# Return to Sport

This tool is a guideline for managing an individual’s return to sport following a concussion and does not replace medical advice. Timelines and activities may vary based on direction from a doctor, nurse practitioner, or licensed healthcare professional with relevant training. Begin Step 1 within 24 hours of injury, with progression through each subsequent step taking a minimum of 24 hours.

## Activities of daily living and relative rest*

- Maximum of 24-48 hours
- Activities at home such as social interactions and light walking that do not result in more than mild and brief** exacerbation (worsening) of concussion symptoms.

**Examples:**
- Preparing meals
- Housework
- Light walking
- Minimize screen time for first 24-48 hours following concussion.

### Activities of daily living, as tolerated

- After a maximum of 24-48 hours after injury, BEGIN STEP 2

### Increase heart rate

- If can tolerate moderate aerobic exercise, BEGIN STEP 3

- Increase intensity of aerobic activities and introduce low-risk sport-specific movements and changing of directions

- If can tolerate non-competitive, high-risk activities, BEGIN STEP 6

*Relative rest: activities of daily living including walking and other light physical and cognitive activities are permitted as tolerated.

**Mild exacerbation (worsening) of symptoms: No more than a 2-point increase when compared with the pre-activity value on a 0-10-point symptom severity scale.

### Begin Step 2: Moderate effort aerobic exercise

- Up to approximately 70% of maximum heart rate (predicted according to age - i.e. 220-age).
- In a safe and controlled environment, engage in light aerobic exercise.

**Examples:**
- Stationary cycling
- Walking at slow to medium pace
- Light resistance training that does not result in more than mild and brief** exacerbation (worsening) of concussion symptoms.

### Begin Step 3: Individual sport-specific activities (that do not have a risk of inadvertent head impact)

- Addion of individual sport-specific activities that are supervised by a teacher/coach/parent.
- Examples:
  - Skating drills (hockey)
  - Running drills (soccer)
  - Change of direction drills
  - Individual gym class activities

It is important to get medical clearance before returning to training that involves any risk of inadvertent head impact.

### Begin Step 4: Non-contact training drills and activities

- Progress to exercises at high intensity, including more challenging drills and activities.

**Examples:**
- Passing drills
- Multi-player training
- Supervised non-contact gym class activities
- Practices without body contact

### Return to all non-competitive activities

- Return to all non-competitive activities, all gym class activities, and full-contact practices
- Participate in higher-risk activities including normal training activities, all school gym-class activities, and full-contact sports practices and scrimmages. Avoid competitive gameplay.

### Return to sport

Back to normal, unrestricted competitive game play, school gym class, and physical activities.

### Medical determination of readiness to return to at-risk activities should occur prior to returning to any activities that pose risk of contact, collision, or fall.

*Note: Returning to activities that have a risk of falling or body contact, restore game-play confidence, and have coaches assess functional skills.

Adapted from: Zemek, R., Reed, N., Dawson, J., et al. "Living Guideline for Pediatric Concussion Care." www.pedsconcussion.com (the PedsConcussion protocol was modified with permission from the Amsterdam International Consensus Statement on Concussion in Sport)

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