

A child aged 5 years or under has been diagnosed with a concussion?

This tool guides you through each stage of the recovery process, so that you can support the child effectively over the coming days and weeks.

A young child has received a worrisome hit to the head, but has not consulted a healthcare professional?

Refer first to the **Early Childhood Detection Tool** to guide you through the next steps.

Other information and tools are available at coco.umontreal.ca



When to return to see a healthcare professional ?

If any of the following 3 situations apply, return to consult a healthcare professional:

- 1 If one or more of the following red flags appear, seek immediate medical attention at the emergency department.
- 2 Symptoms increase or do not improve significantly 2 weeks after the injury.
- 3 Symptoms still significantly interfere with the child's daily functioning 1 month after the injury.

Red flags

- ✓ Loss of consciousness
- ✓ Convulsions
- ✓ Confusion or deterioration of conscious state (e.g., less reactive or very slow, drowsy, difficulty responding to standard questions or recognizing people or places)
- ✓ Unusual behavior (e.g., very agitated, combative or irritable, excessive crying)
- ✓ Difficulty moving around, balance difficulties, poor coordination or weakness in the arms or legs
- ✓ Severe or increasing headaches
- ✓ Vision problems
- ✓ Repeated vomiting
- ✓ Intense neck pain

*This recovery tool does not in any way replace professional medical advice or diagnosis. In case of doubt or concerns, it is preferable to consult with a doctor. In Quebec, for school-age children, consult the **INESSS** recommendations (French only ; inesss.qc.ca). If a skull fracture or intracranial lesion has been detected, different recommendations may apply. Please refer to the advice of the child's medical team. COCO is a knowledge mobilisation program on concussion in young children. For more information on this program, this recovery tool and to access information or additional tools, visit coco.umontreal.ca.



Once the child returns home

Frequent symptoms

A concussion occurs when the brain is shaken inside the skull. This causes a temporary disturbance in brain function and certain symptoms.

In most cases, these symptoms gradually decrease after 2 weeks and disappear 1 month after the injury. In some cases, they may last longer.

- ✓ Seems "elsewhere" or in a daze
- ✓ Thinks or moves more slowly
- ✓ Headaches (rubs or holds head, says they have a headache)
- ✓ Nausea (eats less than usual/has no appetite, says they feel nauseous or sick)
- ✓ Vomiting
- ✓ Fatigue or a decrease in energy
- ✓ Is irritable or grumpy
- ✓ Wants to be held more often
- ✓ Stays closer to caregivers
- ✓ Disrupted sleep (sleep problems or changes)
- ✓ Nervousness, anxiety
- ✓ Concentration difficulties, distracted
- ✓ Sensitivity to sound or light
- ✓ Developmental regression ("taking a step back" in development)

Tips to relieve symptoms and promote recovery

Relieving physical symptoms

- ✓ Offer the child something to drink regularly (dehydration can contribute to headaches).
- ✓ If the child is breastfed, continue breastfeeding as usual or according to the child's needs.
- ✓ Encourage the child to eat. If nausea is present, favour a light diet for 24 hours or until nausea or vomiting subsides: liquids, broths, Jello®.
- ✓ Follow the medical team's instructions to check if medication can be given to the child in case of headache.
- ✓ In case of sensitivity to light, use sunglasses and/or a hat outside.

Adapting after the injury

- ✓ Offer more support than usual if the child needs it.
- ✓ Be patient and caring during this more difficult period.
- ✓ Adapt routines and requirements according to the child's condition.
- ✓ Allow the child to rest more if they are tired, even if this means being flexible about normal sleep routines.
- ✓ Take care of yourself as a parent, and accept support from family and friends or professionals if necessary.



A 3-phase recovery process

Recovery: not to be taken lightly

A gradual return to usual activities promotes the child's recovery and well-being, reduces the risk of developing persistent symptoms and prevents further blows to the head. Repeated concussions can prolong recovery and have negative consequences on the child's health and development.

The 3 recovery phases :

Active rest

24 to 48 hours

Page 4



Gradual return

Duration depends on symptoms

Pages 5 to 7



Complete return

When symptoms disappear

Page 8

Please note: The recommendations for each phase and the duration of active rest are suggested for guidance only. There is no scientific data yet to establish the optimal period of active rest for a young child. However, for people over 5 years of age, an active rest period of 24 to 48 hours after injury is recommended. Young children may need a little more rest, depending on their symptoms and daily environment. **It is important to use the child's symptoms and behaviours to guide the duration of each recovery phase and the activities to be prioritized.**



What about returning to childcare and preschool ?

Many of the environments young children visit are full of stimulation and are demanding mentally, socially and physically. Children may experience symptoms that influence their tolerance of the childcare/school environment (e.g., sensitivity to noise or light, headaches, difficulty concentrating, nausea, fatigue, changes in sleep patterns).

- ✓ Consider keeping the child at home for 24 to 48 hours after the concussion.
Home is the best environment to rest and watch for symptoms.
- ✓ Then, refer to the section “Gradual return to childcare and preschool settings” (pages 6 and 7)

1

Phase 1 : Active rest

Active rest



Gradual return



Complete return

For the first 24 to 48 hours after the incident, focus on light physical activity, and on activities that are calm, simple, enjoyable and not mentally demanding. Start with short periods of activity, then gradually increase the duration and/or the intensity of the activity.

The presence of some symptoms is normal. What's important is that they increase only mildly, and decrease after the activity. **Don't forget that these symptoms may manifest themselves as changes in mood or behaviour.**

Activities to avoid

- ❗ Screens (cell phones, tablets, video games, television)*
- ❗ Highly stimulating situations (e.g., parties, shopping malls, arenas, concerts, music lessons, daycare centers)
- ❗ Activities that require a great deal of concentration, thought or memory (e.g., complex puzzles, multi-step guided crafts, lessons, introduction to new board games with multiple rules; for a baby: battery-operated games with multiple functions, sounds and lights)
- ❗ Activities involving the risk of falling, colliding, contact or shocks (e.g., team sports, cycling, visits to the playground, including climbing a playground structure, swinging or sliding, racing or chasing games, scooters, sliding, playing with a hard or heavy ball, jumping games)

Suggested activities

Ideas for calm indoor activities

- ✓ Telling a short story or listening to an audio book
- ✓ Leaf through a picture book
- ✓ Coloring, drawing or simple crafts
- ✓ Simple seek and find pictures
- ✓ Cooking activity
- ✓ Play "Simons says" using safe, low-key actions
- ✓ Soft music or singing
- ✓ Quiet toys
- ✓ Simple playmat, without music, sound or excessive light stimulation

Ideas for physical and/or outdoor activities

- ✓ Walking/riding in stroller or baby carrier
- ✓ Helping parent with simple tasks (e.g., picking up toys or leaves outdoors)
- ✓ Relaxing in the pool (without very active play)
- ✓ Rolling a soft ball
- ✓ Yoga for young children
- ✓ Creeping or crawling on all fours
- ✓ Interactive games on the floor requiring the baby to stretch, grasp toys, lift themselves up
- ✓ Imitating another person's movements (without jumping or challenging balance)
- ✓ Bowling (light, soft ball)

* Note that the [Canadian Paediatric Society](#) recommends avoiding screens in children under 2 years, whether or not they've experienced a concussion. For children aged 2 to 5 years, screen time should be limited to a maximum of one hour per day at all times.

2

Phase 2 : Gradual return

Active rest



Gradual return



Complete return

After a period of active rest, gradually return to normal activities. Gradually increase participation in more mentally and physically stimulating or demanding activities, while taking care to limit those associated with a high risk of head injury. The child can participate in outings planned by the daycare center or school if the activities can be adapted or restricted.

Watch for symptoms. The presence of some symptoms is normal. What's important is that they increase only mildly, and decrease after the activity. If the symptoms increase a lot, stop the activity and try again the next day.

It's a good idea not to do one activity after another.

Leaving time between activities allows you to assess the presence of symptoms or changes in behaviour or mood.

Activities to avoid

- ! Highly stimulating environments (parties, shopping malls, arenas, concerts, music lessons) if they increase or provoke symptoms.
- ! Organized sports activities (e.g., soccer team, dance classes) unless permitted by the treating medical team.
- ! Activities with a high risk of falls, collisions, contact or strong jolts (e.g., cycling, trampolines, soccer games, climbing a playground structure, skating and sliding, jolly jumper, skipping rope). This is especially important if the child is still learning the activity.

Suggested activities

Ideas for calm indoor activities

- ✓ Puzzles
- ✓ Board games
- ✓ Drawing and other guided manual activities
- ✓ Short lessons and revision, if the child is of school age
- ✓ Longer stories
- ✓ If you allow screens, offer short periods at a time, choosing content that is moderate in stimulation (e.g., limiting action, rhythmic music and rapid scene changes)

Ideas for physical and/or outdoor activities

- ✓ Dance
- ✓ Swimming
- ✓ Outdoor game of seek and find
- ✓ Simple indoor obstacle courses not involving jumping or climbing
- ✓ Games involving individual running, without risk of collision with another person
- ✓ Low-impact ball games (e.g., in pairs, throw and catch)

2

Phase 2 : Gradual return

Gradual return to childcare and preschool settings - part 1

Facilitating return to childcare or preschool is important for recovery. Healthcare personnel, parents and educational or teaching staff need to work together to facilitate this return. This may include accommodations and adjustments to schedules and activities, as needed.



By taking into account the characteristics of the environment and the child's symptoms, it is possible to adjust various aspects of the environment and the activities.

Please note : Not all children require accommodations/adjustments when returning to childcare or preschool. These are relevant if symptoms increase during periods of play, mental or physical activity, or if there are difficulties with concentration, memory, behavior, effort tolerance or any other aspect related to learning.

Please note: Children can return to their childcare or preschool even if they still have mild symptoms.

7 practical questions to ask about the childcare or preschool setting to optimise the child's return and adaptations



- 1 In what type of environment is the child integrated (e.g., family daycare, facility daycare, school daycare or community drop-in daycare)?
- 2 What is the child/adult ratio? Does it allow for flexibility and adaptations?
- 3 What is the level of sensory stimulation in this environment? For example, is there a lot of noise? Are there several different activities going on at the same time?
- 4 Does the environment include facilities with a high risk of falls, such as high playground modules or swings?
- 5 Is there a space where the child can retreat to sleep or rest if necessary?
- 6 Will the child be involved in organized sports and physical activities, such as physical education or swimming lessons?
- 7 What is the ratio between structured learning activities and free play?

2

Phase 2 : Gradual return

Gradual return to childcare and preschool settings - part 2

Some suggestions for winning adjustments for the child

In addition to the recommendations presented in this tool and relevant to all settings, here are a few specific suggestions for adaptations in childcare or preschool settings.

Schedule and activity planning

- ✓ Start with a part-time return (half-days).
- ✓ Allow more quiet time or structured breaks (e.g., in a place with less noise).
- ✓ Offer shorter periods for mentally demanding activities (e.g., listening to a story, puzzles, guided educational activities).
- ✓ If possible, initially replace periods of outdoor play, recess or physical education with a calm activity that does not pose a risk of head injury. Gradually reintroduce these periods as symptoms improve.
- ✓ Allow more time for activities.

Meals and hydration

- ✓ Offer drinks regularly.
- ✓ Let the child eat in a quiet place.
- ✓ Be tolerant of variations in the child's appetite.
- ✓ Allow the child to leave the table sooner if their level of attention and/or agitation does not allow them to wait calmly after finishing their meal.

Nap and rest

- ✓ Let the child sleep as much as he or she needs to, for example by increasing nap time if necessary.
- ✓ Set up a quiet corner where the child can rest as needed.

Movement and transitions

- ✓ Avoid moments of great agitation and traffic in the hallways, for example by allowing the child or his/her group to enter or leave early for an outing.

Communication and awareness

- ✓ Plan a group discussion or workshop to inform and raise awareness among peers about concussions and the child's needs during recovery.
- ✓ Promote parent-educator communication throughout the recovery period.
- ✓ Create a document detailing temporary accommodations to ensure good communication between staff members.



3

Phase 3 : Complete return

Active rest



Gradual return



Complete return

Complete return to normal activities when symptoms have been completely gone for a few days.



Other informations and references

Note here any other information and recommendations provided by the medical team

To reach health care personnel who can help you

Early intervention and rehabilitation concussion/mild traumatic brain injury team in your region.
Note here the contact details provided by the professional who assessed the child :

Your family doctor, paediatrician or specialized nurse practitioner.

If you do not have one, go to a walk-in clinic. In Quebec, you can also make an appointment via the Primary Care Access Point (online or by dialing 811, option 3). Elsewhere in the world, please refer to your local resources.

Other health professionals according to your needs and/or recommendations.

E.g., Physiotherapist, psychologist, neuropsychologist, occupational therapist, optometrist, social worker, nutritionist, etc.

Advice on early childhood concussion recovery could change as scientific knowledge evolves.

Make sure you have the latest version of this document by visiting coco.umontreal.ca regularly.

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