



POST-CONCUSSION EXERCISE PROGRESSION

Post-concussion, getting back to physical activity — and back to yourself — can seem like a daunting task. We've developed this progression plan to support you in feeling confident in getting back to your sport. Because your brain health matters, always consult a physician before returning to activity and commencing an exercise progression plan.

GETTING BACK TO ACTIVITY GUIDELINES

A smooth transition back into movement means no concussion symptoms occur during or after activity (within about an hour or so). If exercise does produce symptoms, take a step back to the last stage of exercise that did not produce symptoms. Progress to the next stage only after 1-2 days of symptom-free activity.

Ideally, your progression should be monitored by a qualified health professional. You may 'supervise' your own progression as long as you are clear on the specifics of the plan and know what red flags to watch out for. Here are some examples of red flag symptoms:



THE PROGRESSION PATH

Progression is 'milestone' focused, not timeline based. A new stage in activity can only be started when the previous has been successfully completed.

- It's typical for exercise to occur once daily post-concussion.
- An increased frequency (to twice daily) may be recommended by your health care professional.
- Each concussion—and each recovery—is unique. There is no 'right rate' for it to happen:
 - For extremely mild cases, you may progress to another stage in the same day (if your progression plan includes two exercise sessions daily).
 - For severe or prolonged cases, it is recommended to perform each stage symptom-free for 3-5 sessions before moving to the next stage.

STAGES

STAGE ONE

REST Goal: Reduce frequency/intensity of symptoms and/or dissolve evidence of any symptoms.

Description:

• No physical activities that raise your heart rate above resting rate.

• Perform non-vigorous isometric stabilization exercises for neck.

RE-INTRODUCTION OF EXERCISE

Goal: Establish the ability to raise your heart rate through cardio without symptoms arising (or without symptoms being worsened).

Description:

• Stationary bike (no head movement) with progression of intensity/duration (don't increase both intensity and duration in the same session):

- 15 mins @ 120 bpm
- Increase duration to 30 mins@ 120 bpm
- 30 mins @ 140 bpm

• 30 mins @ 140 bpm with 1-min maximal sprints every 5 mins (@ 5 mins, 10 mins, etc)

STAGE TWO

LOW LEVEL ACTIVITY

Goal: Create capacity for 30 mins / day of sport-specific movements, with progressive acceleration of the head without symptom production or aggravation).

Description:

• Sport-specific movement that is most relevant to your sport, with gradual progression of intensity of exercise and magnitude of head acceleration.

• No 'cognitive burden' drills that require decision-making, or concentrating other than basic movement. No resistance training.

STAGE FOUR

INTERMEDIATE ACTIVITY

Goal: No symptom production or aggravation after 30 mins / day of sport-specific training. Add in cognitive and visual tracking tasks, and body-weight resistance exercises.

Description:

- Continue with the intensity and duration of sport-specific drills reached in Stage 3, and add an element of thinking or decision-making, ie: ball or puck-handling, shooting, passing, executing set plays, etc.
- Add 15 mins / day of body-weight floor exercises like planks, push-ups, squats, lunges, sit-ups, box jumps, etc.
- Progress from less intense (planks) to more intense (box jumps). Ensure your breathing is consistent don't hold your breath.

SUBMAXIMAL ACTIVITY

Goal: Freedom from symptoms in situations that simulate all aspects of normal training or play, except for the risk of collision. **Description:**

- Sport-specific drills should involve increased complexity simulating game situations.
- Increase duration toward normal daily training load for this sport.
- Resistance training add weights or machines typical of training programs in the sport. Heavy resistance exercises may involve breath holding during very heavy lifting, which increases intracranial pressure.



FULL PHYSICAL ACTIVITY/SPORT

Goal: Unrestricted activity without symptom production. **Description:** Full participation in sports.