

Hull-Ellis Post-Concussion Exercise Study: Physician Recommendations for Prescribing Exercise

Some general exercise recommendations:

- Aerobic exercise is safe and beneficial post-concussion
- Avoid in the early stages of recovery:
 - Resistance training (i.e. weight lifting, using resistance bands, push-ups, etc.)
 - High risk activities
 - Physical sports
 - “Return to play”

Study-specific exercise recommendations:

These pointers are to be used to assist in explaining the exercise prescription form that will be given to the participant.

- Your goal is to exercise for 30 minutes at the prescribed intensity, 5 times per week
 - Make sure to **warm-up for at least 3 minutes** prior to beginning exercise; this time is **in addition** to the 30 minute exercise session.
 - Your prescription will be at a heart rate **just below** the level your symptoms began to worsen on the treadmill test
 - **If you do not exercise frequently**, aim for 10-20 minutes for the first session and build from there
- **Mild symptoms are OK to exercise with**; if you notice your symptoms increasing to a point where they are hindering your ability to exercise, lower the intensity
 - If symptoms dissipate, begin to increase intensity again to a point where symptoms are manageable
 - **Low intensity exercise is better than no exercise at all**
 - Avoid stopping exercise immediately as it may lead to an exacerbation of symptoms such as dizziness. **Always cool-down, even if it is at a very low intensity.**
- If applicable (likely during the early stages of recovery): **Avoid exercise modalities that involve additional head movement** such as jogging, swimming, etc.
 - Recommend sticking to low-impact exercise such as stationary biking or elliptical training.
 - For those without access to a gym, brisk walking, stair climbing or hill walking is a good alternative.
 - A **walk-jog protocol** (1 minute jog, 1 minute walk) can be effective in minimizing symptom exacerbation if a brisk walk is not vigorous enough to meet the exercise prescription.
- Most participants are not current athletes – some stages of the ‘return to activity’ will not be applicable to these people.
 - Either:
 - Explain this to the participant OR;
 - If they are a current athlete, discuss their progression through these stages.

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Hull Ellis Physical Activity & Exercise Prescription



Return to Activity Stages	STOP or AVOID	START or CONTINUE
Daily activities: Examples: walking, house chores, commuting, errands, grocery shopping, etc.	○	○
Aerobic activity with minimal head movement: (Stage 2) Examples: Stationary bike, elliptical, intensive purposeful walks, walk-jog program	○	○
Aerobic activity with additional head movement: (Stage 3) Examples: Jogging, swimming, treadmill, light yoga	○	○
Sport specific individual drills: (Stage 3) Examples: shooting, passing, dribbling, puck handling, throwing	○	○
Team based sport drills: (Stage 4)	○	○
Controlled practice, minimal risk, 'Noncontact': (Stage 4)	○	○
Activities with 'Valsalva': (Stage 5) Examples: weight training or resistance training	○	○
Unrestricted practice, 'Contact': (Stage 5)	○	○
Competition: (Stage 6)	○	○

See below for details

↓ Details for aerobic activity (Stage 2 & 3) ↓

Heart Rate at which the treadmill test was discontinued:			
HR target for prescription (90% of symptom-threshold reserve):			
Type of activity:	Volume		Intensity
	Minutes per session	Sessions per week	HR Target

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