

# Concussion Protocol

## 101 Guide



**ImPACT**<sup>®</sup>  
APPLICATIONS, INC.

# CONCUSSION PROTOCOL 101 GUIDE

For Team Physicians,  
Athletic Trainers,  
Healthcare Providers,  
and Rehab Professionals.

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# CONCUSSION PROTOCOL BASICS



# What is a concussion protocol/policy?

A concussion protocol is an organization's set of policies, tools, and assessments for caring for a concussion. It outlines how the concussion care team prepares for and responds to this injury. You may think a "concussion protocol" implies a strict, written policy that instructs healthcare providers to treat every patient and every concussion the same way. However, trained healthcare providers know that a concussion requires an individualized care approach. For the purposes of this eBook, "protocol" and "policy" mean the same thing.

A concussion protocol (policy) is used to ensure everyone involved knows what to do when a concussion happens.



# Who needs a concussion protocol?

An organization needs a concussion protocol when they have children or adults who may be at risk for a concussion. Keep in mind: concussions don't just happen in sports. They can happen at work, in auto accidents, or from falls. They happen to young children, adolescents, and adults.



Most states in the United States have laws requiring schools to have protocols for their athletes. Ontario, Canada has also passed legislation requiring removal from sport and return to activity protocols for youth athletes. These laws are a step in the right direction to ensuring proper care after a concussion. However, there are still many countries and communities that lack written concussion protocols. Team Physicians, Athletic Trainers, Healthcare Providers, and Rehab Professionals can fill an important gap by creating their own concussion protocols based on current evidence.

The person responsible for creating a concussion protocol depends entirely on the individual setting. In general, a healthcare provider familiar with concussions should be the one to create the protocol.

# What stakeholders are involved in following a concussion protocol?

The best concussion protocols involve a variety of teammates and care stakeholders. At a minimum, a concussion protocol should involve at least these individuals:

- **Point Person:** This is the person who will be in charge of the concussion care team. They may be involved in both diagnosis and management. They'll manage referrals and provide return to activity clearance. This person should always be a trained healthcare provider who is very familiar with concussion care.



- **Athletic Trainer / Athletic Therapist:** They will likely conduct a sideline evaluation for athletes. They also coordinate care at the school for students. They are involved in progressive return to activity.
- **School Nurse/Counselor (for school settings):** The school nurse is someone who can help monitor students' symptoms. They work with school staff to make sure academic adjustments are implemented as the student returns to school after a concussion.



- **Teachers (for school settings):** Teachers can also monitor signs and symptoms after a concussion. They can coordinate with athletic trainers and school nurses to make sure students get the right academic adjustments after a concussion.
- **Rehabilitation professionals:** Physical therapists, physiotherapists, occupational therapists, speech language pathologists, and others. They help target rehab for specific areas that are affected after a concussion.
- **Parents:** it's important to identify the role of parents in symptom monitoring. They also can ensure daily regulation and healthy habits for their children.



# Is there a standard concussion protocol I can follow?

While concussion protocols differ by setting, most healthcare providers agree on the key elements that should be included in a concussion protocol. Concussion protocol requirements can also differ depending on country, state, or local laws.

A concussion protocol should include:





1. Concussion definition
2. Concussion education including signs, symptoms, and immediate recognition
3. Pre-season group baseline testing
4. Removal from activity criteria
5. Sideline assessment procedures
6. Clinical evaluation procedures
7. Academic adjustment guidelines
8. Return to activity procedures and guidelines

With all these key elements, you'll have a great start to a concussion management protocol.

If not in groups, pre-season testing can be done through [BaselineTesting.com](https://www.baselinetesting.com).

# HOW TO CHECK FOR CONCUSSIONS



# What does a sideline evaluation entail?

Sideline evaluations are a critical early measure in checking for a concussion and determining next steps in the concussion care process. After a bump, blow, or jolt to the head, a healthcare provider trained to recognize concussions should follow a well-defined sideline process.

Because a concussion often happens without an individual losing consciousness, a healthcare provider must use screening for head injury in other ways. Without a full sideline assessment, athletes may return to play prematurely and be at risk for negative consequences. The brain can swell and cause lasting damage or increased long-term symptoms.



A sideline evaluation should include a symptom check and memory screening, cognitive functioning, and concentration. Its purpose is to determine if a trip to an emergency department is necessary. If not, they'll determine if removal from participation with continued monitoring is warranted.



Brief tests like ImPACT Quick Test can help a healthcare provider quickly check cognitive function. Sideline professionals should also be on the lookout for worsening symptoms.

# What is concussion screening?

A concussion screen is a brief evaluation conducted by a trained healthcare provider. Its purpose is to determine the presence of a concussion after a head injury.

A trained healthcare provider will document whether or not there was a hit to the head and the location of impact. They will check for visible injury to the head or body. They'll record if there was loss of consciousness, amnesia before or after the event, and any early concussion signs.

They will ask the patient about any symptoms they feel. They'll likely conduct a brief cognitive screening to help make the removal from activity decision. They will determine if the patient requires an emergency department visit. The healthcare provider will continue monitoring for any new symptoms that might appear after the head injury.





# What is baseline testing?

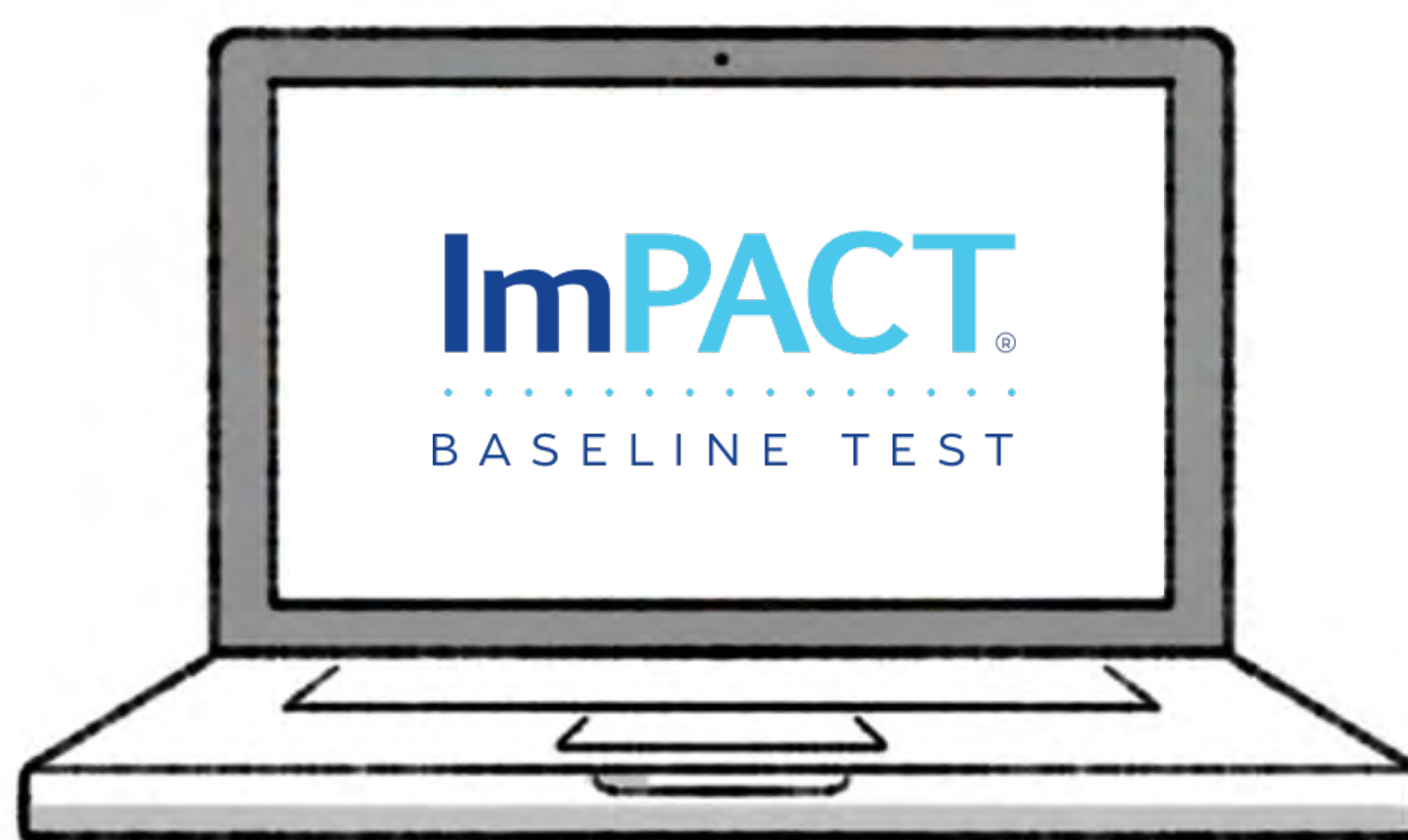
A baseline test measures brain function in a healthy state. If a patient gets a head injury, healthcare providers can use a post-injury test to help determine if they have a concussion. It measures reaction time, memory capacity, speed of mental processing, and executive functioning of the brain. Baseline testing is recommended to be completed annually to ensure an up-to-date record of a patient's normal functioning.

A trained healthcare provider can compare a post-injury test to a patient's baseline test. This way, they'll have an objective idea of the extent of the injury.

While concussions aren't preventable, baseline testing is a great way to ensure someone is prepared if a concussion ever happens.

For healthcare providers, teams, and schools that don't have the resources, staffing or logistics to offer baseline testing to their patients, athletes, or students, there's the option to have them take a baseline test at home.

Have them access [BaselineTesting.com](https://BaselineTesting.com) and complete the test online, in 20 minutes.



If they ever get a head injury, you can access their records using their unique testing ID to have good comparison data.



# What is post-injury testing?

Post-injury testing measures the same areas as baseline testing. Healthcare providers use post-injury testing to understand a patient's cognitive functioning after a jolt to the head. A post-injury clinical report is compared to a patient's baseline clinical report to show deficits in cognitive functioning and reaction time.





Post-injury testing can still be used if a test taker didn't take a baseline test. This is thanks to normative data, which provides average scores within an age range. Post-injury testing is done by trained healthcare providers who use the test and other data to help evaluate a concussion. They'll use it to develop an appropriate treatment plan to provide the most efficient recovery.

# **CONCUSSION SIGNS, SYMPTOMS, DIAGNOSIS & TREATMENT**



# What are the signs of a concussion?

Concussion may have several signs visible to those familiar with an individual who's recently experienced a blow to the head. Most of the time, concussions don't show up on CT scans or MRIs. There are many signs that can point towards a concussion.





Signs of a concussion can include:

- Loss of consciousness
- Change in behavior
- Sleeping much more or less than usual
- Grades dropping for a student
- Increased anxiety
- Repeated vomiting
- Dizziness
- Headaches
- Distractible
- Light or noise sensitivity
- Feeling worse in the afternoon compared to morning

# How do I educate athletes/patients on symptom reporting?

Educating athletes and patients on concussions can seem like an overwhelming process, but there are plenty of resources available to help.



You should provide concussion education to all stakeholders. This include patients, students, athletes, coaches, parents, school staff, and sports officials. Education should take place prior to an athletic season, or at the beginning of each year for students.

These are key elements of a concussion education program:

- What a concussion is
- Signs and symptoms
- Why it's so important to report a concussion, both for individuals and colleagues
- What baseline testing is and why it's done
- Who to talk to if someone suspects a concussion
- What happens after a concussion - expectations for follow up care

Education can be delivered in a few ways, depending on your resources. If you're working with athletes, a preseason meeting is a great place to provide education. You have the option of offering web-based education as well. At any rate, providing concussion education and being available to answer any questions is a good start.



# Who's responsible for diagnosing a concussion?

A healthcare provider trained in concussion care should always be the one to diagnose a concussion. Concussion diagnosis should not be done by coaches, parents, or the patients themselves. Healthcare providers have tools and assessments to help recognize concussions. They know the next steps to take if a concussion is suspected. Because concussions are hard to identify, it's important that diagnosis is done by someone who's trained to do so.



# When to seek medical care for a suspected concussion?

If a concussion is suspected, it's important to contact a trained healthcare provider immediately. It's recommended that individuals with a concussion have a 1-2 day period of rest followed by progressive increases in activity. This return to activity should always be monitored by a trained healthcare provider.



Most providers will try to see their patients 24-72 hours after the head injury to assess their functioning. Every concussion is different. This means that there isn't a "one size fits all" approach to healing after a concussion. A trained concussion care provider can assess patients' individual symptoms and provide a treatment plan that helps them get better.



# What are return to learn and return to play guidelines?

**R**eturn to learn guidelines are the processes used to get a student back to full cognitive activity after a concussion. A concussion affects the way the brain functions. Students recovering from a concussion may have a difficult time adjusting to normal school activities.

Return to learn guidelines can include temporary academic adjustments or longer academic accommodations. In rare cases, formal academic modifications in the form of government documentation and enforcement may be required. In most cases, short-term informal academic adjustments may be all a student needs.

These can include class breaks, early dismissal between classes, reducing computer screen exposure, extra time to take tests, and more.

Return to play guidelines are the gradual processes used to ensure an athlete's safe return to activity after a concussion. Most healthcare providers recommend a 6-step approach to return to activity. Return to activity steps include:

1. Symptom-limited activity
2. Light aerobic exercise
3. Sport or activity specific exercise
4. Non-contact training drills
5. Full contact practice
6. Return to sport



Every concussion is different, so every return to activity approach will be different. Healthcare providers will prescribe exercises specific to the activity the patient wants to return to. Return to activity exercises will help ensure a patient gets back to normal functioning.

# TAKE ACTION





# How can I take action?

A great way to guarantee your patients, athletes, or students are prepared for a potential concussion is by having baseline test scores of their neurocognitive function.



Have them access [BaselineTesting.com](https://BaselineTesting.com) and complete the test online, in 20 minutes.