Returning to physical activity post-SARS-CoV-2 infection

Background

- COVID-19 is usually a mild respiratory disease but can cause severe illness
- It is a multisystem disease where cardiovascular, immunological, renal, haematological and neurological systems are often affected
- Possible chronic complications include ongoing fatigue, myoarcditis and airway hypersensitivity
- Exercise is important for recovery for patients with COVID-19 but must be done gradually and safely

Assessing for return to physical activity

Low risk
- Mild or no symptoms
- Upper respiratory only
- Younger patient
- Recreational exercise goals

Intermediate risk
- Symptoms for >7 days
- Dyspnoea/chest pain with illness
- Elite and/or endurance athletes
- History of asthma or chronic fatigue

High risk
- Hospitalisation and/or ICU
- Abnormal ECG or troponin
- Prolonged dyspnoea or chest pain with rest/minimal exertion
- History of cardiac disease

Graded return to physical activity

Return to work or school
- Return to normal routines and wake up times.
- Reintroduce physical and cognitive loads.

Light activity
- Start with 15 minutes and monitor symptoms.
- Increase heart rate and breathing rate.
- Start to clear any brain fog.
- Try:
  - walking
  - stationary bike
  - light jogging.

Increase training progressively
- Increase the duration of a familiar, light activity first.
- Introduce bodyweight resistance exercises but keep number of reps low.
- Remind muscles they can work.
- Pay careful attention to recovery in this post-viral period.

Steady, continual increase in training
- Introduce sport-specific training, higher intensity drills, eg running drills, ball skills.
- Increase resistance, eg adding weights or return to gym sessions.
- Pay attention to coordination and skills/tactics.
- Restore confidence in pre-COVID skills and exercise tolerance.
- Check in on recovery.

Return to pre-COVID exercise
- Enjoy pre-COVID exercise habits and start to set new goals.
- Follow local physical distancing guidelines and COVID-19 protocols.
- If there are any red flag symptoms or concerns about exercise tolerance, a medical review is required as soon as possible.
- A sport and exercise physician may be able to guide specific cases.

Timeframe for progression
- Each stage must be completed comfortably before progression.
- Timeframes will vary depending on pre-COVID fitness levels.

Red flag symptoms
- Chest pain or palpitations
- Breathlessness, out of proportion with expected recovery
- Features of thrombosis, eg swollen calf or sinus tachycardia, breathlessness

Figure 1. Return to physical activity flowchart

BNP, B-type natriuretic peptide; CT, computed tomography; CXR, chest X-ray; ECG, electrocardiography; ICU, intensive care unit; PCR, polymerase chain reaction