

# Critical Care Unit Rehabilitation Programme

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## Information for patients

This booklet aims to help guide your rehabilitation following your stay on the Critical Care Unit.

Due to the prolonged period of inactivity whilst you were ill, your muscles will have lost strength so do not be surprised if you feel weak and tired to start off with. Even the simplest of tasks may feel difficult to begin with, which is where this booklet can help you.

Before discharge from hospital you will have already made a significant amount of progress with your physiotherapist. This booklet aims to bridge the gap between these achievements and your follow-up rehabilitation classes.

### What are the benefits of exercising after leaving Critical Care?

The importance of exercise following critical care treatment is to improve quality of life and maximise physical and emotional well-being.

Some of the benefits of exercise following critical illness include:

- increased muscle strength and joint movement
- improved stability and balance
- improved exercise tolerance and fitness
- improved circulation
- improved well-being; and
- increased functional ability.

Following critical illness physiotherapy can feel very demanding, but by doing regular exercise as early as possible you are more likely to achieve your goals. This may feel like a long process but it is important that you discuss these goals with your physiotherapist, so that you can get the most out of your rehabilitation.



## Breathing exercises

Your respiratory (breathing) muscles will have been affected during your time on the Critical Care Unit, making it difficult to clear chest secretions (such as phlegm). The **Active Cycle of Breathing Technique (ACBT)** is a simple pattern of breathing which can be used to help clear secretions and improve your breathing.

There is no limit to how many times a day these exercises can be done.

ACBT is a combination of several breathing exercises which can be used inter-changeably depending on what feels most helpful for you.

- **Breathing control**

You should begin the circuit with normal calm breathing, making sure your shoulders and upper chest are relaxed.

- **Deep breathing**

You can now move on to taking deeper breaths which are slower than your relaxed breathing. When breathing in, try and hold your breath for three seconds before breathing out. Take these deep breaths three to four times.

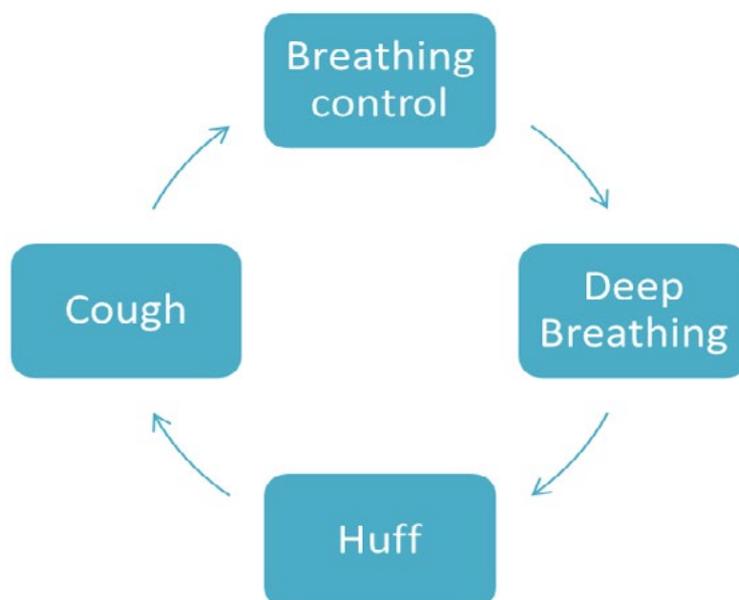
- **Huffing**

Following on from your deep breathing, take a normal breath in and then quickly force a breath out (whilst keeping your mouth open). It is useful to imagine that you are steaming up a glass in front of you. This will help to move secretions along your airways making it easier to cough them up.

- **Coughing**

It should now be easier to cough up any secretions you have. Do not cough unless you can feel that the secretions are ready to be cleared.

Continue with this cycle of exercises until you feel your lungs are clear. Return to **breathing control** and **deep breathing** after each cough.



## How can I exercise safely, and when should I stop?

In order to keep yourself safe whilst exercising, it is important to consider the following points.

- Do not exercise if you are feeling unwell.
- Do not exercise where it is too hot or too cold.
- Do not exercise directly after a large meal. Wait for an hour before exercise.
- Always wear comfortable clothing and sensible footwear.
- Make sure you have enough space to do your exercises safely.

### You should stop exercising if:

- you have any chest pain or tightness
- you feel dizzy; or
- you become very breathless.

After your first few exercise sessions it is normal to have some muscle soreness but this should get better within a few days. However, if your joint or muscle pain continues you should contact your GP.

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## Exercise programme

Your physiotherapist will go through the following exercises with you before you leave hospital. Please use this time to ask any questions or discuss any concerns you may have.

### • Bed exercises

Figure 1



### Bridging

- Lie on your back (figure 1). Squeeze your bottom and push through your feet to lift your bottom off the floor.
- Your shoulders should remain in contact with the floor at all times (figure 2).
- Hold for five seconds and slowly lower back to the floor.
- Repeat \_\_\_\_ times.
- Complete \_\_\_\_ times per day.

Figure 2



## • Bed exercises continued

Figure 3



### Clam

- Lie on your side with your knees bent (figure 3).
- Tighten your buttocks. Lift your top knee as far as you can, without letting your pelvis rotate forward or back (figure 4).
- Hold for five seconds before lowering your knee back (figure 3).
- Repeat \_\_\_ times.
- Complete \_\_\_ times per day.

Figure 4



Figure 5



### Knee rolls

- Lie on your back with your knees together and bent (figure 5).
- Slowly roll your knees from side to side keeping your upper trunk still (figure 6).
- Repeat \_\_\_ times.
- Complete \_\_\_ times per day.

Figure 6



Figure 7



### Straight leg raise

- Lie on your back with your legs straight and toes pulled up towards the ceiling (figure 7).
- Slowly raise one leg off the bed, keeping your leg straight (figure 8). Hold for three seconds and slowly lower.
- Repeat \_\_\_ times on both legs.
- Complete \_\_\_ times per day.

Figure 8



## • Bed exercises continued

Figure 9



### Knee bends

- Lie on your back with your legs straight (figure 9).
- Slowly bend one knee, sliding your foot up the bed towards you (figure 10).
- Slowly straighten your knee to return to the start position (figure 9).
- Repeat \_\_\_ times on both legs.
- Complete \_\_\_ times per day.

Figure 10



Figure 11



### Hip abduction

- Lie on your back with your legs straight (figure 11).
- Slowly take your leg out to the side, keeping it straight (figure 12).
- Slowly bring your leg back towards the middle of the bed (figure 11).
- Repeat \_\_\_ times on both legs.
- Complete \_\_\_ times per day.

Figure 12



Figure 13



### Knee extension

- Lie on your back with a pillow under the knee to be exercised (figure 13).
- Keeping the back of your knee on the pillow, straighten your knee, lifting your lower leg off the bed (figure 14). Hold for five seconds.
- Repeat \_\_\_ times on both legs.
- Complete \_\_\_ times per day.

Figure 14



- **Seated exercises**

Choose a chair where you can sit comfortably, with your back up against the back of the chair (see images below) and your feet flat on the floor. If possible, choose a chair which has arms that you can use for support.

Figure 15



### Ankle pumps

- Slowly raise your heels off the floor (figure 15).
- Lower your heels to touch the floor and lift your toes up (figure 16).
- Repeat \_\_\_ times.
- Complete \_\_\_ times per day.

Figure 16



Figure 17



### Straight leg raise

- Sit in a chair (figure 17).
- Pull your toes up, tighten your thigh muscle, and lift your lower leg straightening your knee (figure 18). Hold for five seconds.
- Slowly relax and lower your leg back to the starting position (figure 17).
- Repeat \_\_\_ times with both legs.
- Complete \_\_\_ times per day.

Figure 18



## • Seated exercises (continued)

Figure 19



### Hip flexion

- Sit in a chair (figure 19).
- Lift your leg up off the seat, keeping your knee bent (figure 20). Hold for five seconds.
- Slowly return to the starting position (figure 19).
- Repeat \_\_\_ times with both legs.
- Complete \_\_\_ times per day.

Figure 20



Figure 21



### Hip abduction

- Sit in a chair (figure 21).
- Lift one leg and bring it out to the side, placing your foot on the floor (figure 22).
- Lift it again and bring it back to the starting position (figure 21).
- Repeat \_\_\_ times with both legs.
- Complete \_\_\_ times per day.

Figure 22



- **Seated exercises (continued)**

Figure 23



### Hip abduction

- Place a rolled up towel between your knees.
  - Squeeze the towel with your thighs. Hold for five seconds.
  - Repeat \_\_\_ times.
  - Complete \_\_\_ times per day.
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Figure 24



### Shoulder shrugs

- Slowly lift your shoulders up (figure 25). Hold for five seconds.
  - Slowly lower (figure 24).
  - Repeat \_\_\_ times.
  - Complete \_\_\_ times per day.
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Figure 25



Figure 26



### Punching

- Clench your fists (figure 26) and punch the ceiling, alternating between your right and left arms (figure 27).
- To make this exercise harder you can hold a weight or a safe object of choice.
- Repeat \_\_\_ times.
- Complete \_\_\_ times per day.

Figure 27



## • Seated exercises (continued)

Figure 28



### Bicep curls

- Keeping your elbow tucked in to your side (figure 28), bend your elbow, bringing your hand up towards your shoulder (figure 29).
- Slowly straighten your elbow (figure 28).
- Repeat \_\_\_ times with both arms.
- Complete \_\_\_ times per day.

Figure 29



Figure 30



### Shoulder abduction

- Slowly lift your arm out to the side and up above your head (figure 31).
- Slowly lower (figure 30).
- Repeat \_\_\_ times with both arms.
- Complete \_\_\_ times per day.

Figure 31



Figure 32



Figure 33

### Tricep extension

- Bring the arm to be exercised up, with the bent elbow pointing to the ceiling (figure 32).
- Slowly straighten your elbow (figure 33).
- To make this exercise more challenging, hold a weight.
- Repeat \_\_\_ times.
- Complete \_\_\_ times per day.

## • Seated exercises (continued)

Figure 34



### Thumb movements

- Touch your thumb to each fingertip in turn.
- Repeat \_\_\_ times.
- Complete \_\_\_ times per day.

Figure 35



### Grip

- Hold a rolled up towel with both hands and squeeze. Hold the squeeze for five seconds.
- Repeat \_\_\_ times.
- Complete \_\_\_ times per day.

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## • Standing exercises



Figure 36



Figure 37

### Sit-stand

- Sit in a chair (figure 36). Use the arms of the chair to push up and slowly stand (figure 37).
- Using the arms of the chair, slowly sit down (figure 36).
- Repeat \_\_\_ times.
- Complete \_\_\_ times per day.
- To make it harder, try not using the arms of the chair to help.



Figure 38



Figure 39

### Heel raises

- Holding on to the back of a chair for support (figure 38), slowly lift your heels off the floor, coming up on to your tiptoes (figure 39).
- Hold for five seconds. Slowly lower.
- Repeat \_\_\_ times.
- Complete \_\_\_ times per day.

- **Standing exercises (continued)**



Figure 40



Figure 41

### Squats

- Holding on to the back of a chair for support (figure 40), slowly bend your knees as if you were to sit down (figure 41).
- Hold for five seconds. Slowly stand up tall (figure 40).
- Repeat \_\_\_ times.
- Complete \_\_\_ times per day.



Figure 42



Figure 43

### Hip flexion

- Holding on to the back of a chair for support (figure 42), slowly lift one knee bringing your foot up off the floor (figure 43).
- Hold for five seconds, then slowly lower your foot to the floor (figure 42).
- Repeat \_\_\_ times with both legs.
- Complete \_\_\_ times per day.



Figure 44



Figure 45

### Hip extension

- Holding on to the back of a chair for support (figure 44), squeeze your bottom muscles and slowly lift one leg behind you, keeping your toes up towards your shin (figure 45). Make sure you remain standing upright.
- Hold for five seconds then slowly lower your foot back down to the floor (figure 44).
- Repeat \_\_\_ times with both legs.
- Complete \_\_\_ times per day.

- **Standing exercises (continued)**



Figure 46



Figure 47

### Hip abduction

- Holding on to the back of a chair for support (figure 46), slowly lift one leg out to the side, keeping your toes up towards your shin (figure 47). Make sure you remain standing upright.
- Hold for five seconds, then slowly lower your foot back down to the floor (figure 46).
- Repeat \_\_\_ times with both legs.
- Complete \_\_\_ times per day.

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- **Balance exercises**

Figure 48



- Standing close to something stable to hold on to, place your feet together.
- Stand like this for one minute.
- Complete \_\_\_ times per day.
- To make this harder, close your eyes or reduce your hold on the stable surface.

Figure 49



- Standing close to something stable to hold on to, place one foot in front of the other.
- Hold for one minute.
- Complete \_\_\_ times per day.
- To make this harder, close your eyes or reduce your hold on the stable surface.

## Exercise diary

Please complete the following diary of your daily exercises and bring to your next hospital appointment. Note such things as what exercise you completed and how you felt both during and after your exercises.

<b>Week 1</b>	<b>Comments - for example what exercises you have completed, how many times you did the exercise, any other activities you completed</b>
<b>Monday</b>	
<b>Tuesday</b>	
<b>Wednesday</b>	
<b>Thursday</b>	
<b>Friday</b>	
<b>Saturday</b>	
<b>Sunday</b>	

<b>Week 2</b>	<b>Comments - for example what exercises you have completed, how many times you did the exercise, any other activities you completed</b>
<b>Monday</b>	
<b>Tuesday</b>	
<b>Wednesday</b>	
<b>Thursday</b>	
<b>Friday</b>	
<b>Saturday</b>	
<b>Sunday</b>	

<b>Week 3</b>	<b>Comments - for example what exercises you have completed, how many times you did the exercise, any other activities you completed</b>
<b>Monday</b>	
<b>Tuesday</b>	
<b>Wednesday</b>	
<b>Thursday</b>	
<b>Friday</b>	
<b>Saturday</b>	
<b>Sunday</b>	

<b>Week 4</b>	<b>Comments - for example what exercises you have completed, how many times you did the exercise, any other activities you completed</b>
<b>Monday</b>	
<b>Tuesday</b>	
<b>Wednesday</b>	
<b>Thursday</b>	
<b>Friday</b>	
<b>Saturday</b>	
<b>Sunday</b>	

## What if I have further concerns or questions?

For any help and advice do not hesitate to contact the Critical Care Unit on one of the numbers below.

- Critical Care Unit, Kent and Canterbury Hospital, Canterbury  
Telephone: 01227 78 31 04
- Critical Care Unit, William Harvey Hospital, Ashford  
Telephone: 01233 61 61 14
- Critical Care Unit, Queen Elizabeth the Queen Mother Hospital, Margate  
Telephone: 01843 23 44 15
- Lucy Mummery, Critical Care Outreach Follow-Up and Rehabilitation Sister  
Mobile: 07771 37 83 31  
Email: [lucymummery@nhs.net](mailto:lucymummery@nhs.net)

## Further information

- National Institute for Health and Care Excellence (NICE). **Rehabilitation after critical illness in adults**. Clinical Guidelines (CG83). March 2009  
Web: [www.nice.org.uk/guidance/cg83](http://www.nice.org.uk/guidance/cg83)

**This leaflet has been produced with and for patients**

If you would like this information in **another language, audio, Braille, Easy Read, or large print** please ask a member of staff. You can ask someone to contact us on your behalf.

**Any complaints, comments, concerns, or compliments** please speak to your doctor or nurse, or contact the Patient Advice and Liaison Service (PALS) on 01227 78 31 45, or email [ekh-tr.pals@nhs.net](mailto:ekh-tr.pals@nhs.net)

**Patients should not bring in large sums of money or valuables into hospital.** Please note that East Kent Hospitals accepts no responsibility for the loss or damage to personal property, unless the property had been handed in to Trust staff for safe-keeping.

**Further patient leaflets** are available via the East Kent Hospitals web site [www.ekhufft.nhs.uk/patientinformation](http://www.ekhufft.nhs.uk/patientinformation)