of 8</th>
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</thead>
<tbody>
<tr>
<td>Days per week</td>
<td>3</td>
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**Main muscles worked:** Triceps
You should feel this exercise at the back of your upper arm

**Equipment needed:** Begin with a weight that allows 3 sets of 8 repetitions and progress to 3 sets of 12 repetitions. As the exercise becomes easier, add weight in 1-pound increments to a maximum of 5 pounds. Each time you increase the weight, start again at 3 sets of 8 repetitions.

**Step-by-step directions**
- Stand tall with your weight evenly distributed over both feet.
- Raise your arm and bend your elbow with the weight behind your head. Support your arm by placing your opposite hand on your upper arm.
- Slowly straighten your elbow and bring the weight overhead.
- Hold for 2 seconds.
- Slowly lower your arm back down behind your head and repeat.

**Tip** Keep your abdominal muscles tight and do not arch your back.

**External Rotators:**

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**Main muscles worked:** Infraspinatus, teres minor, posterior deltoid
You should feel this stretch in the back of your shoulder and upper back

**Equipment needed:** Use an elastic stretch band of comfortable resistance. As the exercise becomes easier to perform, progress to 3 sets of 12 repetitions. If you have access to a fitness center, this exercise can also be performed on a weight machine. A fitness assistant at your gym can instruct you on how to use the machines safely.

**Step-by-step directions**
- Make a 3-foot-long loop with the elastic band and tie the ends together. Attach the loop to a doorknob or other stable object.
- Stand holding the band with your elbow bent and at your side, as shown in the start position.
- Keeping your elbow close to your side, slowly rotate your arm outward.
- Slowly return to the start position and repeat.

**Tip** Squeeze your shoulder blades together when you pull your elbow back.
### Postural Stretches:

<table>
<thead>
<tr>
<th>Stretch Type</th>
<th>Instructions</th>
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<tbody>
<tr>
<td><strong>Child’s Pose Stretch</strong></td>
<td>Start in a kneeling position. Drop your butt toward your heels as you stretch the rest of your body down and forward. In the fully stretched position, rest your arms in a relaxed position along the floor, rest your stomach comfortably on top of your thighs, and rest your forehead on the mat.</td>
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<tr>
<td><strong>Seated Shoulder Stretch</strong></td>
<td>Start seated, legs crossed. Place palms down, fingers backward about a foot off the hip. You can play with how it feels to pull the palms off the floor and stretch the fingers long. Keep the arms straight and lean backward toward the floor. To maximize the stretch you really have to straighten the arms. If bending the arms cannot be avoided, move the hands further from the hips to increase the stretch.</td>
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<tr>
<td><strong>Neck Stretch- Traps</strong></td>
<td>Start with your head neutral. Tucking your arm behind your back, to lock your shoulder in the down position. Using the opposite hand, pull your head to the opposite side.</td>
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<tr>
<td><strong>Neck Stretch- Levator Scapulae</strong></td>
<td>Start with your head neutral. Tucking your arm behind your back, to lock your shoulder in the down position. Holding the bottom of the chair also works. Using the opposite hand, pull your head so that your nose is close to your arm pit. Repeat for the opposite side.</td>
</tr>
<tr>
<td><strong>Trunk Stretch</strong></td>
<td>Start by clasping your hands above your head, head neutral. Gently move arms to the right side feeling the stretch turn on along the left side of the trunk. Hold for 30 seconds. Repeat for the opposite side. Relax the neck during this stretch.</td>
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</tbody>
</table>
Door Way Shoulder Stretch

A) Both arms at the same time, or B) One arm at a time.

Regardless of the option you choose, change the angle of your arms, to facilitate a different stretch. Try below horizontal, at horizontal, and above horizontal. Changing the angle will stretch the top, middle, and bottom of the pectoralis major muscle.

Tip: Use your body weight to lean into the stretch for the double arm version, or rotate your body away from the wall for the single arm version.

Bruegger’s Stretch/Desk Stretch:

This is an excellent stretch for office workers. Start by moving your buttocks to the edge of your chair.

Keep your feet shoulder width apart. Your knees and hips should be at 90 degrees each.

Arch your low back and stick your chest up. Tuck your chin and roll your arms back and reach as far behind you as you can.

Your thumbs should be pointing straight back and the top of your head should be pointing towards the ceiling. Hold for 20-30 seconds.