

# Home Rehabilitation Program for COVID-19 Patients

Physical Medicine & Rehabilitation (PM&R) Service  
Washington DC Veterans Affairs Medical Center  
202-745-8311

PM&R service will provide physician consultation and follow up visits via telehealth for patients with COVID-19 who are discharged home. Please distribute this home exercise program to all COVID-19 patients who are ready to be discharged. This program is designed to be done alone by the patient in their room.



Following Exercise Program Adapted from Anne Felicia Ambrose, MD.  
Department of Rehabilitation Medicine, Montefiore Medical Center  
Version 2: March 24,2020

## Exercise Precautions

- Start gentle exercises if you have had no fever for at least seven days as well as no shortness of breath, palpitations or chest pain while walking around in your house and no swelling of the legs;
- STOP exercise immediately and seek help immediately if you develop any of the following symptoms:
  - Shortness of breath
  - Chest pain
  - Palpitations
  - Exhaustion
  - Dizziness or lightheadedness

## Sequence of Exercise Progression

**Level 1** These exercises are suitable for patients who are very weak and have to lie down most of the time.

- Start with the breathing exercises (exercises 1-3) done at least twice a day, and increase to 4-6 times a day;
- Gradually add the other exercises as tolerated. You can do a few of the different exercises at each session; and
- Once you can do all the exercises in one session without any difficulty, repeat them 2-3 times a day.

**Level 2** Once the patient can complete level 1 exercises with ease, proceed to level 2 which are mainly seated exercises.

- Continue with level 1 exercises;
- Start with a few of the exercises in Level 2;
- Gradually increase the number of exercises that can be done at each session; and
- Increase to repeating the exercises 2-3 times a day.

**Level 3** Once the patient can complete level 2 exercises with ease, proceed to level 3 which are mainly standing exercises.

- Continue with level 1 and 2 exercises;
- Start with a few of the exercises in Level 3;
- Gradually increase the number of exercises that can be done at each session; and
- Increase the numbers of sessions as tolerated.  
The goal is to do this 2-3 times a day.

## LEVEL 1

<b>Deep breathing exercises</b>	2 minutes	Aerating the lower parts of the lung
<b>Pursed lip breathing exercises</b>	2 minutes	Exercising the breathing muscles
<b>Blowing exercises</b>	10 times	Exercising the breathing muscles
<b>Ankle Pumps</b>	Repeat 2-3 times. Increase gradually to 8 times (1 set)	Improves leg circulation and Prevent ankle contractures
<b>Hip and Knee Bends</b>	Repeat 2-3 times. Increase gradually to 8 times (1 set)	Maintain hip and knee range of motion
<b>Crossing your legs in bed</b>	Repeat 2-3 times. Increase gradually to 8 Times (1 set)	Maintain hip external rotation
<b>Overhead arm stretch</b>	Repeat 2-3 times. Increase gradually to 8 Times (1 set)	Maintain shoulder abduction and extension
<b>Touching back of neck</b>	Repeat 2-3 times. Increase gradually to 8 Times (1 set)	Maintain shoulder external rotation
<b>Touching upper back</b>	Repeat 2-3 times. Increase gradually to 8 Times (1 set)	Maintain shoulder internal rotation
<b>Sitting side of the bed</b>	As long as tolerated	Improve sitting balance. Reduce postural dizziness
<b>Sit to Stand</b>	10 times (1set)	Improve ability to get up
<b>Relaxation</b>		

### 1. Deep breathing exercises

1. Lie on your back in bed with a pillow under your head and knees.
2. Place one hand on your belly. Place the other hand on your chest.
3. Slowly breathe in through your nose. Let your belly fill with air, feeling your belly rise.
4. Breathe out through your nose. As you breathe out, feel your belly lower.
5. The hand on your belly should move more than the one that's on your chest.
6. Repeat for two minutes, several times a day

### 2. Pursed lip breathing exercises



1. Relax your neck and shoulder muscles.
2. Breathe in for two seconds through your nose, keeping your mouth closed as if you are smelling a rose
3. Breathe out for four seconds through pursed lips as if you are blowing out birthday candles. *If this is too long for you, simply breathe out twice as long as you breathe in.*
4. Repeat for two minutes

### 3. Blowing exercises.



1. If you were given an **incentive spirometer**, use it.
  - a. Sit straight on a chair or the edge of your bed.
  - b. Breathe out completely to clear all the air from your lungs.
  - c. Close your lips firmly around the mouthpiece. You'll have to breathe in only through your mouth. Plug your nose if you need to.
  - d. Breathe in slowly, and make the piston/ball rise as high as you can. Then hold your breath up five seconds.
  - e. Repeat 10 times
2. If you do not have an incentive spirometer, you could
  - a. get a packet of balloons, practice blowing them up
  - b. get a straw and imagine sucking up a thick milkshake and hold your breath up to five seconds.
  - c. Repeat 10 times

#### 4. Ankle pumps



1. Lie down on the bed. Point your toes up to the ceiling, then point it straight down, so that your toes are parallel to the bed
2. Repeat 2-3 times.
3. Increase gradually to 8 times

#### 5. Hip and Knee bends in bed



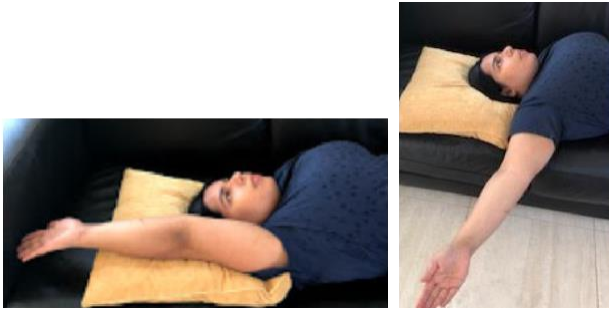
1. Slide your feet up the bed so that your heels are almost touching your buttocks.
2. Return to the original position
3. Repeat 2-3 times.
4. Increase gradually to 8 times.

#### 6. Crossing your legs in bed



1. Bend both knees
2. Place your right ankle on your left knee (as shown). Hold for 10 seconds.
3. Repeat on the other side

## 7. Overhead arm stretch



1. While lying in bed, bring both arms straight up to point to the ceiling. Now lower it so that it is pointing at the head of the bed. Bring it back to your side so that you are now forming a cross.
2. Repeat 2-3 times. Change sides and repeat
3. Increase gradually to 8 times

## 8. Touch the back of your neck



1. Bring both palms up and place them on the back of your neck.
2. Bring your arms back to your sides and repeat 2-3 times.
3. Increase gradually to 8 times

## 9. Touch your mid- back



1. Bring both arms up to touch your back (as if you are trying to hook a bra)
2. Repeat 2-3 times. Increase gradually to 8 times

## 10. Sit at the side of the bed,

1. Dangle your legs off the bed, and sit for as long as you can tolerate it.

## 11. Supported sit to stand



1. Sit at the edge of the bed. Place the back of a sturdy chair in front of you.
2. Stand up while leaning on to a support (E.g. back of chair or a table)
3. Repeat 2-3 times. Increase gradually to 8 times

## 12. Relaxation

1. Lie on the bed with a pillow under your head and your knees.
2. Imagine a peaceful setting.
3. Keeping this image in your mind, focus on controlled, relaxing breathing, slowing your heart rate, or feeling different physical sensations, such as relaxing each arm or leg one by one.
4. Your mind may wander during this exercise- if you notice your thoughts wandering, bring your attention back to your breath.
5. Continue for 10 minutes before getting up slowly from the bed

## Level 2

**Start with one to two repetitions, gradually increase to eight repetitions. This is one set. Once you can easily complete all the exercises, increase the frequency to twice a day.**

<b>Deep breathing exercises</b>	2 minutes	Aerating the lower parts of the lung
<b>Pursed lip breathing exercises</b>	2 minutes	Exercising the breathing muscles
<b>Blowing exercises</b>	10 times	Exercising the breathing muscles
<b>Chin Up and Down</b>	1-2 times, increasing to 8 reps	Neck range of motion. Vestibular exercises
<b>Head Turns</b>	1-2 times, increasing to 8 reps	Neck range of motion Vestibular exercises
<b>Shoulder Rolls</b>	8 times forwards, 8 times backwards	Shoulder range of motion
<b>Finger Stretch</b>	Hold for a count of 8	Wrist and finger stretch
<b>Calf Stretch</b>	Hold for a count of 8	Hamstring Stretches
<b>Wrist Curls</b>		Hand and wrist muscle strengthening
<b>Biceps Curls</b>	1-2 times, increasing to 8 reps	Forearm strengthening
<b>Seated Overhead Extension</b>	1-2 times, increasing to 8 reps	Shoulder muscle strengthening
<b>Seated Shoulder Abductions</b>	1-2 times, increasing to 8 reps	Shoulder muscle strengthening
<b>Tummy Twists</b>	1-2 times, increasing to 8 reps	Core strengthening
<b>Seated Knee Lifts</b>	Start 2-3 times. Increase to 8 times	Hip flexor stretches and strengthening
<b>Seated Knee Extensions</b>	Start 2-3 times. Increase to 8 times	Hamstring stretches Quad strengthening
<b>Relaxation</b>		



### 1. Chin Up & Down



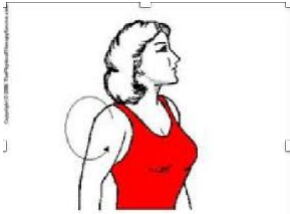
1. Sit up,
2. Slowly drop chin to chest, and then look up to the ceiling,
3. Start with 1-2 times, increase gradually to 8 times

### 2. Head Turns



1. Look left over your left shoulder,
2. Look right over your right shoulder
3. Start with 1-2 times, Increase gradually to 8 times

### 3. Shoulder Rolls



1. Roll the shoulders forward 8 times
2. Roll the shoulders backwards 8 times

### 4. Finger stretch:



1. Stretch both your arms out in front of you ,
2. Keep your elbows straight;
3. With the right hand, stretch the fingers of your left hand backwards; and
4. Count to 8, repeat on the other side.

## 5. Calf stretches in bed



1. Sit up in bed;
2. Place a towel on the sole of your foot
3. Grab both ends of the towel and pull; You should feel the stretch in your calf; and
4. Count to 8. Repeat on the other side.

## 6. Wrist Curls with light weights



1. Place your forearm on a chair's armrest with your hand hanging over the edge;
2. Hold a light weight (2-5 lb.) Slowly bend your wrist up and down; then repeat 2-3 times and increase gradually to 8 reps; and
3. Repeat on the other side

## 7. Biceps Curls



4. Place your forearm on a chair's armrest;
5. Hold a light weight (2-5 lb.);
6. Keep your elbow on the armrest and Bring the weight up to your chin, slowly lower your arm to return to the starting point; repeat 2-3 times and increase gradually to 8 times;
7. Repeat on the other side.

## 8. Seated Overhead Weights



1. Sit on the chair and hold the ball or a cushion at chest level;
2. Move ball up overhead and return to start position;
3. Repeat 8 times.

## 9. Tummy Twists



1. Begin seated position, holding the ball/cushion in both hands;
2. Slowly twist to the right, return to the center then twist to left;
3. Repeat 8 times

## 10. Shoulder Abductions



1. Sit with elbow at the side, while holding light weights;
2. Slowly raise both arms while keeping the elbows bent at 90 degrees; and
3. Slowly lower both arms to return to starting price.

### 11. Seated Knee Lift



1. Sit on the chair;
2. Lift the right leg and hold it for count of 8;
3. Change legs;
4. Repeat each leg 3 times.

### 12. Knee Extensions:



1. Begin seated in a chair with your back straight and knees bent;
2. Slowly extend your right leg forward and hold for a few seconds before lowering back to starting position;
3. Repeat with your left leg. Do 8 reps per leg.

### Level 3

<b>Deep breathing exercises</b>	2 minutes	Aerating the lower parts of the lung
<b>Pursed lip breathing exercises</b>	2 minutes	Exercising the breathing muscles
<b>Blowing exercises</b>	10 times	Exercising the breathing muscles
<b>Overhead stretch</b>	Count of 8	Full body stretch
<b>Side Stretch</b>	Count of 8, Repeat 2-4 times	Full body stretch
<b>Triceps stretch</b>	Hold 15-30 s. Repeat 2-4 times	Arm stretch
<b>Quadriceps stretch</b>	Hold 15-30 s. Repeat 2-4 times	Thigh muscle stretch
<b>Groin Stretch</b>	Hold 15-30 s. Repeat 2-4 times	Hip muscle stretches
<b>Calf Stretch</b>	Hold 15-30 s. Repeat 2-4 times	Hamstring stretch
<b>Standing shoulder flexion</b>	Start 2-3 times and increase to 8 times	Shoulder stretch
<b>Standing shoulder abduction</b>	Start 2-3 times and increase to 8 times	Shoulder stretch
<b>Upright front row</b>	Repeat 8 times	Shoulder strengthening exercise
<b>Biceps curls</b>	Repeat 2-3 times on each side and increase gradually to 8 reps.	Arm strengthening exercise
<b>Core exercises</b>	Start with 1-2 reps and slowly increase to 8 reps	Core strengthening exercise
<b>Leg abduction</b>	Hold for count of 8; Start with 2-3 reps and increase to 8 reps	Hip strengthening exercise
<b>Hamstring curls</b>	Hold for count of 8; Start with 2-3 reps and increase to 8 reps	Leg strengthening exercise
<b>Supported lateral lunge</b>	Hold for count of 8; Start with 2-3 reps and increase to 8 reps	Leg strengthening exercise
<b>Supported squats</b>	Hold for count of 8; Start with 2-3 reps and increase to 8 reps	Leg strengthening exercise
<b>Wall push ups</b>	Hold for count of 8; Start with 2-3 reps and increase to 8 reps	Chest strengthening exercise
<b>Walking</b>	10 minutes Increase to 3 times a day	Cardiovascular fitness
<b>Relaxation</b>	10 minutes;	

## 1. Overhead Stretch



- a. Start off by standing up straight with your hands at your sides and feet shoulder width apart;
- b. Lace your fingers together and raise your hands up towards the ceiling with your palms facing up;
- c. Fully stretch your torso and hold for a count of 8, then return back to the starting position.

## 2. Side Stretch



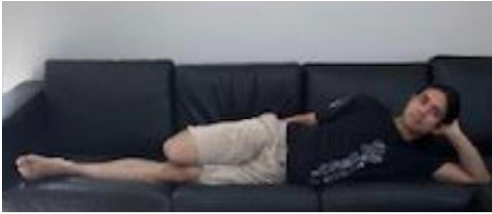
- a. Stand with your back straight and your feet shoulder-width apart. You can do this stretch sitting down if you are not steady on your feet;
- b. Hold your arms above your head, and hold one hand with the other;
- c. Pull upward while leaning straight over toward your right side. Keep your lower body straight. You should feel the stretch along your left side.

## 3. Triceps stretch.



1. Stand with your back straight and your feet shoulder-width apart;
2. Bring your left elbow straight up while bending your arm;
3. Grab your left elbow with your right hand, and pull your left elbow toward your head with light pressure;
4. Hold 15 to 30 seconds, and then switch elbows;
5. Repeat 2 to 4 times for each arm.

#### 4. Quadriceps stretch



1. Lie on your side with one hand supporting your head;
2. Bend your upper leg back and grab your ankle with your other hand;
3. Stretch your leg back by pulling your foot toward your buttocks. You will feel the stretch in the front of your thigh. If this causes stress on your knees, do not do this stretch;
4. Hold the stretch 15 to 30 seconds;
5. Repeat 2 to 4 times for each leg

#### 5. Groin stretch



1. Sit on the floor and put the soles of your feet together. Do not slump your back;
2. Grab your ankles and gently pull your legs toward you;
3. Press your knees toward the floor. You will feel the stretch in your inner thighs;
4. Hold 15 to 30 seconds;
5. Repeat 2 to 4 times.

#### 6. Calf stretch



1. Place your hands on a wall for balance;
2. Step back with your left leg, keeping the knee straight and pressing the heel into the floor;
3. Press your hips forward, bending your right leg slightly. You will feel the stretch in your left calf;
4. Hold the stretch 15 to 30 seconds;
5. Repeat 2 to 4 times for each leg.

## 7. Standing Shoulder flexion



7. Stand while holding light weights in both hands;
8. Lift arms slowly up, while keeping elbows straight as shown;
9. Slowly bring arms down to return to starting position;
10. Start 2-3 times and increase to 8 times.

## 8. Standing arm abduction



1. Stand while holding light weights in both hands;
2. Lift arms slowly up, while keeping elbows bent as shown;
3. Slowly bring arms down to return to starting position; and
4. Start 2-3 times and increase to 8 times.

## 9. Upright Front Row



1. Begin standing with your feet shoulder-width apart, knees slightly bent, and partially leaning forward;
2. Hold one dumbbell in each hand in front of you, with palms facing toward your body;
3. Lift both dumbbells toward your chin while keeping your back straight and shoulders stationary;
4. Return to starting position and repeat 8 times.



## 10. Biceps curls



1. Place your forearm on a chair's armrest;
2. Hold a light weight (2-5 lb.);
3. Keep your elbow on the armrest and bring the weight up to your chin;
4. Slowly lower your arm to return to starting point;
5. Repeat 2-3 times and increase gradually to 8 reps; and
6. Repeat on the other side.

## 11. Core exercises



1. Sit upright nearer the edge of the chair with elbows crossed as shown above;
2. Keeping the elbow crossed, slowly lean backwards;
3. Come back to the upright position;
4. Straighten both arms and stand up without using arms;
5. Sit down again to return to the starting position;
6. Start with 1-2 reps and slowly increase to 8 reps.

## 12. Leg abduction



1. Stand facing the back of the chair;
2. Hold on to the back of the chair;
3. Slowly lift one leg as shown;
4. Hold for count of 8;
5. Slowly lower the leg to return to the original position;
6. Change legs and repeat; and
7. Start with 2-3 reps and increase to 8 reps on each leg.

## 13. Hamstring curls



1. Stand with feet slightly apart;
2. The knee of your support leg should be slightly bent;
3. Slowly bend the other knee, bringing your heel toward your buttocks;
4. Hold for count of 8 and return to start position;
5. Repeat using other leg; and
6. Start with 2-3 reps and increase to 8 reps on each leg.

## 14. Supported lateral lunge



1. Stand facing the back of the chair;
2. Hold on to the back of the chair;
3. Slowly lift one leg as shown;
4. Hold for count of 8;
5. Slowly lower the leg to return to the original position;
6. Change legs and repeat; and
7. Start with 2-3 reps and increase to 8 reps on each leg.

## 15. Supported squats



1. Stand facing the back of the chair;
2. Hold on to the back of the chair;
3. Slowly bend both knees to do half-squat;
4. Hold for a count of 8;
5. Slowly return to the original position; and
6. Start with 2-3 reps and increase to 8 reps on each leg.

## 16. Wall push-ups



1. Stand facing the wall and place both hands on the wall;
2. Lean forward, keeping both knees straight;
3. Hold for a count of 8;
4. Slowly return to the original position; and
5. Start with 2-3 reps and increase to 8 reps on each leg.

## 17. Walking inside your room

1. Walk for ten minutes at a comfortable pace.
2. Gradually increase to three times a day

## **18. Outdoor Walking**

Once you are medically cleared of isolation you can start your outdoor walking program.

### **Step 1.**

Start with 10 min walking 3x/day 5-7 days/week, progress to the next step when you can perform this for a week.

### **Step 2.**

Progress to 15 min walking 2-3x/day for 5-7 days/week, progress to the next step when you can perform this for a week.

### **Step 3.**

Progress to 20 min walking 2-3x/day for 5-7 days/week, progress to the next step when you can perform this for a week.

### **Step 4.**

Progress to > 30-45 min walking 5-7 days/week.