# Montefiore

# PATIENT AND CAREGIVER GUIDE TO MANAGING COVID-19 PATIENTS AT HOME

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This guide was created to help patients and caregivers of patients with COVID-19 that are discharged home from hospital. The exercises are designed to be done alone by the patient in their room. The caregiver can assist by providing instructions over the telephone. Check with your medical provider before starting this program, especially if you have any cardiac disease, lung disease or other serious illness.

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#### What is COVID-19?

SARS-CoV-2, the virus that causes COVID-19, is a new virus that is causing serious illness in many countries of the world. Most patients have fever, dry cough, muscle pain, and extreme weakness. In the majority of patients, symptoms last for two to three weeks, and often resolve spontaneously. In some patients, COVID-19 can be a more serious illness causing pneumonia or affecting other organs, and requiring hospitalization. Doctors and scientists are learning about this disease and the information given below is based on current knowledge.

#### Symptoms of a Covid-19 infection (CDC.gov)

These symptoms may appear 2 to 14 days after exposure.

- Fever
- Cough
- Shortness of breath
- Loss of smell or taste

# If you develop emergency warning signs for COVID-19 get medical attention immediately.

#### Emergency warning signs include\*:

- Trouble breathing
- Persistent pain or pressure in the chest
- · New confusion or inability to arouse
- Bluish lips or face

#### More information is available at: www.cdc.gov/coronavirus/2019



#### Caring for a COVID-19 patient at home

These precautions should last until medical authorities clear the patient.

#### 1. Monitoring the patient

- a. Check the patient's temperature twice a day.
- b. Monitor for new symptoms such as chest pain, difficulty breathing, blue fingers or face, palpitations, changes in mental status, confusion, or swelling of legs. Contact your medical provider if any of these symptoms occur.

#### 2. Isolation Directions

- a. Isolate the affected person. They should be in a separate room.
   It is important to have good air circulation in the room. For example: air conditioning or keeping a window open.
- b. The patient should avoid all contact with older people, pregnant women, or anyone with compromised immunity.
- c. The patient should always wear a mask (see instructions below) and keep at least six feet away if the caregiver has to come into the room. Keep these interactions as brief as possible.
- d. If possible, the patient should have a separate bathroom. If this is not possible, then all other unaffected family members should use caution when using shared facilities. Use diluted bleach to wipe down the door handles, toilet seat and handles, sinks, etc., each time the patient uses the bathroom. The patient should have their own toilet roll and towels, which should be kept separately.
- e. The affected person should eat in their room and if possible, use disposable plates, knives and forks. If not, use gloves when washing their plates, spoons, knives and forks. Use diluted bleach and rinse well.

#### 3. Hygiene and Cleaning

- a. Patients and caregivers should wash hands with soap and water for at least 20 seconds, regularly.
- b. Encourage the patient to have a daily bath.



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- c. The affected person's clothes should be washed separately and with a bleach containing detergent using a hot wash (90 °C) for at least 30 minutes.
- d. Use disposable gloves and a mask when entering the affected person's room.
- e. Dispose of the patient's trash carefully. Use gloves and avoid handling it with your bare hands.
- f. SARS-CoV-2 can live on cardboard, plastic, and food surfaces for several days. Discard all packaging or disinfect surfaces by wiping them down with a disinfectant solution. Wash all fruit and vegetables for at least 20 seconds using soap and water. Heat appears to kill the virus. However, frozen foods may harbor the virus, so make sure all food is heated well. Microwaving until steam rises also appears to kill coronavirus.

#### 4. Emotional and mental health

- a. Try to keep the patient's spirits up. Communicate regularly with them via phone, video calls, or social media.
- b. Confirmed COVID-19 patients often have symptoms such as regret and resentment, loneliness,helplessness, depression, anxiety and phobia, irritation and sleep deprivation, and even panic attacks.
  - i. Try slow breathing, relaxation, meditation and mindfulness.
  - ii. If these symptoms are persistent or recurring, please seek professional help.

# Instructions In Case Of Accidental Exposure To Patient's Body Fluids (saliva, tears, sputum, etc.)

- 1. If it falls on your intact skin, remove the contaminant with a tissue or gauze and apply 0.5% iodophor or 75% alcohol to the skin. Let the solution sit for at least 3 minutes for disinfection, and then thoroughly flush with running water.
- If it falls on broken skin or on mucous membrane such as the eyes, nose, or mouth, then flush with plenty of normal saline(salt water) or 0.05% iodophor for disinfection. Isolate yourself for 14 days and observe for symptoms.
- 3. If you have a sharp object injury, then squeeze blood out from the top of the wound to the bottom end, and flush the wound with running



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water. Then disinfect with 75% alcohol or 0.5% iodophor. Isolate yourself for 14 days and observe for symptoms.

4. If you are coughed or sneezed on directly, immediately go to another room. Gargle with plenty of normal saline or 0.05% iodophor. Dip a cotton swab into 75% alcohol, and wipe your nasal cavity gently in a circular motion. Isolate yourself for 14 days and observe for symptoms.

#### How to wear a mask (from the WHO International website)

- 1. Before putting on a mask, clean your hands with an alcohol-based hand rub or soap and water.
- 2. Cover mouth and nose with mask and make sure there are no gaps between your face and the mask.
- 3. If you are using a surgical mask, the colored part should face the outside.
- 4. Avoid touching the mask while using it; if you do, clean your hands with an alcohol-based hand rub or soap and water.
- 5. Replace the mask with a new one as soon as it is damp and do not re-use single-use masks.
- 6. To remove the mask: remove it from behind (do not touch the front of mask), discard immediately in a closed bin, and then immediately clean your hands with an alcohol-based hand rub or soap and water.

#### Diet.

- 1. The Covid-19 patient needs a nutritious high calorie diet to recover. Foods that boost immunity include citrus fruits, watermelon, berries, spinach, wheat germ, yoghurt, garlic, ginger and chicken soup.
- 2. However, they may get exhausted easily and struggle to finish the meal. They may be able to eat soups or soft foods.
- 3. Make sure they drink plenty of water. They will need at least 8-10 glasses of water every day. However, if they have heart or kidney disease or low sodium, please consult the physician on the correct amount of fluids to drink daily. One way to make sure is to ask them to check their urine. They should have a clear or pale-yellow urine and be urinating 3-4 times a day. If not, they need to drink more water.



#### EXERCISE

This illness is highly debilitating. We don't yet know how long most patients will take to recover, but we think it will take several months to recover fully.

- Please check with your physician before starting any exercises.
- These exercises are designed to be done alone by the patient in their room. The caregiver should not be in the same room.
- The caregiver can provide remote instructions and supervision by telephone from another room.
- Equipment required:
  - Incentive spirometer: If this is not available, a packet of balloons and a disposable straw can be used as a substitute.
  - Light weights: If this is not available, a water bottle can be used as a substitute.
  - 12-inch Exercise Ball: If this is not available a cushion or small pillow can be used as a substitute.

#### **Precautions**

#### a. You can start gentle exercises if

- i. You have not had fever for at least 7 days
- ii. You have no shortness of breath, palpitations or chest pain while walking around in your house
- iii. You have experienced no swelling of the legs
- b. STOP immediately if you develop any of the following. Get help immediately
  - i. Shortness of breath
  - ii. Chest pain
  - iii. Palpitations
  - iv. Exhaustion
  - v. Dizziness or Lightheadedness



#### Table 1: Sequence of Exercise Progression

| Level 1 | <ul> <li>These exercises are suitable for a patient who is very weak and has to lie down most of the time.</li> <li>Start with the breathing exercises (exercises 1-3) done at least twice a day, and increase to 4-6 times a day</li> <li>Gradually, add the other exercises as tolerated. You can do a few of the different exercises at each session</li> <li>Once you can do all the exercises in one session without any difficulty, repeat them 2-3 times a day</li> </ul> |
|---------|--|
| Level 2 | <ul> <li>Once the patient can complete level 1 exercises with ease, proceed to level 2, which are mainly seated exercises.</li> <li>Continue with level 1 exercises</li> <li>Start with a few of the exercises in Level 2</li> <li>Gradually increase the number of exercises that can be done at each session</li> <li>Increase to repeating the exercises 2-3 times a day</li> </ul>   |
| Level 3 | <ul> <li>Once the patient can complete level 2 exercises with ease, proceed to level 3, which are mainly standing exercises</li> <li>Continue with level 1 and 2 exercises</li> <li>Start with a few of the exercises in Level 3</li> <li>Gradually increase the number of exercises that can be done at each session</li> <li>Increase the numbers of sessions as tolerated. The goal is to do this 2-3 times a day</li> </ul>  |



## Table 2: LEVEL 1 EXERCISES

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



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#### 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 sink.
- 5. The hand on your belly should move more than the one that is on your chest.
- 6. Repeat for 2 minutes, several times a day

#### 2. Pursed lip breathing exercises (Figure 1)



Figure 1

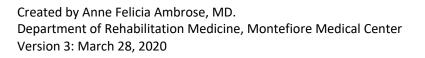
- 1. Relax your neck and shoulder muscles.
- 2. Breathe in for two seconds through your nose, keeping your mouth closed as if you are smelling a rose.
- 3. Breathe out for four seconds through pursed lips as if you are blowing out birthday candles. *If this is too long for you, simply breathe out twice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

#### 3. Blowing exercises. (Figure 2)



Figure 2

- 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 to 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.
     Denset 10 times
  - c. Repeat 10 times





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**4. Ankle pumps** (Figures 3 and 4)



Figure 3

Figure 4

5. Hip and Knee bends in bed (Figure 5)

- 1. Lie down on the bed. Point your toes up to the ceiling (Fig 3), then point it straight down, so that your toes are parallel to the bed. (Fig 4)
- 2. Repeat 2-3 times.
- 3. Increase gradually to 8 times.



Figure 5

- 1. Slide your feet up the bed so 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 (Figure 6)



Figure 6

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- 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** (Figures 7 and 8)



Figure 7

- 1. While lying in bed, bring your right arm straight up to point to the head of the bed. (Fig. 7)
- 2. Keeping your elbows straight, bring your arm to your side as shown (Fig 8) Return to the starting position. (Fig 7)
- 3. Repeat 2-3 times. Change sides and repeat
- 4. Increase gradually to 8 times.
- 8. Touch the back of your neck (Figure 9)



Figure 9

- 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 (Figure 10)



Figure 10

- 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.

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10. Dangling legs (Figure 11)



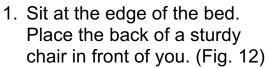
- 1. Sit at the side of the bed
- 2. Dangle your legs off the bed
- 3. Sit for as long as you can tolerate it.

#### 11.Supported sit to stand (Figures 12 and 13)



Figure 12

Figure 13



- Stand up while leaning on to a support (E.g. back of chair or a table- see Fig. 13)
- 3. Repeat 2-3 times. Increase gradually to 8 times



Figure 14

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.

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## Table 3: LEVEL 2 EXERCISES

| -  | tions, and gradually incre      | • •                              |  |  |  |
|--|---------------------------------|----------------------------------|--|--|--|
| This is one set. Once you can easily complete all the exercises, |                                 |                                  |  |  |  |
| increase the frequency to twice a day.                           |                                 |                                  |  |  |  |
| Deep breathing   | 2 minutes                       | Aerating the lower parts         |  |  |  |
| exercises  |                                 | of the lung                      |  |  |  |
| Pursed lip   | 2 minutes                       | Exercising the breathing         |  |  |  |
| breathing<br>exercises   |                                 | muscles                          |  |  |  |
|  | 10 times                        | Eversising the breathing         |  |  |  |
| Blowing exercises  |                                 | Exercising the breathing muscles |  |  |  |
| Chin Up and  | 1-2 times, increasing to        | Neck range of motion.            |  |  |  |
| Down   | 8 reps                          | Vestibular exercises             |  |  |  |
| Head turns   | 1-2 times, increasing to        | Neck range of motion             |  |  |  |
|  | 8 reps                          | Vestibular exercises             |  |  |  |
| Shoulder rolls   | 8 times forwards, 8 times       | Shoulder range of                |  |  |  |
|  | backwards                       | motion                           |  |  |  |
| Finger stretch   | Hold for a count of 8           | Wrist and finger stretch         |  |  |  |
| Calf stretch   | Hold for a count of 8           | Hamstring Stretches              |  |  |  |
| Wrist curls  |                                 | Hand and wrist muscle            |  |  |  |
|  |                                 | strengthening                    |  |  |  |
| Biceps curls   | 1-2 times, increasing to        | Forearm strengthening            |  |  |  |
|  | 8 reps                          |                                  |  |  |  |
| Seated overhead  | 1-2 times, increasing to        | Shoulder muscle                  |  |  |  |
| extension  | 8 reps                          | strengthening                    |  |  |  |
| Seated shoulder  | 1-2 times, increasing to        | Shoulder muscle                  |  |  |  |
| abductions   | 8 reps                          | strengthening                    |  |  |  |
| Tummy twists   | 1-2 times, increasing to 8 reps | Core strengthening               |  |  |  |
| Seated knee lifts  | Start 2-3 times. Increase       | Hip flexor stretches and         |  |  |  |
|  | to 8 times                      | strengthening                    |  |  |  |
|  |                                 |                                  |  |  |  |
| Seated knee  | Start 2-3 times. Increase       | Hamstring stretches              |  |  |  |
| extensions   | to 8 times                      | Quad strengthening               |  |  |  |
| Relaxation   | 10 minutes                      |                                  |  |  |  |



1. Chin Up & Down (Figure 15 and 16)



Figure 15

Figure 16

- 1. Sit up.
- Slowly drop chin to chest (Fig 15), and then look up to the ceiling. (Fig 16)
- 3. Start with 1-2 times, Increase gradually to 8 times

2. Head Turns (Figure 17 and 18)



Figure 17 Figure 18

- 1. Look left over your left shoulder (Fig 17)
- 2. Look right over your right shoulder (Fig 18)
- 3. Start with 1-2 times, Increase gradually to 8 times
- 3. Shoulder Rolls (Figures 19 and 20)



Figure 19

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Figure 20

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- 1. Roll shoulders forward 8 times (Figure 19).
- 2. Roll shoulders backwards 8 times (Figure 20)



#### 4. **Finger stretch**: (Figure 21)



- 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.
- 4. Count to 8. Repeat on the other side

Figure 21

#### 5. Calf stretches in bed (Figure 22)



Figure 22

- 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
- 4. Count to 8. Repeat on the other side

#### 6. Wrist curls with light weights (Figures 23 and 24)

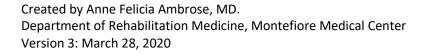


Figure 23



Figure 24

- 1. Place your forearm on a chair's armrest with your hand hanging over the edge. (As shown in Fig 23)
- 2. Hold a light weight (2-5lb) Slowly bend your wrist up and down (Fig. 24), then repeat 2-3 times and increase gradually to 8 reps.
- 3. Repeat on the other side





7. Biceps Curls (Figure 25 and 26)



Figure 25

Figure 26

- 1. Place your forearm on a chair's armrest. (Fig. 25)
- 2. Hold a light weight (2-5lb)
- Keep your elbow on the armrest and Bring the weight up to your chin, slowly lower your arm to return to the starting point (Fig 26). repeat 2-3 times and increase gradually to 8 reps.
- 4. Repeat on the other side

8. Seated Overhead weights (Figure 27 and 28)



- 1. Sit on the chair and hold the ball or a cushion at chest level (Fig 27)
- 2. Move ball up overhead (Fig 28) and return to start position (Fig 27)
- 3. Repeat 8 times

Figure 27 Figure 28





Figure 29Figure 30Created by Anne Felicia Ambrose, MD.Department of Rehabilitation Medicine, Montefiore Medical CenterVersion 3: March 28, 2020

1.Begin in the seated position, holding the ball/cushion in both hands. (Fig 29)

2. Slowly twist to the right, return to the center (Fig. 30), and then twist to left

3. Repeat 8 times on each side.





10. Shoulder Abductions (Fig 31 and Fig 32)

- Sit with elbow at the side (Fig 31), while holding light weights
   Slowly raise both arms while
- Slowly raise both arms while keeping the elbows bent at 90 degrees (Fig 32).
- 3. Slowly lower both arms to return to starting price

Figure 31

Figure 32

#### **11. Seated knee lift** (Fig 33)



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

Figure 33

## 12. Knee Extensions: (Fig 34)



Fig 34

- 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

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Figure 35

1. Lie on the bed with a pillow under your head and your knees.

- 6. Imagine a peaceful setting.
- 7. 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.
- 8. Your mind may wander during this exercise- if you notice your thoughts wandering, bring your attention back to your breath.
- 9. Continue for 10 minutes before getting up slowly from the bed.



# Table 4: LEVEL 3 EXERCISES

| Deep breathing       | 2 minutes                         | Aerating the lower     |
|----------------------|-----------------------------------|------------------------|
| exercises            |                                   | parts of the lung      |
| Pursed lip breathing | 2 minutes                         | Exercising the         |
| exercises            |                                   | breathing muscles      |
| Blowing exercises    | 10 times                          | Exercising the         |
| Bioming excisions    |                                   | breathing muscles      |
| Overhead stretch     | Count of 8                        | Full body stretch      |
| Side stretch         | Count of 8. Rpt 2-4 times         | Full body stretch      |
| Triceps stretch      | Hold 15-30 s. Rpt 2-4 times       | Arm stretch            |
| Quadriceps stretch   | Hold 15-30 s. Rpt 2-4 times       | Thigh muscle stretch   |
| Groin stretch        | Hold 15-30 s. Rpt 2-4 times       | Hip muscle stretches   |
| Calf stretch         | Hold 15-30 s. Rpt 2-4 times       | Hamstring stretch      |
| Standing shoulder    | Start 2-3 times and increase to 8 | Shoulder stretch       |
| flexion              | times                             |                        |
| Standing shoulder    | Start 2-3 times and increase to 8 | Shoulder stretch       |
| abduction            | times                             |                        |
| Upright front row    | Repeat 8 times                    | Shoulder               |
|                      |                                   | strengthening exercise |
| Biceps curls         | Repeat 2-3 times on each side     | Arm strengthening      |
|                      | and increase gradually to 8 reps. | exercise               |
| Core exercises       | Start with 1-2 reps and slowly    | Core strengthening     |
|                      | increase to 8 reps                | exercise               |
| Leg abduction        | Hold for count of 8               | Hip strengthening      |
|                      | Start with 2-3 reps and increase  | exercise               |
|                      | to 8 reps                         |                        |
| Hamstring curls      | Hold for count of 8               | Leg strengthening      |
|                      | Start with 2-3 reps and increase  | exercise               |
|                      | to 8 reps                         |                        |
| Supported lateral    | Hold for count of 8               | Leg strengthening      |
| lunge                | Start with 2-3 reps and increase  | exercise               |
|                      | to 8 reps                         |                        |
| Supported squats     | Hold for count of 8               | Leg strengthening      |
|                      | Start with 2-3 reps and increase  | exercise               |
|                      | to 8 reps                         |                        |
| Wall push ups        | Hold for count of 8               | Chest strengthening    |
|                      | Start with 2-3 reps and increase  | exercise               |
| Ne/ 11 -             | to 8 reps                         |                        |
| Walking              | 10 minutes                        | Cardiovascular fitness |
|                      | Increase to 3 times a day         |                        |
| Relaxation           | 10 minutes                        |                        |

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1. Overhead Stretch (Fig 36)



Fig 36

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

#### 2. Side Stretch (Fig 37)



Fig 37

- 1. Stand with your back straight and your feet shoulderwidth apart. You can do this stretch sitting down if you are not steady on your feet.
- 2. Hold your arms above your head, and hold one hand with the other.
- 3. 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 (Fig 38)



Fig 38

- 1. Stand with your back straight and your feet shoulderwidth 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.



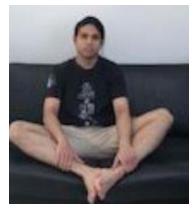
4. Quadriceps stretch (Fig 39)





5. Groin stretch (Fig 40)

- 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.
- 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





#### Sit on the floor and put the soles of your feet together. Do not slump your back. Orab your publics and postby pull your lange

- 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 (Fig 41)



Fig 41

- 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.
- 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.

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7. Standing Shoulder flexion (Fig 42)

8. Standing arm abduction (Fig 43 and 44)



Fig 42

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



Figure 43

Figure 44

- 1. Stand while holding light weights in both hands. (Fig. 43)
- 2. Lift arms slowly up, while keeping elbows bent as shown. (Fig. 44)
- 3. Slowly bring arms down to return to starting position.
- 4. Start with 2-3 repetitions and increase to 8 times
- 9. Upright Front Row (Fig 45)



Fig 45

- 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** (Figure 46 and 47)



Figure 16

Figure 47

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

#### **11. Core exercises** (Figures 48, 49, 50, and 51)



Figure 48



Figure 49



Figure 50



Figure 51

- 1. Sit upright near the edge of the chair with elbows crossed (Fig 48)
- 2. Keeping the elbow crossed, slowly lean backwards (Fig 49)
- 3. Come back to the seated upright position.
- 4. Straighten both arms in front of you and stand up without using your arms (Fig 50)
- 5. Sit down again to return to the starting position (Fig. 48).
- 6. Start with 1-2 reps and slowly increase to 8 reps



12. Leg abduction (Figure 52)



Figure 52

- 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 a count of 8.
- 5. Slowly lower the leg to return to the original position.
- 6. Change legs and repeat.
- 7. Start with 2-3 reps and increase to 8 reps on each leg.

#### **13. Hamstring curls** (Figure 53)



Figure 53

- 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.
- 6. Start with 2-3 reps and increase to 8 reps on each leg.



#### 14. Supported lateral lunge (Figure 54)



Figure 54

- 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.
- 7. Start with 2-3 reps and increase to 8 reps on each leg.

#### **15.** Supported squats (Figure 55)



Figure 55

- 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



16. **Wall push ups** (Figure 56 and 57)



Figure 56

- 1. Stand facing the wall and place both hands on the wall (Fig. 56)
- 2. Lean forward, keeping both knees straight. (Fig. 57)
- 3. Hold for a count of 8
- 4. Slowly return to the original position. (Fig. 56).
- 5. Start with 2-3 reps and increase to 8 reps

#### Walking 17.

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

#### 18. Relaxation (Fig 35)



Figure 35

18.

- 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.



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