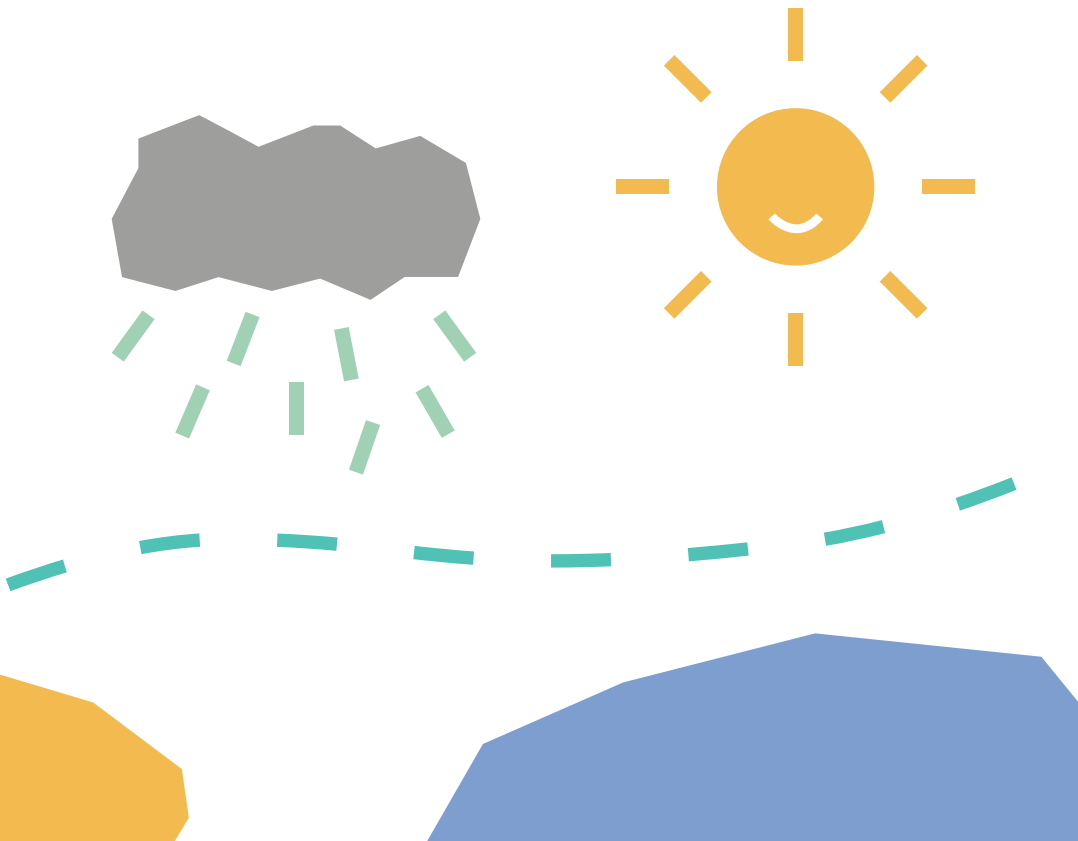


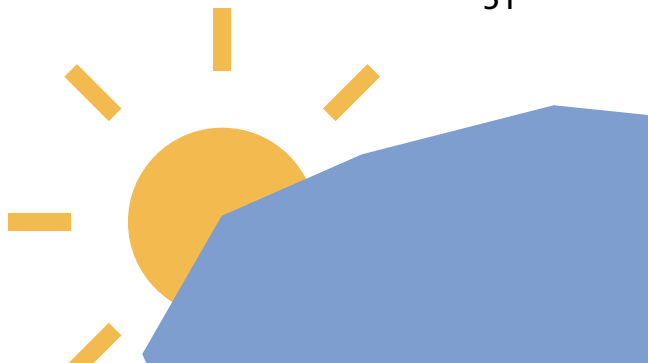
# Patient education pack

COVID-19 recovery



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# Introduction

This pack has been designed to support your recovery from Covid-19. It will give you further information on the main symptoms you may be experiencing and practical tips and strategies you can adopt to help manage them.

You may also wish to access [www.yourcovidrecovery.nhs.uk](http://www.yourcovidrecovery.nhs.uk)

However, if you do not see any improvement or are concerned, then speak to your GP, call the 111 service or speak to your health care provider.

## What is Covid-19?

COVID disease is an infection caused by a coronavirus. There are many types of coronavirus. Illnesses from viruses range from the common cold and flu-like illnesses, to more severe diseases such as severe flu and pneumonia. The full name of the virus is SARS-CoV-2. SARS stands for Severe Acute Respiratory Syndrome. It spreads easily between humans by droplets in the air caused by coughing and sneezing.



# What are the common symptoms / effects?

Some people have had very severe disease. However, others may not be aware they have had it. Scientists are trying to work out why it affects people so differently.

There are many symptoms caused by the illness, these include:

- Breathlessness
- Fatigue
- Cough
- Muscle weakness and reduced mobility
- Low mood
- Poor memory / ability to focus
- Impaired swallow
- Weight loss
- Pressure areas
- Loss of taste and smell

Many people will make a full recovery. It may take weeks to a few months. We expect that some people will have ongoing symptoms of cough, breathlessness, poor or reduced sleep, fatigue, anxiety and low mood.

# Breathlessness

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, anxiety and or having a change in your breathing pattern. 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

- Get in a comfortable position.
- Close your eyes and bring your attention to your breathing.
- 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).
- Put a hand on your stomach and recognise how it rises and falls when you breathe in and out.
- Try to breathe in and then out PAUSE before your next in breath in and gradually work towards a longer breath out

than in. This will slow your breathing rate down.

- Notice areas of tension in your body and try to release this with each breath out.
- 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.

# Breathing techniques

## Pursed lip breathing

This technique will slow your breathing rate down and make your breathing more comfortable.

- Relax your neck and shoulders
- Take a normal sized breath in
- Pucker your lips (as if you were going to blow out a candle)
- Keep your lips in this tight pursed position, try to breath out over 3 seconds gently and slowly

## 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)

- Breathe in before you make the effort.
- Breathe out whilst making the effort (e.g. as you lift the object).
- 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.

## Suppress the urge to cough

- Breathing in and out through your nose instead of your mouth
- Sucking on boiled sweets or lollipops.
- 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 two 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

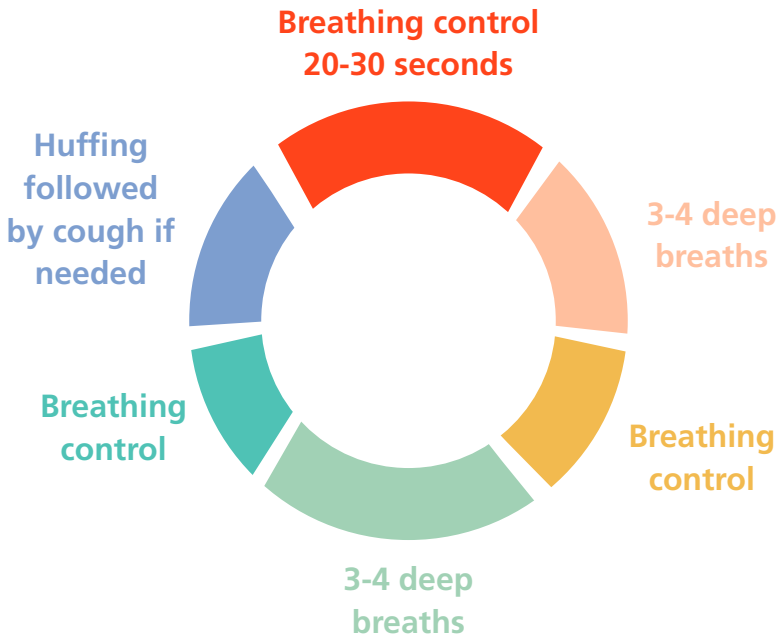
## How can I help clear my mucous if I have a productive cough?

The Active Cycle of Breathing Techniques (ACBT) is an active breathing used to help clear secretions from your lungs. It helps loosen secretions, improve your breathing and improve the effectiveness of your cough. There are 3 main elements, breathing control, deep breaths and a huff.

**Breathing control:** as mentioned already, is breathing gentle using as little effort as possible

**Deeper breaths:** Take a long, slow, deep breath in, through your nose if you can. Try to keep your chest and shoulder relaxed. Breathe out gently, like a sigh.

**Huff:** To huff you squeeze air quickly from your lungs, out through your open mouth and throat, as if you were trying to mist up a mirror or your glasses. Use your tummy muscles to help you squeeze the air out, but do not force it so much that you cause wheezing or tightness in your chest. Huffing should always be followed by breathing control.



# Fatigue

This information is intended to help you manage your Long Covid fatigue. It discusses the ways in which fatigue can affect you and gives practical tips and strategies you can adopt to help manage your fatigue.

## What is fatigue?

Fatigue is one of the most commonly reported symptoms in Long Covid. It is often described as an overwhelming sense of tiredness which isn't relieved by sleep or rest. Fatigue is the experience of struggling to find enough energy to do the things that you need to do and feeling tired possibly to the point of exhaustion. It can arise in response to a mixture of physical and emotional factors, including various illnesses, such as Covid and other medical conditions, but also in response to prolonged stress, anxiety or low mood.

Prolonged periods of fatigue can last for months and can have a profound impact on function and quality of life. It can create barriers and prevent people from engaging in valued roles, such as family life, work, social activities and hobbies.

## What causes Long Covid related fatigue?

A combination of causes is likely to contribute to the development and ongoing patterns of fatigue.

Primary factors are those which stem from the body's response to the actual Covid (Coronavirus) infection. A complex

interaction between several body systems is likely to be implicated. Homeostasis is the process by which the body strives to deal with threats and works towards maintaining optimum functioning of the body. However, sometimes the responses the body makes to do this can become 'dysregulated' or out of kilter, causing symptoms to emerge.

Our immune response uses various types of cells with defined functions to identify and to try to destroy microbes (foreign bodies including viruses that may be harmful to us). However, Covid can sometimes give rise to an over-response of parts of the immune system – by way of a 'cytokine storm' which involves the extreme over-production of signalling cells (cytokines) which then cause the parts of the immune system that attack microbes to also start attacking healthy parts of our body's function (known as an auto-immune response). Some of the cells that are involved in fighting microbes (even if they do so without an auto-immune response) are associated with fatigue: specifically, interleukin-2 and interferon. T lymphocytes can also affect quality of sleep. So, there is reason to believe that the immune response may be implicated in the experience of Long Covid fatigue.

We also know that as the immune response affects and is affected by other body systems such as the autonomic nervous system and the HPA axis (hypothalamic-pituitary-adrenal axis), that symptoms (including fatigue) can be exacerbated by dysregulation to these other systems too.

However, we know from research that secondary factors can also exacerbate fatigue. Secondary factors include disordered breathing, stress and anxiety, work/family/social demands, or

the presence of other medical conditions, all of which may add further stress to our body and perpetuate fatigue symptoms.

Stress and anxiety can have an impact on the function of the autonomic nervous system by over-activating its sympathetic branch, also known as the fight, flight and freeze response. This in turn communicates with the HPA axis and immune system mentioned above and so causes further dysregulation.

The effect of these primary and secondary factors is that body systems move away further from homeostasis and balance and become dysregulated.

However, it is possible to address many secondary perpetuating factors, leading to an improvement of symptoms.

## Managing Long Covid fatigue

It is helpful to think of managing fatigue in three distinct stages:

### Stabilisation

- Taking steps to ensure your fatigue is no longer getting worse
- Establishing a baseline

### Increasing tolerance

- When you can consistently manage your baseline
- Gently start to increase activity levels, for example by using the four Ps

## Maintenance

- Building knowledge and skills to maintain your fatigue management
- Relaxation, good sleep

## Setting a baseline

In order to stabilise your fatigue, the first thing is to find your baseline. A baseline is an amount of activity that you can tolerate on a consistent basis, without significantly increasing your symptoms.

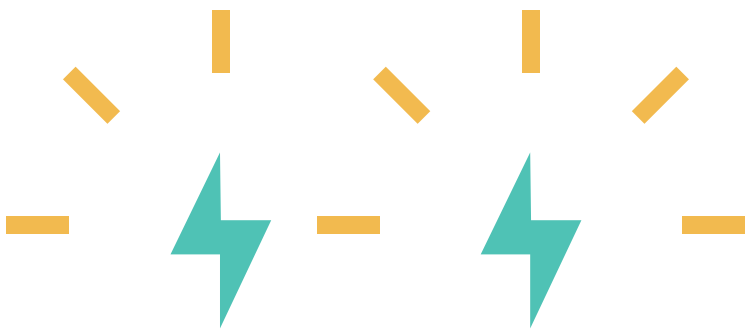
Ideally, a baseline should avoid any extremes of either activity or inactivity – shown on the diagram as the blue lines.

Next, pay attention to your pattern of activity. If you cram too much in so that you can catch up or because you feel slightly better so use that as an opportunity to fit in lots of activity you may end up feeling overwhelmed by fatigue. This is known as boom and bust (the red line on the diagram). It demonstrates the extremes of doing too much, followed by a crash in energy leading to inactivity.

Try to maintain a manageable level of activity balanced by rest and relaxation. You may feel mildly tired after such a level of activity but should not be completely exhausted and should feel better again after a short rest. This is represented by the green line and demonstrates a good baseline of activity. It sits between

the blue lines of extreme activity and inactivity and also avoids the steep increases and decreases in activity seen on the red line (boom and bust).

An effective baseline of activity that you can manage consistently over a period of time without a 'crash' or significant increase in fatigue suggests that you are ready to slowly start increasing your activity.



# The four P's approach

## Plan

- Have a look at how you plan activities across your week, and each day. Use a diary or calendar and try to not do too many jobs in one day.
- Plan ahead – alternate heavy and light tasks.
- Plan regular relaxation and rest breaks to 'cushion' periods of activity. This is essential and should be considered as a daily 'dosage of relaxation'. (See below for information on relaxation).
- Consider the timing of tasks – schedule more demanding tasks for the time of day that you are at your best in terms of energy.
- Prepare or complete some aspect of tasks ahead. Break tasks into small steps.

## Pace

- A slow and steady approach is the best
- Practice breathing exercises during tasks.
- Doing things slowly uses less energy and less oxygen so will leave you with more energy to spare.
- Breathe out during a strenuous part of an activity, or when bending / reaching ("Blow as you Go!")

## Prioritise

- Split the tasks into 'essential' and 'valued'
- Try to get a balance of tasks that are essential and those that you enjoy or value (at a level that you can manage).
- Try to achieve at least one valued activity each day as this can replenish energy.
- Learn to say No, ask for help and accept it when offered.

## Positivity

- Remain focused on making the changes that you need to be able to feel better
- Consider keeping a journal of your progress so you can refer to it and see improvements when you need a little extra motivation
- Celebrate even the small things that you achieve
- Be kind to yourself – choose to be your own supportive friend rather than a critical bystander

# Examples of adapting tasks to manage fatigue

## Self care

- Rest between each stage
- Can you sit down to wash or shower, or to dry yourself?
- Rest your elbows on a firm surface for drying your hair or applying make up
- Dress your lower body first and then sit to dress your top half
- Choose easy fitting clothes and footwear.

## Chores

- Challenge what needs doing and how often. Do you have to iron everything or vacuum as frequently as you do?
- Sit down to do tasks as often as possible; it uses less energy
- Break jobs down into small chunks and sit down to rest in between stages of a task
- If you do a high energy job such as vacuuming, avoid another high energy job such as gardening on the same day. Spread things out.
- Batch cook meals if you can, so that you have meals ready for days when you're tired.
- Order shopping for delivery rather than doing a big shop.
- Keep things in easy to reach places & near to where they are needed.
- If you can, have duplicate items around the house so you do not have to 'fetch & carry' throughout the day.
- Use a bag to carry several items at a time.

- Take things up the stairs when you go rather than going up the stairs especially.
- Avoid excess stooping and stretching – place items where they will be used and at waist height, use long handled tools whenever available.

## Out and about

- If you have a big event coming up, plan rest before and after and don't schedule in lots of other tasks
- If someone else can drive, this will reduce your energy demands
- Consider lightweight folding chairs or a walking stick with a seat if going for a walk
- Keep well hydrated
- Don't forget your rests

## Relaxation

Finding time for effective relaxation is essential for managing Long Covid fatigue. Effective relaxation needs patience and practice. Think of it as something that can be “dosed” like a medicine and make time for several doses a day.

Sometimes the words ‘rest’ and ‘relaxation’ can be used interchangeably. However, some of the things people do to ‘rest’ are not necessarily relaxing. For example, sitting down to watch the TV, stimulates your brain and so whilst it may be a low demand activity that rests you physically, it is not necessarily the same as relaxation. When we are resting or relaxing effectively it enables the body and mind to recharge.

To achieve quality rest, it is important to see relaxation as a positive strategy that helps to reduce tension in your body and mind. In this section, we use the words rest and relaxation to mean engaging in refreshing your mind and body through targeted activities that replenish energy levels.

## The importance of relaxation

The aim of relaxation is to reduce mental and physical tension so that the body and mind is rested. It can be helpful in managing a variety of health conditions. When our body is in its natural relaxed state, our heart rate and breathing rate is slower, our blood pressure is lower, and we experience a feeling of increased wellbeing.

Relaxation techniques are generally considered safe for most healthy people, however there may be some techniques that may not be helpful or suitable for some health conditions, as they may bring on further emotional stress, for example if you have experienced traumatic events you may wish to avoid visualisation techniques. If after practicing a relaxation technique for a while it is not effective for you, stop doing it and try a different one.

Balancing activity with quality rest throughout the day is an important part of self-managing Long Covid fatigue. Without adequate periods of rest, our bodies cannot function effectively.

## Types of relaxation

There are different levels of feeling relaxed and various ways in which to achieve a state of relaxation. There is relaxation by 'doing' which involves engaging in activities you enjoy, to distract or refresh you from fatigue symptoms that you may be experiencing. Whilst it is possible to experience some degree of relaxation using this method, it is important not to get too absorbed in these types of activities for longer than you can tolerate with your current baseline, as this could cause a flare up in symptoms.

There is also relaxation by 'being' which involves more formal types of relaxation such as breathing exercises, guided visualisation and mindfulness meditation.

Knowing what relaxation techniques will work for you, is down to personal choice and preference. Whichever method or methods of relaxation you choose, regular practice will help.

## Sleep

Optimising the quality of sleep is obviously important in managing fatigue. The practice of having a good routine to get the most out of your sleep is called 'Sleep Hygiene'.

## Sleep Hygiene

Strangely, one of the most important things to try to improve your sleep hygiene is to stick to the same getting up time every day (including weekends). This helps to regulate your Circadian rhythm – the body's routine that repeats every 24 hours and which helps to regulate when you feel sleepy and more active.

Once you have done this, try to establish a routine that prepares your body for going to bed every night. Once you have found your 'countdown to bedtime' routine, try to stick to it as it helps your body understand that it is time for sleep. You may wish to consider introducing some of the following when planning and experimenting with your routine:

- A hot milky drink (replicates sleep hormone effects)
- A warm bath or shower an hour or two before bed. Try to let some of the water evaporate from your skin for a moment before drying yourself as this replicates the natural cooling of our bodies as we enter sleep.
- Avoid screens (phones, TVs, computers) for two hours before bed preferably. The blue light they emit tricks the brain into staying awake and alert. If you must use phones etc, see if they have a low light setting to minimize blue light.
- Listen to some soothing music
- Spray some pillow mist containing essential oil such as lavender (if you can tolerate this) which is associated with relaxation or use a diffuser device to achieve the same effect. (If using anything with a naked flame – remember to extinguish it before bed)!
- Avoid alcohol (although it may make you initially feel sleepy, it has a wakening effect later during the sleep cycle).
- Try a relaxation technique such as a breathing exercise
- If you have something on your mind, jot it down in a notebook before you go to bed and then tell yourself you will do it in the morning.

Once you have established your routine, try to do things in the same order every night before bed, as this signals to your brain that it is time to sleep.

If you wake in the night and are tossing and turning and unable to get back to sleep within 30 minutes or so, get out of bed and go somewhere where you can sit for a while in dim light. Perhaps have a non-caffeine drink such as warm milk or a herbal tea designed for encouraging sleepiness and then go back to bed.

If sleeplessness persists, try hard to keep your regular getting up time, but consider going to bed later – when you really feel tired. If this results in you dropping off to sleep straight away after going to bed, this is a good sign. Get up at your normal time (you may need an alarm) and the next night go to bed just 15 minutes earlier. This can help 'reset' your sleep routine and if it works you can gradually go to bed a little earlier each time until you are at your preferred bedtime.

## A note on daytime napping

Sometimes people report that they are so tired that they need to nap during the day to keep up with daily life. In the past, it was considered a bad idea to have daytime naps, because they were thought to prevent good quality night time sleep. Recent studies have suggested however, that a short day-time nap may be helpful in replenishing energy. Key points to bear in mind are to limit naps to around 30 minutes and try to avoid napping after 3pm so that your night time sleep is not affected.

# Muscle weakness

It is normal to become weak and deconditioned during your illness. Your recovery will need to be a gradual process, during which you will be able to do more daily activities. These might start with simple tasks such as feeding yourself or, brushing your teeth.

It is also beneficial to build your physical ability by doing daily exercises, which will strengthen your muscles, heart and lungs, lower stress, help with sleep and improve your mood.

Below are some guided exercises for different stages of your recovery journey. When you are following these exercises, it is often hard to know how much you can safely do. You may find it beneficial to refer to the BORG scale below. You should aim to exercise between levels 3 & 5- in the yellow section.

## The BORG scale

	Breathlessness	Muscular effort
1	No problem	Very light
2	Very easy	Fairly light
3	Easy	Moderate
4	Beginning to feel puffed	Somewhat hard
5	Feeling a bit puffed	Hard
6	Feeling puffed	
7	Tiring	Very hard
8	Very tiring	
9	Out of breath	
10	Exhausted	Very, very hard

## 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.

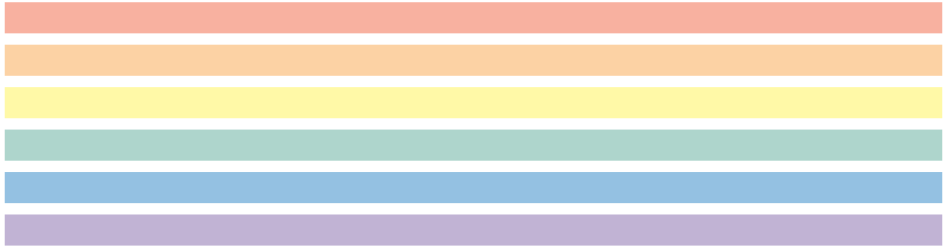
## Flexibility and stretching exercises

<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 diary 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.

# The emotional impact of Covid19

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, affecting many areas of an individual's life.

Having ongoing symptoms can cause common problems such as:

- 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.

**Depression**

**Pain**

**Anxiety**

**Memory loss**

**Sleep problems**

**Fatigue**

**Sensory change**

Including vision,  
hearing, taste and smell.

**Post-traumatic  
stress symptoms**

Including hallucinations,  
nightmares, fear and  
anger.

**Social  
problems**

## What can help?

It is helpful to remind yourself that during your treatment, you will experience ups and downs – good days and bad days. It is important not to dwell on the negative or become too self-critical. Try not to be too hard on yourself if you are finding things difficult. Recovery takes time and reminding yourself to focus on the positives, no matter how small can be helpful. As best you can practice self-compassion, by being kind to yourself as you would likely do towards a close friend or family member.

There are several things you can do to help self-manage the symptoms of long-COVID and reduce their impact on day-to-day function including:

- Engaging with activities you find relaxing or enjoyable.
- Spending time in the company of close family and friends.
- Avoid watching too many news items or being on social media if this is creating unnecessary anxiety.
- Focus on the things that are in your control.

## Learning to relax

Relaxation is a vital part of conserving your energy and can assist in controlling feelings of anxiety as well as reducing the experience of pain and improving overall quality of life. To get you started, here is a simple technique you can use for managing anxiety and helping to relax.

## Sensory grounding technique

Take slow, gentle breaths whilst you do with the following tasks.

- Look around your environment and focus on five different things you can **SEE**
- Listen out for four different sounds you can **HEAR**
- Make contact with three different objects you can **TOUCH** and feel
- Try to find two different things you can **SMELL**
- If available to you, place one edible object in your mouth and focus on its **TASTE**

Try to complete each task slowly, focusing on the use of one sense at a time and spend at least 10-15 seconds on each area.

There are many different approaches in learning to relax and people often prefer different techniques. For this reason, it can be helpful to explore and engage with several different strategies to find the one which works best for you. Some methods may include:

- Progressive Muscle Relaxation (PMR)
- Mindfulness
- Meditation
- Visualisation or Guided Imagery
- Aromatherapy
- Yoga
- Tai Chi
- Music

# Thinking patterns and symptoms

It is important to remember that ongoing symptoms are a normal part of long-COVID. However, focusing attention on and worrying about symptoms can often make them worse. As doing so will likely magnify or intensify them, as shown in the diagram below:



To illustrate this, try to focus your attention on your heartbeat or on your breathing, even for just a few moments and notice how much more aware you become of how these sensations feel to you. Similarly, imagine if you were to focus your attention on a headache or on a difficulty with sleeping. How much more likely would you be to experience more headaches or further difficulty with sleeping? This is also true of long-COVID symptoms such as breathlessness, pain, and fatigue. Before ever contracting COVID-19, you will have likely experienced similar symptoms, but would have perhaps dismissed them much more easily? This can be a helpful approach when experiencing symptoms of long-COVID. However, it is also important not to ignore any ongoing symptoms and to discuss these with your GP or medical team.

Very often symptoms appear linked, which means that when one symptom intensifies, it can lead to increases in other symptoms also. For example, if you are tired, it is common to struggle with concentration, which in turn can affect your ability to process new information and remember it. These subsequent lapses in memory can lead to an increase in anxiety, which can also lead to further feelings of exhaustion and fatigue. This is perfectly normal. The good news is that being caught in such a cycle means that making an improvement in one area should also lead to improvements in other areas as a result. For this reason, targeting cycles such as the one mentioned above, are often the focus of treatment interventions.

# Impaired swallow and voice

Swallowing and speaking involve using many muscles in the mouth, throat and chest. The coordination of breathing plays an important part: to produce voice and to protect our lungs from food and fluid going down the wrong way when swallowing.

People who have had Covid-19 may have difficulties eating, drinking and speaking due to:

- Difficulties breathing: you may become breathless very easily
- Weaker muscles because they haven't been used for a while (for example if you needed a tube to feed you)
- Soreness and inflammation in the throat and voice box
- You may become tired very easily: swallowing and speaking may take more effort than usual

If you needed a tube to help you breathe this may also have affected your swallowing and speaking, as it passes through your mouth and throat, and directly through your vocal cords into your windpipe. This can cause swelling and soreness and occasionally other, more prolonged problems with your voice or throat.

These difficulties should resolve as your general condition improves. In the meantime there are many things you can do to help.

If you have any of these symptoms you may be at risk of choking, or food/fluid going down the wrong way into the lungs, which could cause chest infections. You may also struggle to get enough to eat and drink.

## Things you can do to help

- Always sit as upright as you can for eating, drinking and taking tablets
- Reduce distractions so that you can concentrate (eg turn off the TV)
- Take small sips of drink and small mouthfuls of food; take tablets one at a time
- Eat and drink at a slower pace – one sip or bite at a time - give yourself time for extra swallows to clear any food or fluid sticking in your mouth or throat
- Sips of drink between mouthfuls can help clear food sticking in the throat
- Stop and rest if you are feeling breathless or tired
- Softer, moister food that requires less chewing may be easier. It may help to add sauce or gravy
- Eat smaller amounts at a time – little and often throughout the day rather than 3 main meals

## Eating and drinking

The types of difficulties you may experience with swallowing include:

- Coughing/choking during or after eating, drinking or taking tablets

- Wet or 'gurgly' sounding voice
- Finding it harder to breathe while eating and drinking
- Difficulty chewing
- The sensation of food, fluids or tablets sticking in your mouth or throat

If you have any of these symptoms you may be at risk of choking, or food/fluid going down the wrong way into the lungs, which could cause chest infections. You may also struggle to get enough to eat and drink.

### Things you can do to help

- Always sit as upright as you can for eating, drinking and taking tablets
- Reduce distractions so that you can concentrate (eg turn off the TV)
- Take small sips of drink and small mouthfuls of food; take tablets one at a time
- Eat and drink at a slower pace – one sip or bite at a time - give yourself time for extra swallows to clear any food or fluid sticking in your mouth or throat
- Sips of drink between mouthfuls can help clear food sticking in the throat
- Stop and rest if you are feeling breathless or tired
- Softer, moister food that requires less chewing may be easier  
It may help to add sauce or gravy
- Eat smaller amounts at a time – little and often throughout the day rather than 3 main meals

# Voice

The types of difficulties you may experience with speaking include:

- Weak, quiet, hoarse or breathy voice
- Dry or sore mouth and throat
- Only being able to say a few words on one breath
- Increased effort and discomfort when speaking

## Things you can do to help

- Take a moment to notice any tension in your shoulders/neck/jaw and release as much as you can. Aim to do this frequently throughout the day
- Sit as upright as you comfortably can
- Make sure you are face-to-face with the person you are speaking to and avoid speaking over background noise (eg TV, music)
- Take a relaxed breath before talking and take regular breaths to avoid straining. Speak in shorter sentences and take your time
- Avoid shouting or forcing/pushing your voice out – speak in a soft, gentle voice
- Don't intentionally whisper as this makes your voice box work harder
- Stay hydrated by drinking plenty of water – sip water frequently throughout the day. Avoid caffeine and alcohol

Stress and anxiety can also have a negative impact on your voice, breathing and communication. There are many forms of relaxation which may help, such as 'mindfulness'. If you feel you need more support or ideas please see the 'Keep Your Head' website – this brings together reliable information on mental health and wellbeing for children, young people and adults across Cambridgeshire and Peterborough ([keep-your-head.com](http://keep-your-head.com)).

If your voice has not completely returned to normal 6-8 weeks after starting with COVID-19 virus symptoms speak to your GP - it may be helpful for you to be seen by an Ear, Nose & Throat (ENT) doctor, and you may benefit from Speech and Language Therapy.

# Eating well

It is important to maintain a good nutritional status to reduce the impact of Covid-19 and other illnesses. To do so, it is best to eat a variety of foods to help provide adequate nutrition. Eating a range of foods will help to decrease the risk of poor health and lung function while also increasing immunity and overall well-being.

Below is The Eatwell Plate. This shows the food groups that contribute to a balanced diet and the proportions that they should be eaten in.



## Carbohydrates

Bread, rice, pasta, potatoes and other cereals.

Other foods in this food group include: oats, noodles, maize, millet, cous cous, cornmeal and flour. This group provides starch which is the main source of energy for the body. These should be eaten at every mealtime. Whole grain varieties also help to provide fibre, which helps to maintain good bowel function.

## Fruit and vegetables

This food group is important as they provide many essential vitamins and minerals, including Vitamin C, potassium and folate. They also are a source of fibre which can help with gut motility and also helps to maintain a healthy gut.

It is recommended to have at least five portions of fruit and vegetables daily. An ideal portion is 80g or a handful. This can include any fruit or vegetable whether fresh, frozen, dried or tinned, as long as they are tinned in their own juice. Ways to try and increase fruit and vegetables in your diet include adding fruit to cereal, adding vegetables to sauces and main dishes and having fruit salad for dessert.

## Dairy products

The Dairy group includes any products made from milk, whether made with cow's milk or an alternative. This could include milk e.g. cow's, goat's sheep's, soya, rice, pea and oat (choose non-cow's milk products that have added calcium), yoghurts, cheese, fromage frais and crème fraîche. This food group is extremely important as they provide Calcium, Vitamin A and Vitamin D. Calcium and Vitamin D are very important to help maintain bone strength. Steroids, a medication which is often prescribed, can increase the bone loss, inevitably making bones weaker. It is

very important to have 3 portions of dairy products, or calcium rich dairy alternatives, a day to maintain bone strength, but often calcium supplements may be prescribed.

## Protein

This group includes beef, lamb, pork, chicken, turkey, fish, beans, lentils, pulses, soya products, quorn and tofu. These foods provide protein which is essential for the maintenance of muscle and muscle function. Ideally, white meat and fish are lower in fat than red meat therefore try to limit to not have more than 2 portions of red meat (beef, lamb) a week. It is important to try and have two portions of fish a week, one of which should be a portion of oily fish e.g. salmon, trout, sardines or mackerel.

## Foods high in fat and high in sugar

High fat, high sugar foods are energy dense and should be eaten sparingly. Weight gain may occur if they are eaten frequently without equal amounts of activity. This food group contains a range of foods that are high in fat, whether the food is classified as "good" or "bad" fat. This is because no matter the type of fat, it is very high in energy and over consumption can lead to weight gain. Fats and oils includes butter, lard, margarine, olive oil, sunflower oil, rapeseed oil and other cooking fats. Additionally, chocolate, biscuits, crisps and fried foods are high in fat. Foods high in sugar include sweets, high sugar cereals and non-diet fizzy drinks. It is important to limit these products to maintain a healthy weight. Try to have no more than a couple of times a week.

It is important for everyone to maintain a healthy body weight and Body Mass Index (BMI). BMI is weight in kg divided by your height in metres<sup>2</sup>. Although, like many tools, BMI is not perfect, it does give us a good starting point or guide as to whether someone may be underweight, overweight or just right.

BMI	Classification
Less than 18.5	Underweight
18.5 – 25.0	Healthy / ideal body weight
25.0 – 29.9	Overweight
More than 30	Obese

If you have a BMI in the “healthy” range, it is important to try and keep your weight stable. This can be done by:

- Eating regular meals throughout the day with occasional snacks
- Eating five portions of fruit and vegetables a day
- Being physically active daily

# Unplanned weight loss

If your BMI is already under 18.5 and/or you are unintentionally losing weight, it is important to try and increase your weight and BMI. This is because unplanned weight loss can increase the loss of respiratory muscle strength, which may lead to increased difficulty breathing and also, increased risk of infection making it harder for you to breathe. People with a lower weight tend to have longer stays in hospital and longer recovery periods. This is largely due to them having less reserve or already struggling with eating and drinking enough.

Many of the things noted earlier in this book can affect your ability and desire to eat e.g.:

- Sore throat from being on a ventilator
- Swallowing difficulties, again from the ventilator or being tube fed and any muscle loss while in hospital
- Breathlessness – it's hard to eat a "proper meal" if you are gasping for breath after each mouthful
- Loss of taste and smell – desire and pleasure of eating reduces significantly when everything tastes the same or doesn't taste/smell as you would expect it to.
- Fatigue from your illness too can mean that preparing a meal and eating it can be too tiring. Equally if you are sleeping a lot, meals and snacks could be missed, reducing your overall energy intake.

To prevent further weight loss, you could enrich your meals for example:

- Add extra butter/oil when cooking or eating foods
- Use full fat dairy products e.g. full cream milk, cheese and cream
- Eat little and often e.g. 3 meals and 3 snacks a day
- Add extra ingredients to meals. This may include adding cheese or croutons to soup, adding full cream milk/butter/milk powder to mash potato or adding extra sugar/honey/milk powder to breakfast cereal
- Have milk or other nourishing drinks e.g. Horlicks, hot chocolate, milky tea, milky coffee, milkshakes, smoothies or fresh fruit juices instead of water
- Try to eat when relaxed as this may improve the eating experience and may result in you eating slightly more
- Have two small courses at meal times e.g. sandwich and dessert
- Eat the foods that you enjoy
- Eat when you fancy food, not when you think you should eat e.g. meal times only

If you are experiencing shortness of breath (SOB) or if you are having difficulty eating due to SOB, you could try

- Eating more slowly
- Eating when relaxed
- Choose foods that are easy to chew
- Have 5/6 smaller meals throughout the day
- Try to have liquids after a meal

Overall, it is important to enjoy your food. Try to eat a variety of food to provide adequate nutrition and to increase enjoyment.

# Brain fog

## 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.

People with brain fog can have quite significant memory and thinking difficulties. The symptoms are often quite frightening for people. However, it is important to know that doctors do not think that there is anything seriously wrong in the brains of people with these symptoms. There are very good reasons why this is happening; namely, that there are problems in attention. While this is frightening, we expect people to get better over time.

All of our activities are influenced by attention. If your attention is poor, your ability to carry out everyday tasks is impaired. For example, if you are cooking, opening your front door, chatting to a friend, watching TV, reading a book or doing a complex task at work, these are all underpinned by attention. The term doctors and psychologists use for attention is working memory. Working memory is our ability to hold multiple things in mind in

order to complete a task. One of the reasons we have lapses in attention is because working memory has a limited capacity; we can only hold a certain amount of information in our minds at any one time. For example, experiments have shown that people cannot do two things at once, for example do maths puzzles and describe the meaning of words at the same time. We know that there are many factors that can interfere with our working memory but it is likely to be one of the following:

- Physical health problems
- Pain
- Tiredness/fatigue
- Low mood
- Anxiety
- Stress
- Medication
- Alcohol and drugs

For example, in the case of fatigue, we have all had the experience of being exhausted and not being able to write an email or make a decision but we get a good night's sleep and things seem easier.

We also know that hypervigilance affects our attention – in other words when we over interpret symptoms and signs that are in fact relatively common. For example, word finding problems are common in the normal population but if we start to worry about our word finding difficulties, the problem becomes worse and can lead people to think they have dementia. People who are hyper-vigilant tend to focus on small

changes in their mental and physical state, which can lead them to misinterpret those symptoms, creating anxiety and causing further cognitive difficulties.

These attentional problems lead to another problem, not only are you unable to do the task at the time, it also leads to problems with your memory. Put simply, if you do not pay attention to the information you are unlikely to remember it later on.

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
  - 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.<sup>41</sup>

## 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 repeat 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. For example if you are going upstairs to get your medication, remind yourself 'I am getting my medication' as you walk up the stairs so you don't get distracted and forget what you have gone upstairs for.

## **Feel, see, say**

If you are locking the front door, feel the key in your hand, watch yourself as you turn it and say 'I am locking the door.'

# Resources

## Websites

Advice on post covid fatigue and pacing: [www.rcot.co.uk/recovering-covid-19-post-viral-fatigue-and-conserving-energy](http://www.rcot.co.uk/recovering-covid-19-post-viral-fatigue-and-conserving-energy)

Sleep Foundation: [www.sleepfoundation.org/articles/healthy-sleep-tips](http://www.sleepfoundation.org/articles/healthy-sleep-tips)

How to Get to Sleep: [www.nhs.uk/live-well/sleep-and-tiredness/how-to-get-to-sleep/](http://www.nhs.uk/live-well/sleep-and-tiredness/how-to-get-to-sleep/)

Statutory Sick Pay: [www.citizensadvice.org.uk/work/rights-at-work/sick-pay/check-if-youre-entitled-to-sick-pay/#Who\\_isnt\\_entitled](http://www.citizensadvice.org.uk/work/rights-at-work/sick-pay/check-if-youre-entitled-to-sick-pay/#Who_isnt_entitled)

Relaxation Techniques: [www.getselfhelp.co.uk/relax.htm](http://www.getselfhelp.co.uk/relax.htm)

What is Mindfulness?: [www.headspace.com/mindfulness](http://www.headspace.com/mindfulness)

Every Mind Matters: Eat better, sleep better, move more, manage stress and low mood: [www.nhs.uk/oneyou](http://www.nhs.uk/oneyou)

## Apps

Calm: [www.calm.com](http://www.calm.com)

Headspace: [www.headspace.com/headspace-meditation-app](http://www.headspace.com/headspace-meditation-app)

Insight Timer: [www.insighttimer.com](http://www.insighttimer.com)



# Patient Advice and Liaison Service

For information about CPFT services or to raise an issue, contact the Patient Advice and Liaison Service (PALS) on Freephone 0800 376 0775, or e-mail [pals@cpft.nhs.uk](mailto:pals@cpft.nhs.uk)

Out-of-hours service for CPFT mental health service users

Please call NHS 111 for health advice and support.

If you require this information in another format such as braille, large print or another language, please let us know.

With grateful thanks to the Leeds Teaching Hospitals NHS Trust for permission to use and adapt their leaflet for Cambridgeshire and Peterborough patients.

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