

ICU: Rehabilitation Programme

Introduction

During an ICU stay, maintaining a patient's stamina, muscle strength and general movement is very important to their prolonged recovery.

It is vital that, even from day one, movement and mobility are encouraged, and patients are able to take responsibility for some of their recovery, both on a psychological and physical basis.

This booklet aims to allow you, the patient, with your family to actively engage in your rehabilitation; aided and assisted by the physiotherapy and wider team on the unit.

Importance of exercise and mobility on ICU

The Critical Illness Rehabilitation Guidelines published by NICE (NICE. 2009) advise an "individualised, structured rehabilitation programme with frequent follow-up reviews".

Current evidence suggests that a 'self-help, guided rehabilitation programme' can speed up physical recovery in the Intensive Care setting (Griffiths *et al.* 2004). It also suggests that in order to support long term physical function, physiotherapy and exercise are key, and where "*intervention is started earlier, better outcomes may be obtained*" (Calvo-Eyala *et al.* 2013)

Why do we need to exercise?

- To maintain muscle strength.
- To maintain bone density.
- To maintain joint range of movement.
- To help improve cardiovascular fitness.
- To aid return to function and daily life.
- To maintain and improve exercise tolerance.
- To aid the recovery of the respiratory system.
- To provide positive psychological benefits.

ICU assessment and goal setting

The Chelsea and Westminster hospital, London, recently developed an assessment tool to measure physical function in ICU patients – The Chelsea Critical Care Assessment Tool. (Chelsea and Westminster NHS Foundation Trust. 2010)

As a unit we use this as a way of assessing a patient's improvement, both from a respiratory and mobility point of view. It looks at things such as an individual's ability to cough, through to whether they are able to walk independently.

The physiotherapy team would be happy to talk through your progress with you and your family and friends so that you are able to monitor your improvement with us.

As part of this booklet, we aim to set goals with you that are specific and achievable within a timescale.

Family and friends involvement

Guidelines published by the NICE state that for those patients at risk of physical and non-physical decline, rehabilitation goals should be set alongside members of the patient's family (NICE. 2009)

During a stay on ICU, we like to encourage family and those visiting to become involved in the rehabilitation process. Whilst we provide extensive physiotherapy cover on the unit, evidence shows that an ongoing programme throughout the day, that is patient or family led, can greatly improve a patient's outcome and their ability to progress.

This involvement is varied and will be set at a level suitable for each individual patient – and will be discussed and reviewed by the team during the length of stay. This involvement can then be continued throughout their recovery.

We do not expect family to complete the exercise programme if they do not feel comfortable with this. You should not feel pressured by staff to complete the programme. We understand that ICU can be a scary environment and not everyone will feel at ease with the responsibility.

We ask that you speak to the nursing staff before starting the exercises to ensure that it is a safe time to complete them. The staff can advise you on correct manual handling and positioning to protect both the patient and anyone assisting them.

Head and neck



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Sitting or lying

Bend your head forwards until you feel a stretch behind your neck.

Hold for approximately ___ seconds.

Repeat _____ times.



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Sitting straight-backed

Pull your chin in, keeping your neck and back straight (not tipping your head forwards).

Hold at the end position and feel the stretch in your neck.

Repeat _____ times.



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Sitting or lying

Tilt your head towards one shoulder until you feel the stretch on the opposite side.

Hold for approximately ___ seconds.

Repeat on the other side.

Repeat _____ times.



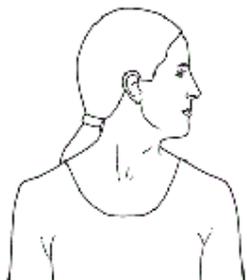
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Sitting or lying

Bend your head backwards as far as it is comfortable.

Hold for approximately ___ seconds.

Repeat _____ times.



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Sitting or lying

Turn your head to one side until you feel a stretch.

Hold for approximately ___ seconds.

Repeat on the other side.

Repeat _____ times.

Upper limb



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Sit, stand or lie

Lift your shoulders – then relax.

Repeat _____ times.



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Stand or sit

Move your shoulder blades gently back and up (small movement).

Hold for approximately ____ seconds.

Repeat _____ times.



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Sit or stand

Roll your shoulders in both directions.

Repeat _____ times.



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Sit or stand

Place your fingers on your shoulders.

Roll your shoulders back.

Repeat _____ times.



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Lying on your back

Bring your arm up and over your head, keeping your arm close to your ear.

Repeat _____ times.



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Stand or sit

Lift your arm up sideways with thumb leading the way.

Repeat _____ times.



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Stand

Bend your elbow and then straighten your elbow.

Repeat _____ times.

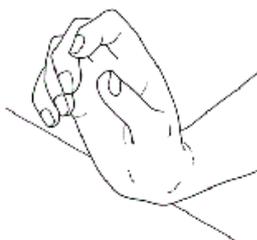


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Lie or sit

With your elbow bent and your palm turned down, turn your palm up and down, rotating your forearm.

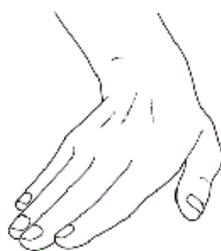
Repeat _____ times.



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Extend the wrist and clench your fist – relax and let your hand drop.

Repeat _____ times.



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Hold fingers and wrist straight.

Bend wrist first towards the little finger and then towards your thumb.

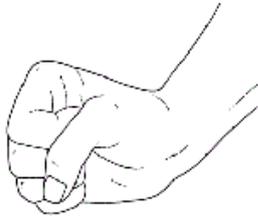
Repeat _____ times.



Forearm on a table, palm turned down, alternatively turn the palm up and down, keeping the elbow still.

Repeat ____ times.

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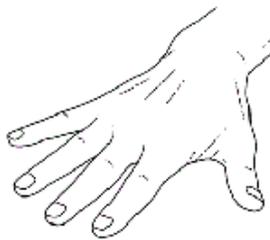
Support your forearm on a table as shown.

Make a fist.

Then straighten your fingers and bend your wrist upwards.

Repeat ____ times.

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Make a fist.

Straighten fingers.

Repeat ____ times.

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Touch each fingertip with your thumb.

Repeat ____ times.

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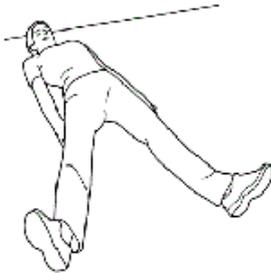
Lower limb



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Lying on your back

Bend and straighten your leg.
Repeat _____ times.



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Lying on your back

Bring your leg out to the side and then back to mid position.
Repeat _____ times.



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Lying on your back

Squeeze buttocks firmly together.
Hold for approximately ____ seconds.
Relax.
Repeat _____ times.



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Lying with knees bent and feet on floor (hip width apart)

Turn the soles of your feet to face each other and allow your knees to fall outwards.
Feel the stretch in your groin.
Keep your back flat on the floor during the exercise.
Repeat _____ times.



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Lying on your back

Bend one leg and put your foot on the bed and put a cushion under the other knee.
Exercise your straight leg by pulling your foot and toes up, tightening your thigh muscle and straightening the knee (keep knee on the cushion).
Hold for approximately 5 seconds and slowly relax.
To make the exercise harder put a _____kg weight around your ankle.
Repeat _____ times.



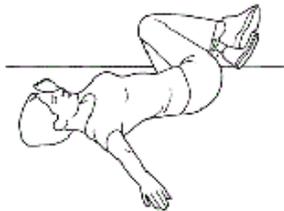
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Lying on back with knees bent and arms by side

Tighten your stomach muscles and press the small of your back against the floor, letting your bottom rise.

Hold for 5 seconds, then relax.

Repeat ____ times.



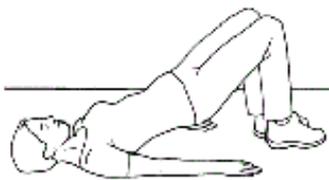
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Lying

Lying on your back with your arms in a T-position and knees bent towards the ceiling.

Slowly roll both your legs from side to side without touching the floor.

Repeat ____ times.



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Lying on your back with knees bent and feet on floor

Lift your pelvis and lower back (gradually, vertebra by vertebra) off the floor.

Hold the position.

Lower down slowly returning to starting position.

Repeat ____ times.



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Lying

Lie on your back with one leg straight and the other leg bent. You can vary this exercise by having your foot pointing either upwards, inwards or outwards.

Exercise your straight leg by pulling the toes up, straightening the knee and lifting the leg 20cm off the bed.

Hold for approximately 5 seconds – then slowly relax.

Repeat ____ times with both legs.



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Lying on back or sitting

Bend and straighten your ankles briskly. If you keep your knees straight during the exercise you will stretch your calf muscles.

Repeat ____ times.



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Sitting or lying

Rotate your ankle.

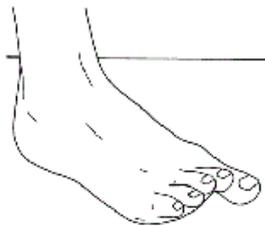
Change directions.

Repeat ____ times.



Sit or stand
Bend your ankle.
Curl your toes.
Repeat _____ times.

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Sit with your foot on the floor
Keeping your big toe on the floor, lift the other toes up.
Repeat _____ times.

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Goals

The goal	How will this goal be achieved?	When will this goal be achieved by?

References:

Calvo-Ayala, E et al. (2013) Interventions to Improve the Physical Function of ICU Survivors - A Systematic Review, *CHEST*, 144(5), p.1469-1480

Griffiths, J et al. (2004) Follow-up after Intensive Care, *Continuing Education in Anaesthesia, Critical Care & Pain*, 4(6), p.202 - 205.

National Institute for Health and Care Excellence (2009) *Rehabilitation after Critical Illness*, [online] Available at: <http://www.nice.org.uk/cg83> [Accessed 27th December 2013].

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