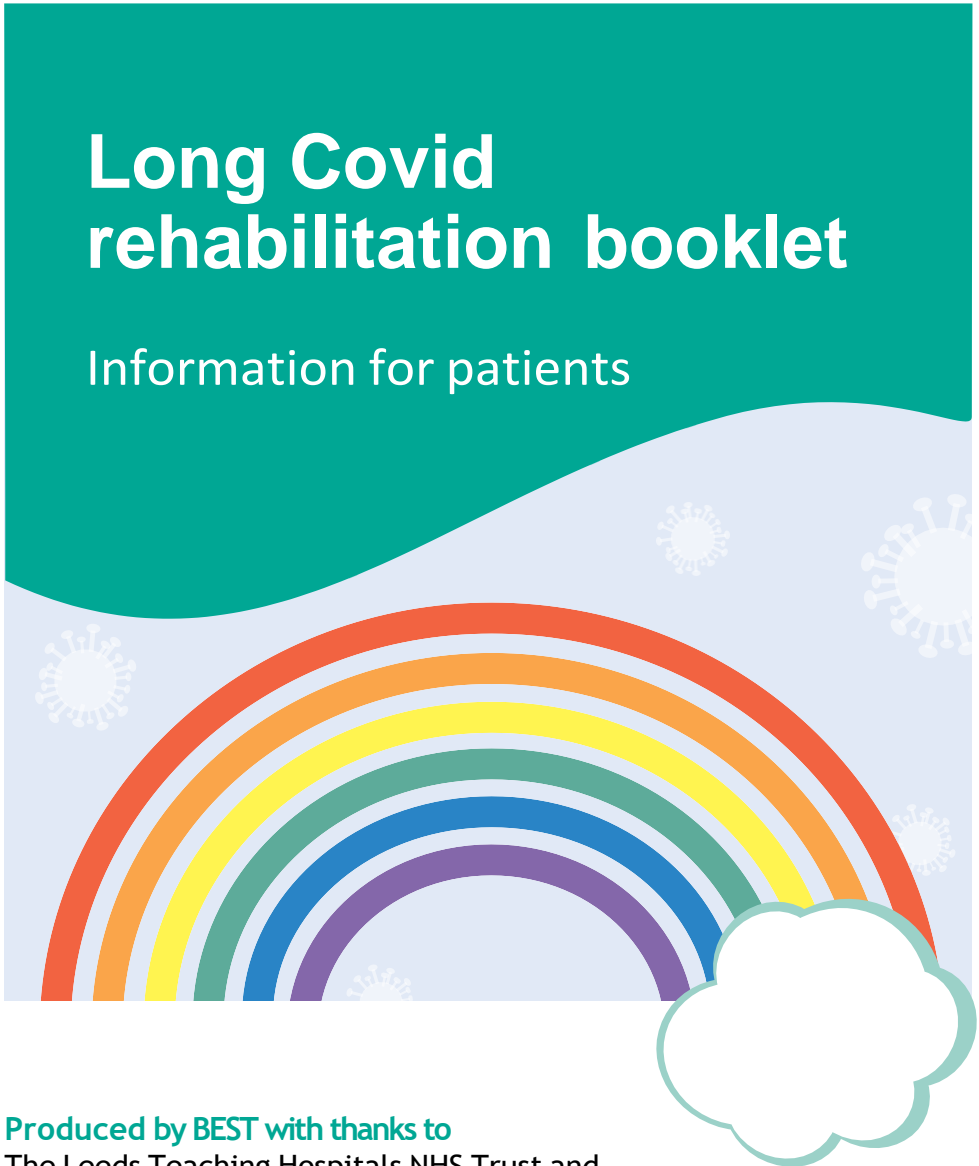


Long Covid rehabilitation booklet

Information for patients



Produced by BEST with thanks to
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Name: **NHS Number:**

At home or at our hospitals

To maintain the safety of both you and our staff it is very important to observe the Government guidance regarding:

- Hand hygiene
- The wearing of face coverings
- Social distancing.

Sometimes this is difficult to achieve, especially during some of your care, treatment and rehabilitation. However, all staff working with you will be wearing protective equipment and on some occasions you may be asked to wear a face mask to minimise the risk of spreading the virus.

At the end of this document there is a section that gives you more in-depth advice. Please read this important information carefully.

What is long COVID?

Post COVID-19 Syndrome is also called long COVID. It describes the signs and symptoms that develop during or following an infection consistent with COVID-19, which continue for more than 12 weeks and are not explained by an alternative diagnosis.

The condition usually presents with clusters of symptoms, often overlapping, which may change over time and can affect any system within your body.

The severity of your illness after catching COVID-19 does not indicate whether you will go on to develop long COVID. In other words, you may have a mild dose of COVID-19 and then develop long COVID. Or, you may have been severely ill with COVID-19 and then suffer no longer term after effects.

Commonly reported symptoms

There are a broad spectrum of symptoms that you may or may not experience with long COVID. The most common ones are listed below:

- Fatigue
- Breathlessness
- Chills and sweats
- A fast heart rate at rest or on exertion
- Headaches
- Poor concentration and short term memory problems
- Voice problems

- Muscle weakness
- Pain – back/joint/muscular and chest
- Anxiety
- Dizziness
- Flare up/exacerbation of pre-existing health problems
- Hair loss
- Skin rashes
- Tinnitus
- Gastro-intestinal issues
- Loss of taste and smell
- Numbness/pins and needles
- Insomnia
- Hormonal imbalance.

Please seek advice from your GP or by calling 111 if you feel your symptoms are worsening and might need further investigation.

The emotional impact of long COVID

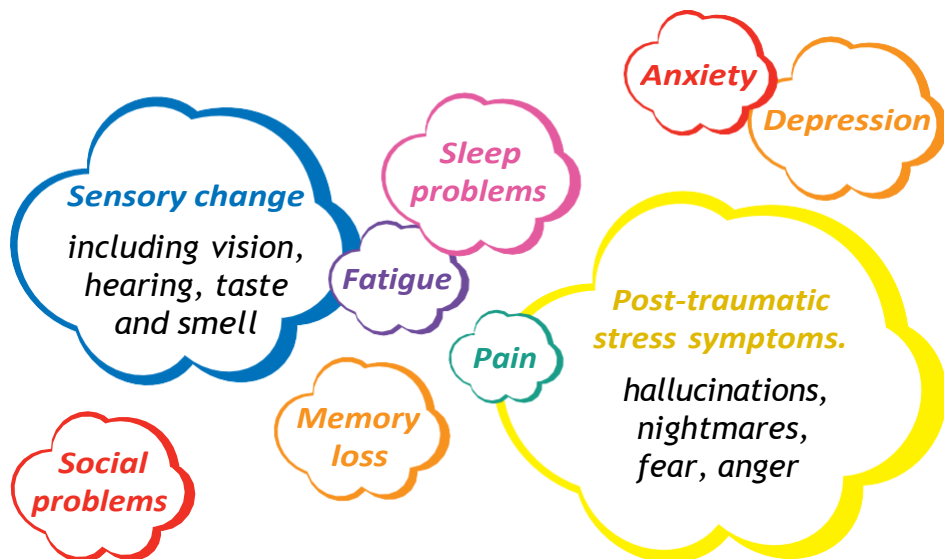
The experience of having COVID-19 can be very frightening. It is understandable that the experience and then suffering from ongoing symptoms months after contracting the virus can have a huge emotional impact.

Having ongoing symptoms can cause common problems outlined on the next page:

- Feeling anxious when struggling to catch your breath and when your heart feels like its racing.
- Feeling low in mood.
- Poor sleep.
- Wondering if this will ever go away.
- Worries about getting back to work.
- Worries about family or friends becoming ill and suffering.
- Health experts not always being able to answer all your questions or give explanations.

If you were treated in hospital, you might also experience:

- Unpleasant images from your stay, that might seem to come 'out of the blue'.
- Nightmares.
- Feelings of panic with any hospital reminders.



What can help?

- Avoid watching too much news or social media if its making you feel anxious.
- Speak to family and friends.
- Try to do activities that you find enjoyable and relaxing.
- Don't be too hard on yourself if there are things that you are finding harder to do, and remind yourself that recovery takes time.
- Focus on what is in your control.

Relaxation

Relaxation is an important part of energy conservation. It can help you to control your anxiety, improve the quality of your life and reduce pain. Below is a technique you can use to manage anxiety and help you relax.

Grounding technique

Take slow gentle breaths and ask yourself:

1. What are five things I can see?
2. What are four things I can feel?
3. What are three things I can hear?
4. What are two things I can smell?
5. What is one thing I can taste?

Think of the answers slowly to yourself, one sense at a time and spend at least ten seconds focussing on each one.

Also:

There are a number of different relaxation techniques you can try, different people prefer different techniques. You can search on the internet to explore different strategies.

- Progressive muscle relaxation
- Meditation
- Mindfulness
- Guided imagery or visualisation
- Alexander technique
- Aromatherapy
- Tai Chi
- Yoga
- Music.

Thinking patterns and symptoms

It is important to remember that your symptoms are a normal part of your recovery following COVID-19.

Worrying and thinking about your symptoms can often make them worse. This is partly due to paying attention to something will magnify or increase it.

If you focus on your breathing or heart rate for a couple of minutes you will feel the sensations more. This is the same with all long COVID symptoms. For example, if you focus on headaches, you will likely get more headaches, if you focus on poor sleep you will likely struggle to sleep and if you focus on struggling to concentrate, concentration will become increasingly difficult.

Before you experienced COVID-19 you may have had some of these symptoms before therefore treat them in the same way you would have done before. We do not mean to ignore your symptoms, and you should still discuss any ongoing symptoms with your medical team as they may be able to offer treatment to help with any symptoms felt.

Often symptoms are linked: meaning an increase in one symptom leads to an increase in another symptom. If you are fatigued your concentration will be effected, this in turn will affect your memory. These lapses of memory can increase your anxiety, which increases your fatigue. As you can see this goes round in a cycle. Therefore, an improvement in one area should lead to an improvement in another.

During your recovery you will have good and bad days, or ups and downs. This is normal and it is important not to dwell on the negative. Throughout your rehabilitation try to be kind to yourself, try to think what advice you might give to a friend rather than being too critical on yourself.

Breathlessness and long COVID

Breathlessness is a very common symptom in people with long COVID. Your lungs can become inflamed with your initial infection and the effort of breathing can increase.

You may be breathing more quickly and shallower than normal, however, it is important to try and stay calm.

As your lungs recover and time passes into the 12 week mark following infection, there can be other reasons for your breathlessness to continue. These can be due to being deconditioned and anxiety.

Anxiety can also increase your heart rate and make your breathing rate increase further. We encourage breathing control to help manage your breathlessness. Practice at rest to begin with then use during activity.

Breathing control - something to help you relax

1. Get in a comfortable position.
2. Close your eyes and bring your attention to your breathing.
3. Breathe in and out through your nose (or mouth if you are unable to do this - but work towards trying to breathe through your nose in time).
4. Put a hand on your stomach and recognise how it rises and falls when you breathe in and out.
5. Try to breathe in for the count of one, PAUSE and then out for count of two, working towards a longer breath out than in. This will slow your breathing rate down.
6. Notice areas of tension in your body and try to release this with each breath out.
7. Gradually try to make your breaths slower and deeper.



Positions of ease:

These positions may help reduce your breathlessness and effort of breathing. Practice your breathing control in these positions.

High side lying:

- Lie on your side
- Use multiple pillows under your head and shoulders
- Bend your knees a little.



Supported forward sitting:

- Sitting upright, lean forward on to a table
- Add as many pillows as required.



Forward sitting:

- Sit leaning forward
- Rest your forearms on your knees
- Relax your chest and shoulders.



Supported standing:

- Stand leaning forward and use a chair, bench or wall for support
- Relax your chest and shoulders.



Blow as you go

This is useful during activities that make you breathless e.g. lifting an object (can be used with pursed lip breathing)

1. Breathe in before you make the effort.
2. Breathe out whilst making the effort (e.g. as you lift the object).
3. Always breathe out on the hardest part of the action.

How can I manage my cough?

You may be experiencing a persistent, dry cough. This can be irritating, exhausting and can lead to inflammation in your upper airways.

There are techniques that you can use to help to reduce the amount you cough. By supressing your cough, you can break the cycle of coughing and help reduce your symptoms.

Supress the urge to cough

1. Breathing in and out through your nose instead of your mouth.
2. Sucking on boiled sweets or lollipops.
3. Having regular drinks / sips of fluids.

Stop cough exercise

As soon as you feel the urge to cough, close your mouth and cover it with your hand (SMOTHER the cough). At the same time, make yourself SWALLOW. STOP breathing - take a pause. When you start to breathe again, breathe in and out through your nose SOFTLY.

Smother - Swallow - Stop - Soft is a good way to remember this exercise.

If you need to cough, try to cough into a tissue or the crease of your elbow and over 2 metres away from other people. Always wash your hands for 20 seconds after you cough.

If you cough at night, try lying in a different position and / or use pillows to prop yourself up.

Physical activity advice in long COVID

Spending time in hospital and also being ill at home with COVID-19 over a long period of time can result in a significant reduction in your muscle strength and endurance.

Exercise is very important for regaining your muscle strength and endurance BUT this needs to be safe and managed alongside other long COVID symptoms.

Activities around the house and gentle short walks whilst pacing are considered safer whilst you are recovering before returning to exercise.

Using the BORG scale (page 15) will help you regulate your exertion and develop a good understanding of the level of activity or exercise that you should be working at. It is a good tool to help you understand any symptoms of breathlessness you might have.

Staying active during your recovery will improve:

- The strength of your breathing muscles, heart and circulation.
- The strength of your arms and leg muscles.
- Your energy levels.
- Your wellbeing, independence and confidence.

Staying active during your recovery will reduce your:

- Anxiety or depression.
- Stress levels and blood pressure.
- Risk of falling by improving your balance.
- The risk of developing other problems associated with bed rest such as chest infections, bed sores, blood clots, reduced mobility and weakness.

How to use the BORG scale during activity and exercise

On the next page you will see a copy of the BORG scale, you can use it to understand how hard you are working and your feelings of breathlessness whilst undertaking any physical activity and during exercise.

This scale is based on how effortful your breathing feels at rest and during activity or exercise.

Using this scale during activity and exercise will really give you guidance and a greater understanding about the safe level to challenge yourself.

Aim to stay at level 4-5

<i>1 - 10 Borg Rating of Perceived Exertion Scale (RPE)</i>	
0	Rest
1	Really easy
2	Easy
3	Moderate
4	Sort of hard
5	Hard
6	
7	Really hard
8	
9	Really, really hard
10	Maximal, just like my hardest race

Exercise and fatigue

If you are suffering from on-going fatigue, please seek advice from a physiotherapist before getting back to 'strenuous' exercise.

Fatigue and exercise need to be carefully considered and phased to prevent Post Exertional Malaise (PEM) and a 'relapse' of your symptoms. The return to exercise section on the "your COVID recovery" website is a good source of information.

PEM symptoms include a marked physical and or mental fatigue in response to increased activity/exercise and can be debilitating and cause a relapse.

The exhaustion felt maybe immediate after the activity/exercise or maybe delayed by hours or days. Recovery normally takes 24 hours or longer and can affect your fatigue levels, concentration, sleep, memory and can cause muscle/joint pains and flu like symptoms.

To avoid PEM, follow the advice in the fatigue management section on pacing of activities.

If you experiencing fatigue symptoms after exercise then we recommend:

- Monitor your heart rate as you exercise and introduce new exercises.
- Monitor your rate of perceived exertion using the **Borg Rating of Perceived Exertion Scale** (page 15).
- Keep your heart rate at less than 60% of your maximal heart rate.

To calculate your maximal heart rate you subtract your age from 220 then multiply the answer by 0.6

$(220 - \text{age}) \times 0.6 = 60\% \text{ of your maximal heart rate}$

E.g. if you are 40 years old then $220 - 40 = 180$, $180 \times 0.6 = 108$. During exercise you aim to keep your pulse at less than 108 beats per minute.

You can monitor your heart rate by taking your pulse or you may have a phone or smart watch that can do this for you.

If you cannot confidently do this, then continue to use **Borg Rating of Perceived Exertion Scale** (page 15)

Exercise and chest pain and/or a racing heart beat

If you are suffering from chest pain, palpitations, severe breathlessness or feel faint then please seek advice from a physiotherapist before starting any exercise programme.

A physiotherapist will ensure that you have had the necessary investigations prior to starting exercises.

If you have a diagnosis of **any cardiac problems** or autonomic nervous system problems such as **Postural Orthostatic Tachycardia Syndrome**, you may need a more individualised exercise programme than the suggestions in the following pages.

Phases of exercise

You should consider your return to exercise in 5 phases; the following sections describe these phases and give suggestions.

No exercise should be painful. If you experience pain, chest pain, feel faint or dizzy during exercise you should stop immediately and not restart your exercise programme until you have been seen by your physiotherapist.

Phase 1 - Preparation for return to exercise






Types of exercise: Gentle walking, breathing exercises, flexibility and stretching.

Breathing exercise example:









Relaxed tummy breathing

1. Make sure you are in a comfortable position with your head and back supported and your shoulders and upper chest relaxed.
2. Place one hand on your tummy – feel your tummy rise and expand as you breathe in and relax back down as you breath out.
3. Rest and wait for your next breath to come.
4. Breathe gently when practicing; there should only be a slight movement of your tummy at rest.

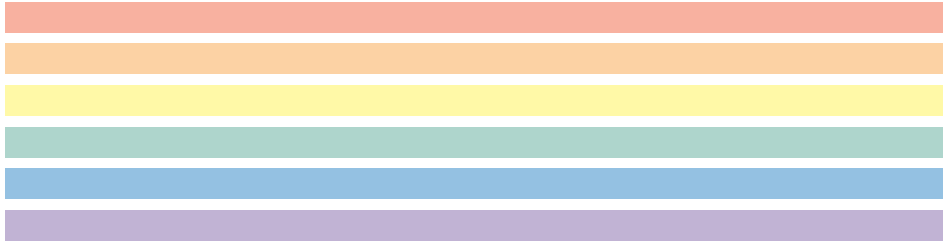
Flexibility and stretching exercises

<i>Calf stretch</i>	<i>Inner thigh stretch</i>	<i>Hamstring stretch</i>	<i>Thigh stretch</i>
Start 	Start 	Start 	Start 
End 	End 	End 	End 

Instructions:

<i>Wrist stretch</i>	<i>Arms stretch</i>	<i>Neck stretch</i>	<i>Shoulder stretch</i>
Start 	Start 	Start 	Start 
End 	End 	End 	End 

Instructions:



Phase 2 - Low intensity activity

Types of exercise: Walking, light household/garden tasks, light yoga.

Light Yoga is a form of stretching, breathing control and relaxation that has been found to be beneficial during your recovery from COVID.

Yoga is shown to assist with the lymphatic system that helps to









- Remove toxins from the body.
- Increase flexibility in the thoracic region (where your heart and lungs are) that can become weak and stiff during illness and resulting inactivity.

Iyengar Yoga UK have developed a COVID 19 yoga programme, downloadable from <https://iyengaryoga.org.uk/covid-19-recovery-a-suggested-yoga-programme/>









Phase 3 - Moderate intensity aerobic and strength exercises

Types of exercise: Walking - introducing inclines, resistance exercises.

Resistance exercises

<i>Heel raises</i>	<i>Hip abduction</i>	<i>Side lunges</i>	<i>Wall squats</i>
Start 	Start 	Start 	Start 
End 	End 	End 	End 

Instructions:

<i>Biceps curl</i>	<i>Triceps curl</i>	<i>Lateral raises</i>	<i>Press ups</i>
Start 	Start 	Start 	Toes 
End 	End 	End 	Knees 

Instructions:

Phase 4 - Moderate intensity aerobic and strength exercises with co-ordination and functioning skills

Types of exercise: Cycling, swimming, jogging, racket sports, Zumba classes, dance classes

Phase 5 - Return to your baseline exercises

You are now able to complete your usual pre COVID regular exercise/activity regime.

Top tips:

- Spend a minimum of seven days at each phase.
- Drop back a phase if you have difficulty.
- Only exercise if you feel recovered from the previous day and have no return of symptoms and no new symptoms.
- Choose exercises that you enjoy. You are more likely to do them and they will help to improve your mental wellbeing.
- Exercises that you did prior to COVID may not be appropriate to your stage of recovery.
- Doing less intensity of the same pre COVID activity may not always be the best way to approach your phased return to exercise.
- Track your exercise progress using an exercise dairy on the next page.

No exercise should be painful. If you experience pain, chest pain, feel faint or dizzy during exercise you should stop immediately and not restart your exercise programme until you have been seen by your physiotherapist.

Fatigue management

Fatigue is the most common debilitating symptom that is experienced in long COVID. It is often described as an overwhelming sense of tiredness which can be physical and mental.

Fatigue stops people from returning to work, cooking/ planning a meal, holding and understanding a conversation and playing with their children.

Physical fatigue:

Some people find that when they are fatigued their body feels overwhelmingly heavy and that moving at all takes an enormous amount of energy.

It may be that specific muscles such as those in your hands and legs fatigue very easily and this can depend on the activity that you are doing e.g. writing, walking.

Mental and cognitive fatigue:

Many people find that when they are fatigued it becomes difficult to think, concentrate or take in new information and that memory and learning is affected. Some people find even basic word finding and thinking difficult.

The fatigue people are experiencing with long COVID leaves them exhausted after completing the most basic of tasks, and some people wake up feeling as tired as they did when they went to sleep.

Fatigue affects people in different ways, and it may change from week to week, day to day or hour to hour. It may also mean people have little motivation to do anything because

they are so tired and/or know that undertaking the smallest task will leave them exhausted. This can make it difficult to explain to family/friends/colleagues.

Helping others to understand your fatigue and how it impacts on you can make a big difference to how you cope with and manage your fatigue.

Sleep

A lack of sleep or poor sleep quality can make fatigue worse.

Sleep can be adversely affected by a number of things:

- Pain
- Needing the toilet
- Insomnia
- Spending more time than usual inside
- Too much caffeine
- Alcohol
- Noise
- Temperature (too warm or too cold)
- Mood (anxiety/depression)
- PTSD and flashbacks.

When thinking about your sleep and the effect it is likely to be having on fatigue it is important to consider each of these issues and make any necessary changes to minimise the impact.

There is a 'Coping with COVID' online course provided by Leeds Mental Health and Wellbeing Service. This is a valuable free resource that has a session on sleep health.

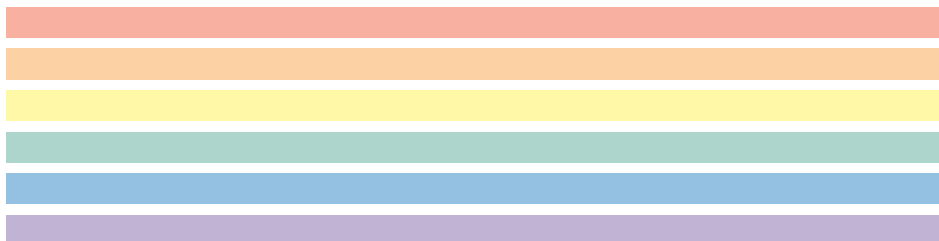
The 'Coping with COVID' course is aimed at everyone and is focused on the wider impact of COVID-19 but may support your recovery.

Pacing and recovery: The 3 Ps = Pace, Prioritise, and Plan

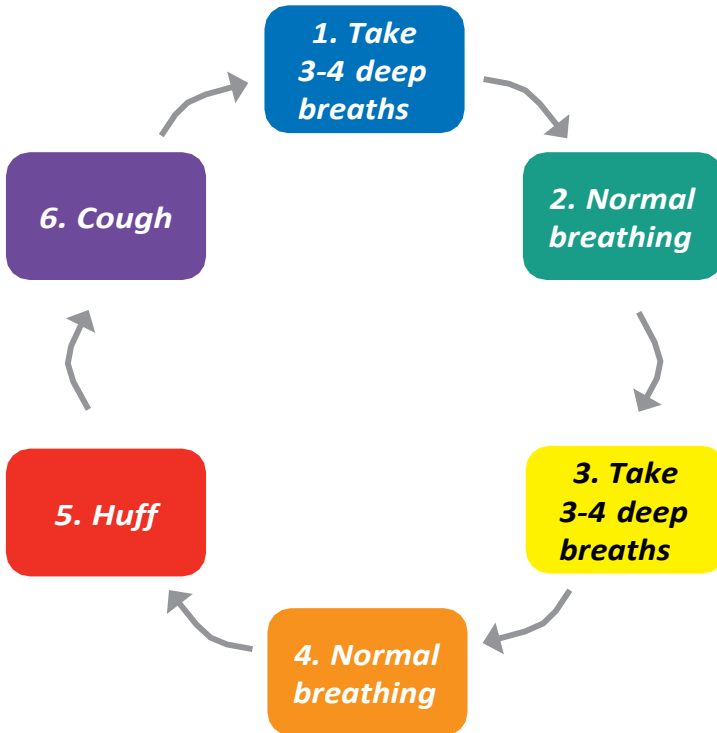
When recovering from any serious illness most people will experience ups and downs with their symptoms for a variety of reasons.

People tend to use these symptoms to decide how much they do. So on 'good days' they may try to do more, often trying to 'catch up' and very often overdoing it. This can result in experiencing a bad day and some people describe this as a 'relapse' when they might experience more symptoms and feel low and then are able to do very little.

It is important to remember that all activity takes energy, whether it is physical, mental or emotional.



You might have noticed that when you ‘overdo’ things, your symptoms are worse and you need to rest more. Resting decreases the symptom and you are tempted to be active again. This is called the ‘boom and bust pattern’ and is detrimental to your recovery.



Pacing

Pacing is a strategy that helps you to get out of this boom and bust cycle and helps you to manage your activities without aggravating your symptoms.

You should develop an activity plan which allows you to stay within your current capabilities and therefore avoid ‘overdoing things’. Your levels of activity can then be

increased in a controlled way over time as your stamina increases.

By pacing your activities you are ensuring that:

- You are controlling the demands you place on yourself.
- These demands are in line with your current capabilities.
- You are exposing your body and mind to these demands in a regular controlled way.

By deciding that you will not ‘overdo’ activity on good days, it is possible to avoid the severity of symptoms on bad days, therefore making it easier to predict the level of activity you will be able to achieve on any given day.

The first step is to think about how much activity you are able to carry out at the moment, even on a ‘not so good’ day. It is important not to compare yourself to others or to how much you could do before.

From this, you will be able to set a baseline of activity. This is the amount of activity you will carry out every day.

Prioritise

When energy supplies are limited, you may need to make sure that the energy you use is spent on activities that are the most important to you. It may also be useful to identify what activities in your day are necessary, i.e. which tasks ‘need’ to be done and which do you ‘want’ to do, what activities could be carried out at a different time or day, and which activities could somebody else assist with.

Prioritising activities is very individual and what may be a priority for some may not be for others. For example, it may

be important for someone to use their energy to have a shower each morning and for someone else, they may limit this to three times a week to ensure they save their energy to carry out a leisure task that is important to them.

Tip: It may be useful to write down the activities that you both want and need to do throughout the day. You could then score these activities to help you to prioritise them. This will also help you in planning your day.

Plan

When planning your day or week, spread your activities out rather than trying to fit them all in one day. Think about when your energy levels may be at their best and therefore completing high energy tasks at this time.

Can an activity be graded so that it doesn't have to be completed all at once? E.g. cleaning one room as opposed to the whole of the house.

Before starting an activity, it is useful to think about what you may require to complete that particular activity. It is helpful to have an organised working space and ensure that you have all items to hand to avoid you having to use more energy going back and forth.

Can you conserve energy by sitting down to complete some of the tasks? E.g. preparing vegetables for cooking.

As well as planning your activities, it is equally as important to plan your rest and relaxation times to allow you to 'recharge.'

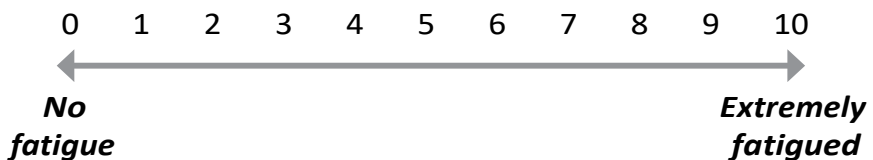
Creating an activity diary or a daily plan will help you to **pace** yourself and **prioritise** what you want and need to do.

It may take a few attempts to get right, but once you feel you have found your baseline it is important to ensure a period of consistency before this is increased again.

Create an activity diary

- Start at the beginning of each day.
- Write down each activity including rest period you have taken in each three hour interval.
- Using the scale below score how you felt at the end of this three hour period.
- Record any other factors you feel are relevant e.g. stressful events, skipping meals, over-exertion.
- Record your BORG score for each activity you undertake. Sometimes, activities that have a high BORG score do not have a high fatigue score.

Fatigue scoring



When you are ready, you can gradually increase the amount of activity you are doing but be careful not to build up too quickly. As a general rule it is suggested an increase of no more than 20%.

Once you have made an increase, you will need to keep the levels stable for around a week before increasing again.

Nutrition and hydration

Good nutrition and hydration help to support your body in fighting Covid-19 as well as helping to rebuild your muscle strength and function as part of your rehabilitation. Even though you may not feel hungry or thirsty, it is important to eat and drink well.

Below is some general information to help you to maximise your food and fluid intake. If you have specific dietary requirements, please check with a healthcare professional that the information is safe for you to follow.

What you need to do:

1. *Stay hydrated:*

Being well hydrated helps your body to function, and aids mobilisation and recovery.

- Drink regularly throughout the day - aim to have eight cups of fluid each day.
- Take small, frequent sips of liquids every few minutes if you are not able to drink large amounts at one time.
- Aim to drink enough fluid to keep your urine a pale straw colour.
- If you have a raised temperature, your fluid needs may be higher.
- All fluids (except alcohol) count, try to include nourishing fluids such as milky drinks or juices.



2. Eat a varied and nourishing diet:

You may require more nutrition than usual to support your body during and after illness.

Dieting with the aim of reducing body weight is not recommended during acute illness or recovery, due to the risk of reducing your muscle mass, strength and ability to carry out day to day tasks.

Long COVID can affect peoples' appetite and weight in different ways. Some people find they gain unwanted weight and others suffer with a reduced appetite and consequently lose weight.

A well-balanced diet contains foods from all the food groups.

The Eatwell Guide shows how much of what we eat overall should come from each food group to achieve a healthy, balanced diet.

You do not need to achieve this balance with every meal, but try to get the balance right over a day or even a week.

For more information visit: <https://www.nhs.uk/live-well/eat-well/the-eatwell-guide/>

Eatwell Guide

Check the label on packaged foods

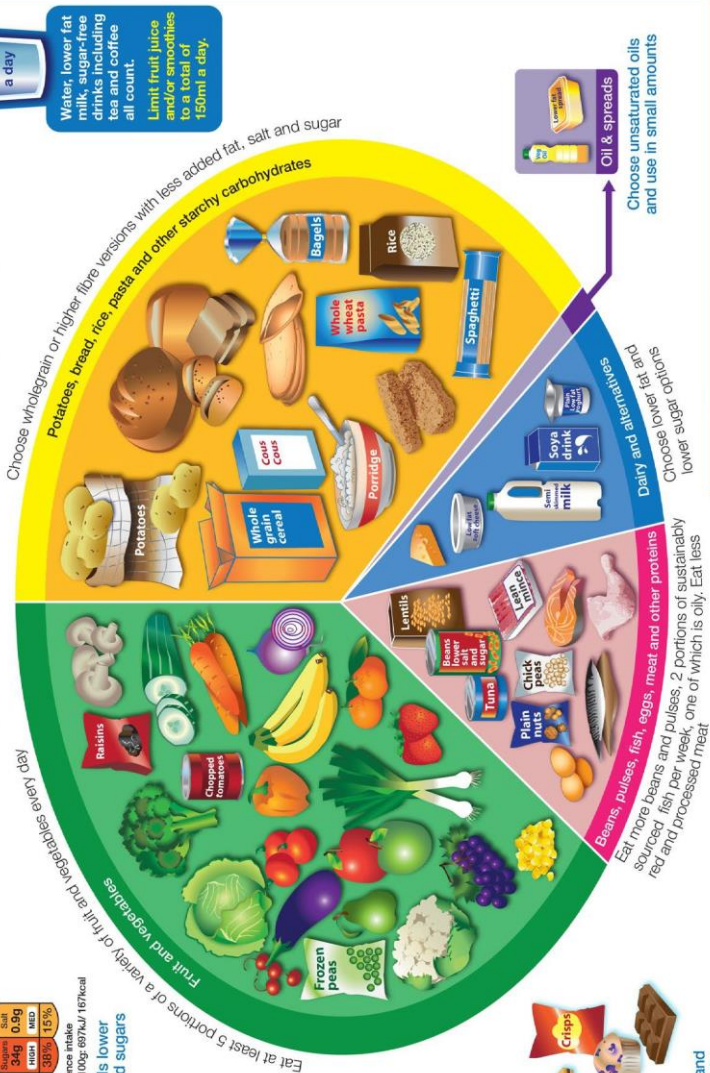
Each serving (150g) contains

Energy	1000kJ	240kcal	13%	13%
Carbohydrate	30g	60g	45%	45%
Fat	1.3g	34g	2%	2%
Salt	0.3g	0.9g	6%	6%
LOW	LOW	LOW	LOW	LOW
HIGH	HIGH	HIGH	HIGH	HIGH
MEQ	MEQ	MEQ	MEQ	MEQ

Typical values (as sold) per 100g: 697kJ/167kcal of an adult's reference intake

Choose foods lower in fat, salt and sugars

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.



Water, lower fat milk, sugar-free drinks including tea and coffee all count.
Limit fruit juice and/or smoothies to a total of 150ml a day.

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

Unwanted weight changes

Unintentional weight gain

Some people find themselves eating more than normal due to low mood, boredom, comfort eating or wanting to boost energy levels.

They may also be less physically active and therefore more likely to gain weight.

To help minimise unintentional weight gain keep high fat, sugary foods and sugary drinks to a minimum.

Instead choose healthier alternatives.

For more detail visit <https://www.nhs.uk/live-well/eat-well/healthy-food-swaps/>

Unintentional weight loss

For others long COVID can cause a poor appetite which results in eating significantly less than normal.

To help minimise unintentional weight loss eat regularly (by the clock rather than waiting to feel hungry).

Eat little and often having nourishing snacks and drinks in between your meal.

If untreated unintentional weight loss can lead to malnutrition.

Ask your health professional if you are struggling to regain your weight.

For more advice on managing a poor appetite and preventing malnutrition visit <https://www.bda.uk.com/resource/malnutrition.html>

Practical tips to help you eat and drink well

<i>Reduced taste/smell</i>	Choose strongly flavoured foods, e.g. spicy, citrus. Add sauces or extra herbs/pepper to add more taste to meals
<i>Breathlessness</i>	Choose soft (easy chew) foods and nourishing drinks. Eat slowly and take smaller bites. Try to eat more at the times when you feel less breathless
<i>Dry mouth</i>	Sip drinks regularly, choose moist foods and ensure good mouth care. Try sucking on fruit sweets, mints or chewing gum to stimulate saliva production

If you have any concerns about your eating and drinking:

- **In hospital** - speak to your nurse
- **At home** - speak to your GP



How could COVID-19 affect my swallowing?

COVID can affect your breathing. This can interrupt the breathe-swallow pattern as you need to hold your breath momentarily while you swallow. Due to this you may find that you become breathless while eating and drinking or that it is hard to hold your breath to swallow or cough when you swallow.

You may have had a stay in Intensive Care (ICU). This can result in weakening of the muscles used for swallowing as they haven't been used while you were unwell or asleep. Over time, the muscles will rebuild strength as you build up your intake.

If you had a breathing tube this can sometimes cause some bruising and swelling to your throat and voice box. Sometimes this can result in one or both of the vocal folds not moving properly, which can cause changes to your voice and reduced protection for your airway when you swallow. Usually these affects are temporary and will resolve over time.

Some descriptions of swallowing difficulties:

- Coughing or choking when eating and drinking
- Throat clearing when eating and drinking
- Gurgly/wet voice
- Recurrent chest infections
- Poor appetite
- Weight loss
- Feeling as though food is getting stuck.

Swallowing advice from a Speech and Language Therapist:

- Make sure you are sat upright and that you are fully awake and alert when you are eating and drinking.
- Take your time and take small mouthfuls. It can be helpful to reduce distractions around you.
- You should avoid talking while eating and drinking as this opens the airway which could result in food or drink going “the wrong way”. Talking can also make you more breathless which can in turn impact on your swallowing.
- You may want to try making some modifications to the texture of your diet e.g. well chopped, softer consistencies, more moisture if your throat feels uncomfortable when you swallow.
- It is also very important to keep your mouth clean and healthy with regular tooth brushing. If you notice that your tongue is coated or your mouth looks unclean, speak to your GP or pharmacist.
- If you experience any persisting symptoms speak to your GP for a referral to Speech and Language Therapy for further assessment.

How could COVID-19 affect my voice?

- COVID-19 can cause a sore throat, laryngitis and a cough, and some people may have needed a ventilator with a breathing tube through the voice-box which can cause an injury. Your voice may be weak and breathy or hoarse and you may have difficulties with voice projection.

- You may have throat discomfort; such as soreness, an irritable cough, a sensation of mucous pooling in the throat and feel the need to throat clear.
- Some people may feel their throat/upper airway becomes more sensitive to the environment around them. For example, a strong scent may trigger a cough, sensation of throat tightness or a restriction in your breathing at the top of your airway.
- Other influences may be dehydration of your voice box, acid reflux, fatigue and stress.
- Your voice reflects your general health and how you are feeling including fatigue and worry.

Advice:

- Keep hydrated; drinking 8-10 glasses of water a day is recommended as dehydration caused by alcohol or caffeine in drinks can lead to vocal fold irritation.
- If your voice is hoarse or weak, don't whisper - use your voice gently to avoid strain.
- Steam inhalation for 10-15 minutes can help with dryness and moisturizes the vocal tract.
- Reflux is very common so avoid eating late at night and foods that cause indigestion.
- Reduce or avoid smoking.
- Avoid lots of dairy produce as this can cause thick secretions and throat clearing.
- Try not to 'throat clear' - use sips of water and a hard swallow.

Will my voice return to normal?

The inflammation and damage to your voice box should get better over time without treatment. However, if it doesn't, please seek a referral to the Ear, Nose and Throat (ENT) department via your GP and ENT Speech and Language Therapy.

Persisting alteration of your voice may be an indicator of damage to the vocal folds and will need further assessment.

Cognition

Cognition means someone's 'thinking skills'. People can experience a range of difficulties with their thinking skills post-COVID-19. These difficulties include memory, attention, information processing, planning and organisation.

A common symptom experienced is Brain Fog. Brain Fog is a term used to explain a number of symptoms that affect someone's ability to think. This involves feeling confused, disorganised, having memory problems, finding it hard to focus and having slower processing of information.

Brain Fog is often made worse by fatigue, meaning the more tired a person is, the more they notice increased difficulty with their thinking skills.

To support your thinking skills consider the following:

- **Minimise distractions:** Try to work in a quiet environment with no background distractions. You may find it helpful to:
 - Wear ear plugs
 - To let people know that they should try not to interrupt you.

- If you are distracted when reading text, block off parts of the text using paper, or use your finger as a marker.
- **Complete activities when less fatigued:** When completing a task that demands your thinking skills, plan this for a time when you are less tired. For example if you tire as the day goes on - then do the task in the morning.
- **Say things out loud:** By saying things out loud like 'what should I be doing now?' or 'Stay focused' or by reading instructions out loud you can help yourself to stay on the right track.
- **Take frequent breaks:** If the problem is made worse by fatigue, work for shorter periods of time and take breaks. Use "little and often" as a guide and pace yourself.
- **Set yourself targets or goals:** Having something definite to work towards will help you stay motivated. Setting deadlines like "I'll do that task at 10 o'clock", instead of "I'll do my work later on".
- **Best time and apply structure:** Work out when your best time of day is for doing this kind of work. Try to set up your daily/weekly schedule to take account of this. It may help to plan activities ahead of time. Establishing a daily and weekly routine can also help. Keeping a record, or breaking things down into manageable parts can help, so then if you get distracted you can pick up where you left off.
- **Use incentives:** When you achieve a target or goal reward yourself, try something very simple such as a cup of tea or coffee, letting yourself watch a TV programme or going for a walk.

- **One thing at a time:** Concentrate on one thing at a time, do not try to take in too much information at once, as this can lead to mistakes. Do one task then move on to the next.
- **Don't rush things:** You may find that you have a tendency to rush everyday tasks and end up making mistakes. Take your time and pace yourself.
- **Self-monitor or check and double check your work:** Do this with everything you do. It will be slow and hard at first, but it will become a habit as you get accustomed to it. This is the only sure-fire way of picking up on your own errors.
- **Gain control:** If in everyday conversation you feel you are being 'overloaded' and you cannot attend to all the information, ask the person who is talking to you to slow down and/or repeats themselves. Be assertive and say something like 'Excuse me, I think you have lost me, could you repeat that please?'
- **Aids:** Using lists, post it notes, diaries and calendars can all help support your memory and routine.
- **Repeating things:** Immediately repeating something can help.

Communication

Sometimes people experience difficulties with their ability to communicate; this can affect the way that they communicate with other people.

You may experience one or more of the following difficulties:

- Understanding what people are saying to you
- Reading
- Putting your thoughts and feelings into words

- Having a conversation
- Finding the correct word
- Having slurred speech.

These symptoms can be worse when you are fatigued or feeling stressed. If you are having difficulty with your communication, speak to your GP or your therapist.

Social life and hobbies

When you have been ill, you may feel different, and you might not want to do the things you used to enjoy.

You may not feel like seeing lots of people at the same time, and you might find it hard to concentrate to read or watch television. As you recover, your concentration will get better and your memory will improve.

Try to find activities that you enjoy doing while you recover; this might include starting a new hobby or finding different ways to continue with old hobbies.

It is important that you have a balance of 'work, rest and play'. Try to make sure that each day you can do a good balance of 'work, rest and play' allowing yourself time to do things you enjoy not only things you have to do.

Returning to work with long COVID

If you have a job to return to and wish to return to that job early discussions with your workplace manager and occupational health department is often a good idea. This will help your employer to develop a better understanding of your

ongoing symptoms and manageable daily activity.

To support a successful return to work it is often helpful to have a flexible and phased return. This might include altered hours or altered duties. These adjustments to your work will aim to help you to manage your symptoms during your recovery.

Before returning to work it is important to think about the physical and cognitive demands. Cognitive demands means your thinking skills, examples might include attention, problem solving or organisation.

These skills should be compared to how much you can manage at home. Ideally the amount you can do at home should start match the amount you need to do at work.

It can be helpful to get some 'feedback' on your current abilities. This is beneficial as you may have been out of work for some time and may not be aware of how tired or unfit you are.

Through doing some normal day to day activities at home, you can begin to understand your current abilities.

Examples of activities to try (providing this is safe):

- Sorting through paper work, and letters.
- Placing books or CDs in alphabetical order.
- Using your computer for email, research or social media.
- Walking (how long and far will depend on your current abilities and symptoms).
- Helping with a mini DIY project (do not use ladders or sharp tools).

- Making phone calls, e.g. to the bank, a local shop, ordering a family takeaway.
- Cooking yourself a meal/snack (if it is safe to do so).

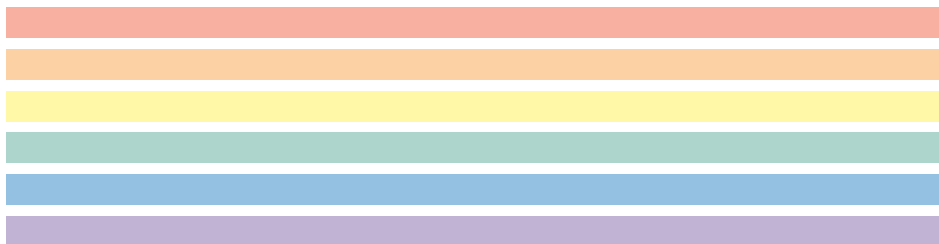
Many of these activities need similar skills and abilities that you will need to have for returning to work. For example using your home computer for emails and social media can help you to build up your typing skills and concentration.

Now consider:

- How are you managing with these tasks?
- What went well?
- Did you struggle with anything?
- Is there anything that you need to practice?

The more information that you have about how you find different activities at home will help you inform when you will be ready to return to work. This information can also help you to structure your return to work and understand any change that you might need when you are at work, to ensure a successful return to your job.

Your GP can discuss any changes that you may need to return to work, as well as your local COVID Rehabilitation Team.



If your health deteriorates please contact your GP or 111 for help and advice.



Useful resources

- **NHS Your COVID recovery:**
<https://www.yourcovidrecovery.nhs.uk/>
- **ICU Steps: the intensive care patient support charity**
<https://icusteps.org/>
- **NHS Lancashire Teaching Hospital:**
Covid-19 specific guidance <https://bit.ly/358zBqT>
- **Older people:**
<https://library.nhs.uk/coronavirus-resources/older-people/>
- **Accessible formats:** <https://library.nhs.uk/coronavirus-resources/accessible-formats-2/>
- **Children and young people:**
<https://library.nhs.uk/%20coronavirus-resources/children-and-%20young-people/>
- **How to manage post-viral fatigue after COVID-19:** <https://www.rcot.co.uk/how-manage-post-viral-fatigue-after-covid-19>
- **Long COVID-19 Foundation:** www.longcovidfdn.com

Exercise

- **Tune in to 10 Today:** 10 minute workouts -
<https://bit.ly/2XQCxqw>
- **Chartered Society of Physiotherapy:** Being active with a long term condition - <https://www.csp.org.uk/public-patient/keeping-active-healthy/love-activity-hate-exercise-campaign/being-active-long-term>
- **NHS:** Physical activity guidelines - <https://bit.ly/2VnShzl>
- **AgeUK:** Looking after yourself physically and mentally -
<https://bit.ly/3eF4qrQ>

- **AgeUK:** Keep active and reduce your risk of falling - <https://bit.ly/3aoTMSD>
- **Post Exertional Malaise:** www.workwellfoundation.org - select menu/resources and COVID 19 resources.

Nutrition

- **British Dietetic Association:** General advice - <https://bit.ly/2VHi9FR>
- <https://www.malnutritionpathway.co.uk/covid19> - Use the 'resources finder' to help you find the right information on **good nutrition** during or after Covid-19
- **Nutrition and Hydration Information for patients with, and recovering from, COVID-19:** <http://flipbooks.leedsth.nhs.uk/LN004842.pdf>

Mind

- **Mindfulness exercises and tips:** <https://www.mind.org.uk/information-support/drugs-and-treatments/mindfulness/mindfulness-exercises-tips/>
- **Psychology Tools:** Living with worry and anxiety amidst global uncertainty - https://www.psychologytools.com/assets/covid-19/guide_to_living_with_worry_and_anxiety_amidst_global_uncertainty_en-gb.pdf
- **Mind:** Psychological wellbeing during coronavirus - <https://bit.ly/2KIGRX4>
- **Headspace:** 10 days free meditation - <https://bit.ly/34QBpoh>

Hospital appointments

There are some actions you can take to help:

- Please keep to the left when walking along the corridors.
- Please walk in single file if you are able.
- Please comply with social distancing signs and floor markings.
- Please follow one way routes when directed to do so by staff.

If you have an appointment please do not arrive early. Try to attend no more than 10 minutes before your expected appointment time. If you arrive earlier than this you may be asked to return nearer to your appointment time. This is to stop too many people being in the department at one time. If you arrive late, your appointment may need to be rebooked for another date.

We kindly ask that you attend the outpatient department on your own, if at all possible. If you need help with walking, communicating, or have other care needs, then no more than one carer or family member who lives at same address should attend the department with you. Parents are asked that only one parent attends the department with their child. If you have been driven to the hospital, your driver will be asked to wait outside the hospital, or in their car.

Face coverings

All patients and visitors must wear a face covering whilst in the hospital.

Face coverings do not replace the need to follow social distancing rules but may prevent you passing on coronavirus before you have symptoms.

If you have your own face covering, you must wear this to your appointment. On your arrival, clinical staff may ask you to wear a surgical face mask whilst you are with us. Thank you for your cooperation with this.

A cloth face covering should cover your mouth and nose while allowing you to breathe comfortably. It can be as simple as a scarf or bandana that ties behind the head. When wearing a face covering, take care to tuck away any loose ends.

Wash your hands or use hand sanitiser before putting it on and after taking it off. Avoid touching your eyes, nose, or mouth at all times and store used face coverings in a plastic bag until you have an opportunity to wash them.

Do not touch the front of the face covering, or the part of the face covering that has been in contact with your mouth and nose. Once removed, make sure you clean any surfaces the face covering has touched.

You should wash a face covering regularly. It can go in with other laundry, using your normal detergent. Information on how to make your own face covering may be found at:

www.gov.uk/government/publications/how-to-wear-and-make-a-cloth-face-covering/how-to-wear-and-make-a-cloth-face-covering

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