

Post COVID19 Recovery - Rehab in 2022

Jane Dickson, Clinical Specialist Cardiorespiratory Physiotherapist

How are you Coping with COVID?



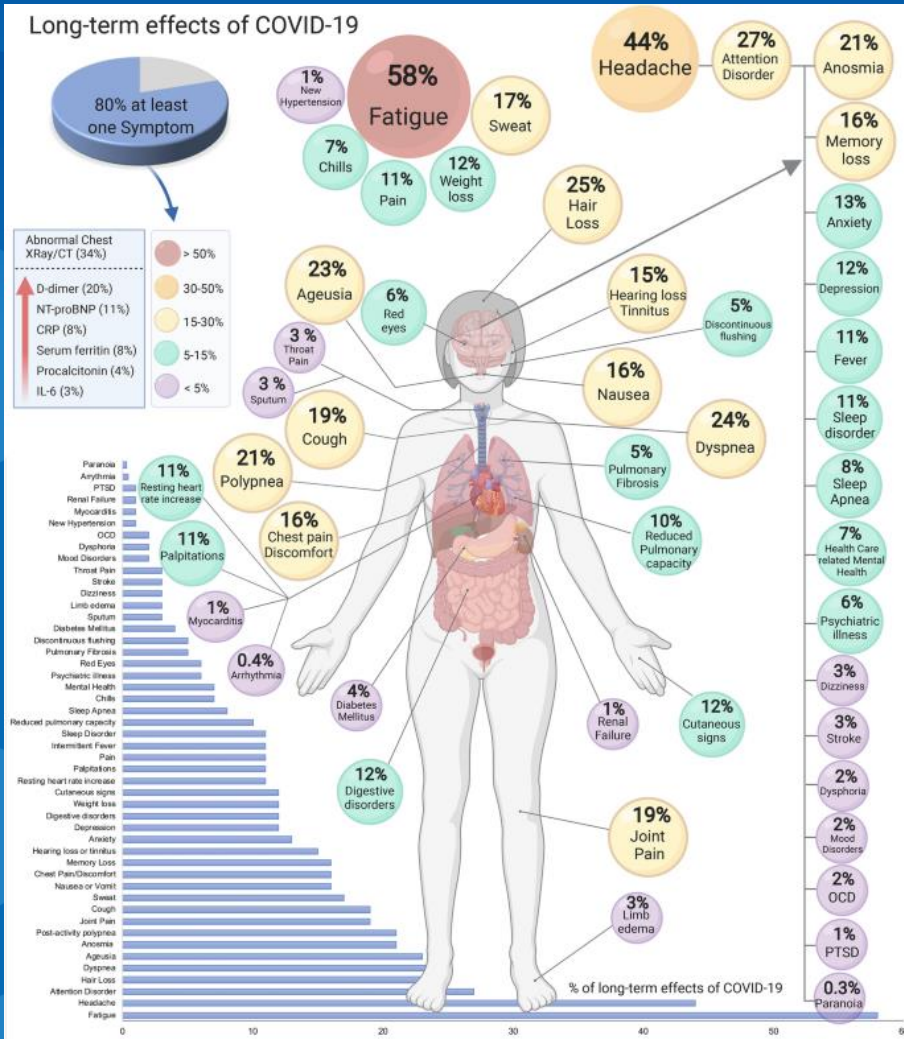
Long COVID -> Post COVID-19 Condition

WHO definition (6th Oct 2021)

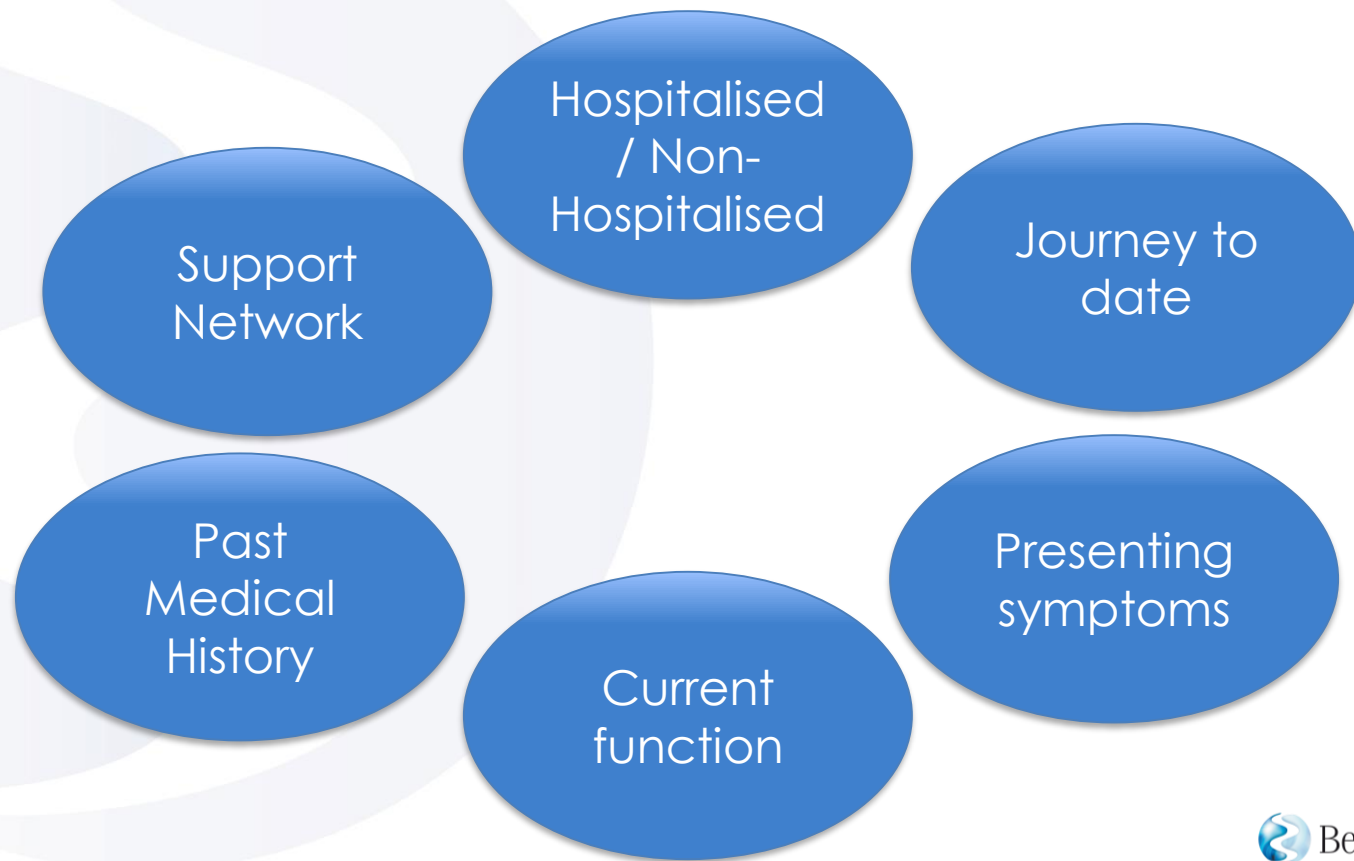
- Occurs in individuals with a history of probable or confirmed SARSCoV-2 infection
- Usually 3 months from the onset of COVID-19
- symptoms that last for at least 2 months
- cannot be explained by an alternative diagnosis.

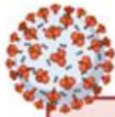
Symptoms

Long-term effects of COVID-19



We have to Look at the Patient Sitting in Front of us...





POST-COVID-19 SYNDROME

Estimated time
to resolution

6-12
weeks

8-12
weeks

?

PSYCHOLOGICAL

- Depression and anxiety
- Post-traumatic stress

NEUROLOGICAL

- Cognitive impairment
- Headache
- Taste and smell alterations
- Post-traumatic stress
- Sleep disturbances
- Peripheral neuropathy
- Dizziness
- Delirium

CARDIOVASCULAR

- Chest tightness
- Palpitations
- Orthostatic hypotension
- Syncope
- Dysautonomia

RESPIRATORY

- Dyspnea
- Chest pain
- Cough

MUSCULOSKELETAL

- Fatigue
- Weakness
- Osteoarticular pain
- Muscular pain

OTHERS

- Abdominal pain
- Nausea
- Diarrhoea
- Anorexia



POTENTIAL BENEFITS OF EXERCISE

PSYCHOLOGICAL

- Modulates pain
- ↑ Well-being and mood state
- ↓ Stress

NEUROLOGICAL

- Stimulates brain plasticity
- ↑ Neurocognitive abilities
- ↓ Cognitive dysfunction
- ↓ Allostatic overload
- ↑ Sleep quality

CARDIOVASCULAR

- ↑ Mitochondrial biogenesis
- ↑ Vasculature
- ↑ Cardiovascular function
- ↓ Blood pressure
- Normalizes dysautonomia

RESPIRATORY

- ↓ Dyspnea
- ↑ Oxygen uptake
- ↑ Pulmonary function
- ↑ Oxidative stress

MUSCULOSKELETAL

- ↑ Muscle mass
- ↑ Muscle strength
- ↑ Intermuscular coordination
- ↑ Tolerance to exercise

IMMUNE SYSTEM

- ↑ Immune function
- ↑ Anti-inflammatory cytokines
- ↓ Pro-inflammatory cytokines
- ↓ Immunosenescence



Huge range of pathology with very different types of rehabilitation needs.... **Individualised**

Multifaceted...**MDT**



**World
Physiotherapy**

**World Physiotherapy
response to COVID-19
Briefing paper 9**

**SAFE REHABILITATION APPROACHES FOR
PEOPLE LIVING WITH LONG COVID:
PHYSICAL ACTIVITY AND EXERCISE**

June 2021

➤ Key messages

Safe rehabilitation



- **Post-Exertional Symptom Exacerbation:** before recommending physical activity (including exercise or sport) as rehabilitation interventions for people living with Long COVID, individuals should be screened for post-exertional symptom exacerbation through careful monitoring of signs and symptoms both during and in the days following increased physical activity, with continued monitoring in response to any physical activity interventions.
- **Cardiac Impairment:** exclude cardiac impairment before using physical activity (including exercise or sport) as rehabilitation interventions for people living with Long COVID, with continued monitoring for potential delayed development of cardiac dysfunction when physical activity interventions are commenced.
- **Exertional Oxygen Desaturation:** exclude exertional oxygen desaturation before using physical activity (including exercise or sport) as rehabilitation interventions for people living with Long COVID, with continued monitoring for signs of reduced oxygen saturation in response to physical activity interventions.
- **Autonomic Dysfunction and Orthostatic Intolerances:** Before recommending physical activity (including exercise or sport) as rehabilitation interventions for people living with Long COVID, individuals should be screened for autonomic nervous system dysfunction, with continued monitoring for signs and symptoms of orthostatic intolerance in response to physical activity interventions.

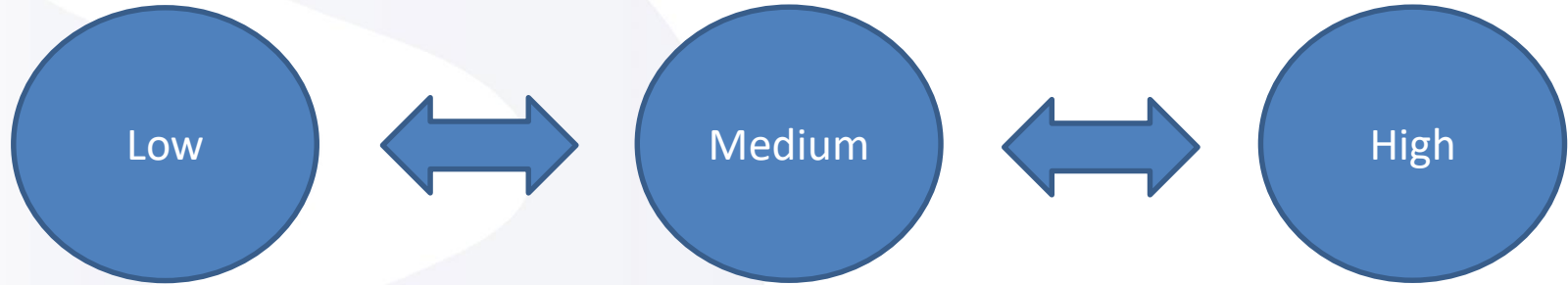
Common testing:

- ECG
- ECHO
- Bloods
- CXR
- PFTS – including MIPS/MEPS
- Physio assessment
- Consultant review

Outcomes measures:

- Symptom list
- Fatigue score (Chalder)
- SF 36
- HADS
- Chester step test
- Hand grip strength
- +/-Breathing assessment

What is the Patient's Functional Level?



Minimal assessment:

Watch out for signs of Post exertion Symptom Exacerbation (PESE) or Post exertional malaise (PEM)

“I have good days and bad days.. When I feel good I do lots, but I suffer after”

Numerous Aspects of Rehab to be Covered

Supervision by medical team

Physio

Reconditioning through:

- Strength
- Flexibility
- Fatigue management
- SOB management

Occupational therapy

- Pacing/energy conservation
- Cognitive training
- Return to work planning

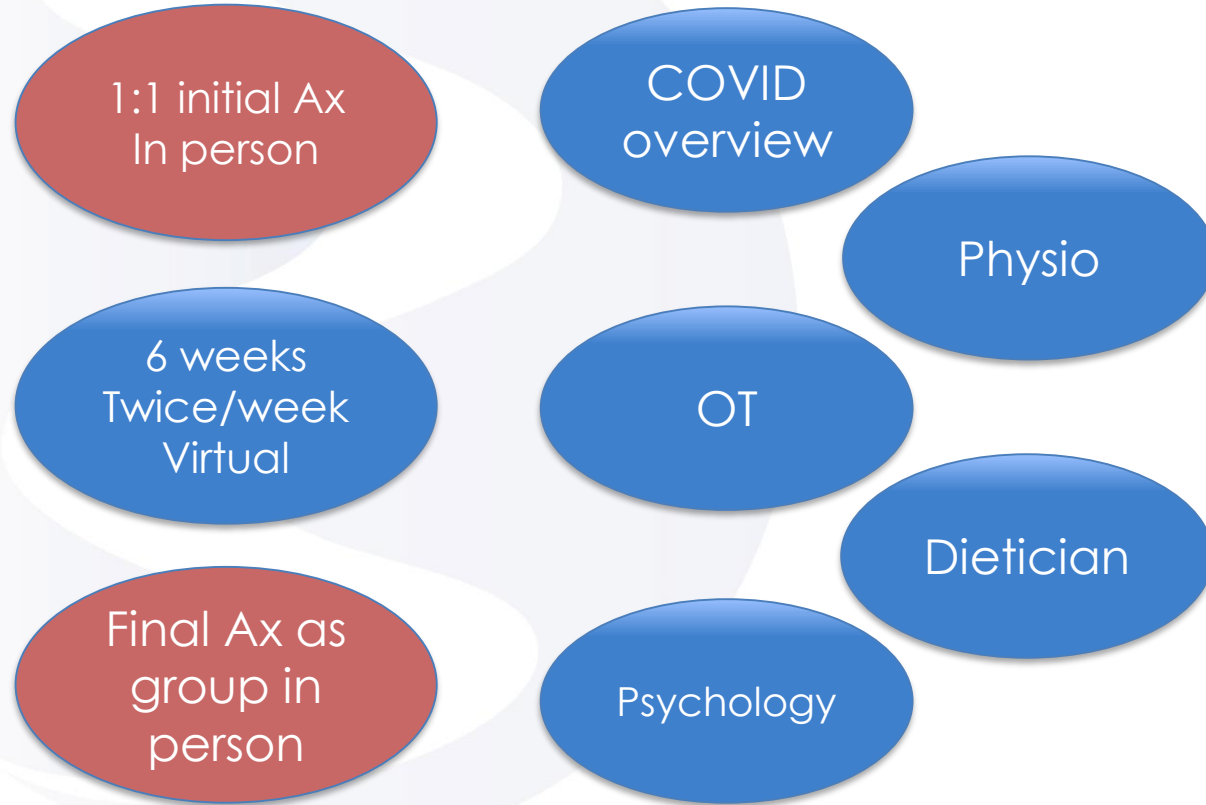
Diet

- Taste and smell changes and impact on nutrition
 - GI disturbances
- Up to date info on supplements

Psychology

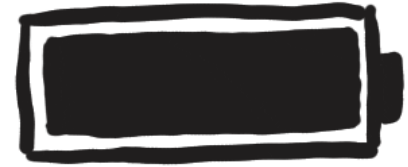
- Anxiety management
- Self doubt about condition
- Goal setting with rehab and recovery

Long Covid Class at Beacon Hospital



Recognise your **body**
battery...

What do you want to give
energy to?



DePaul Symptom Questionnaire – Short Form
DSQ – SF

For each symptom below, please circle one number for frequency and one number for severity:
Please complete the chart from left to right.

<u>Frequency:</u> Throughout the past 6 months , how often have you had this symptom? For each symptom listed below, circle a number from: 0 = none of the time 1 = a little of the time 2 = about half the time 3 = most of the time 4 = all of the time	<u>Severity:</u> Throughout the past 6 months , how much has this symptom bothered you? For each symptom listed below, circle a number from: 0 = symptom not present 1 = mild 2 = moderate 3 = severe 4 = very severe
--	--

Symptom	Frequency:	Severity:
1. Fatigue/extreme tiredness	0 1 2 3 4	0 1 2 3 4
2. Next day soreness or fatigue after non-strenuous, everyday activities	0 1 2 3 4	0 1 2 3 4
3. Minimum exercise makes you physically tired	0 1 2 3 4	0 1 2 3 4
4. Feeling unrefreshed after you wake up in the morning	0 1 2 3 4	0 1 2 3 4
5. Pain or aching in your muscles	0 1 2 3 4	0 1 2 3 4

Issue: Chest Pain, Palpitations

Clearance for safety to return to exercise



Cardiac screening

In absence of fatigue, may be more suited to
cardiac rehab environment



Breathing control

Inspiratory muscle training
may be an option



3 P's (**Plan, Prioritise and Pace**)

Activity with **stabilization of symptom exacerbation**

Remember cognitive tasks are draining too (not just physical tasks)

Keep a diary (helpful guide for planning, also shows progress)

Breath



**LONG
COVID
PHYSIO**

**Our website is for everybody living with Long COVID
and anyone wanting to learn more**

Return to Higher Level Exercise / Sport

Continue with principle of activity and exercise with symptom stabilization

Cardiac clearance for safety where needed

CPET testing has potential

Use of monitoring (caution with wrist-based monitors)

BMJ guidance June 2020

GRADUATED RETURN TO PLAY PROTOCOL

UNDER MEDICAL SUPERVISION

	STAGE 1 10 DAYS MINIMUM	STAGE 2 2 DAYS MINIMUM	STAGE 3A 1 DAY MINIMUM	STAGE 3B 1 DAY MINIMUM	STAGE 4 2 DAYS MINIMUM	STAGE 5 EARLIEST DAY 17	STAGE 6
ACTIVITY DESCRIPTION	MINIMUM REST PERIOD	LIGHT ACTIVITY	FREQUENCY OF TRAINING INCREASES	DURATION OF TRAINING INCREASES	INTENSITY OF TRAINING INCREASES	RESUME NORMAL TRAINING PROGRESSIONS	
EXERCISE ALLOWED	WALKING, ACTIVITIES OF DAILY LIVING	WALKING, LIGHT JOGGING, STATIONARY CYCLE, NO RESISTANCE TRAINING	SIMPLE MOVEMENT ACTIVITIES E.G. RUNNING DRILLS	PROGRESSION TO MORE COMPLEX TRAINING ACTIVITIES	NORMAL TRAINING ACTIVITIES	RESUME NORMAL TRAINING PROGRESSIONS	
% HEART RATE MAX		<70%	<80%	<80%	<80%	RESUME NORMAL TRAINING PROGRESSIONS	
DURATION	10 DAYS	<15 MINS	<30 MINS	<45 MINS	<60 MINS	RESUME NORMAL TRAINING PROGRESSIONS	
OBJECTIVE	ALLOW RECOVERY TIME, PROTECT CARDIO-RESPIRATORY SYSTEM	INCREASE HEART RATE	INCREASE LOAD GRADUALLY, MANAGE ANY POST VIRAL FATIGUE SYMPTOMS	EXERCISE, COORDINATION AND SKILLS/TACTICS	RESTORE CONFIDENCE AND ASSESS FUNCTIONAL SKILLS	RESUME NORMAL TRAINING PROGRESSIONS	
MONITORING	SUBJECTIVE SYMPTOMS, RESTING HR, I-PRRS	SUBJECTIVE SYMPTOMS, RESTING HR, I-PRRS, RPE	SUBJECTIVE SYMPTOMS, RESTING HR, I-PRRS, RPE	SUBJECTIVE SYMPTOMS, RESTING HR, I-PRRS, RPE	SUBJECTIVE SYMPTOMS, RESTING HR, I-PRRS, RPE	SUBJECTIVE SYMPTOMS, RESTING HR, I-PRRS, RPE	

RETURN TO COMPETITION
IN SPORT SPECIFIC TIMELINES

ACRONYMS: I-PRRS (INJURY - PSYCHOLOGICAL READINESS TO RETURN TO SPORT); RPE (RATED PERCEIVED EXERTION SCALE)

NOTE: THIS GUIDANCE IS SPECIFIC TO SPORTS WITH AN AEROBIC COMPONENT

“I would really like to thank you for everything over the last while. I really do appreciate your guidance and kindness and feel that I am in a much better place both physically and psychologically as a result”

Thank you