Simkovich
CRANIAL INSTITUTE

TESTING AND DIAGNOSING A CONCUSSION

The realization that you or someone you know may have a concussion can be terrifying. After a blow to the head, one can experience headaches, dizziness, nausea, or even loss of consciousness. These symptoms can range in various levels of severity, often times resulting in prolonged functionality issues. Understanding your symptoms is the first step towards treatment. Before you take the next step and seek professional medical attention, here is a rundown of the testing you might expect. Hopefully this information will help ease any anxiety and will help prepare any questions you may have for your doctor.

Typically a doctor evaluating a possible concussion will pay close attention to the patient's own account of the accident and the following symptoms. Keep in mind that signs and symptoms of a concussion may not appear until hours or days after an accident. It is helpful to keep close detail following a possible accident that could result in a concussion. Along with the patient's complaints, the doctor will review medical history and conduct a neurological examination, cognitive testing, imaging tests, and observation.

Only with a proper diagnosis will a patient receive the proper treatment.

All concussion cases are not equal. Each case is unique and paired with a variety of symptoms that will respond differently to above mentioned testing. However, with the help of all four types of testing, a doctor will be able to diagnosis the severity of your concussion.

TESTS YOUR DOCTOR MAY PERFORM OR RECOMMEND INCLUDE: [1]

[1] Mayo Clinic
[2] Subtle Brain Injury

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NEUROLOGICAL EXAMINATION

Regardless of the physician you choose, a neurological exam following a concussion should be a diligent and detailed evaluation. The focus of a neurological exam after a concussion is usually the nervous system, with a particular emphasis on the cranial nerves. The cranial nerves are nerves which branch off of the brain stem, and primarily control the functions which are within the head. Neurological testing should include examination of the following parts : [2]

- Vision: test the movements and reactions of the eye using an ophthalmoscope
- Smell: test each nostril; a compromised sense of smell can be an indicator of frontal lobe damage
- Facial movement: test ability to whistle, smile, and clench teeth
- Hearing: test each ear for hearing loss
- Neck movement: the muscles required to move the head around should be palpated
- Motor skills: test classic hand and arm movements in order to evoke evidence of tremors, unilateral/bilateral motor weakness, and to study coordination and position sense

OBSERVATION

A simple overnight evaluation is the most common form of "testing" following a concussion. A doctor may even request the patient be hospitalized overnight for observation. More often, doctors agree to allow the patient to be observed at home. In these less severe cases, someone is required to stay with the patient and regularly check on the patient for at least 24 hours to ensure the symptoms aren't worsening. A doctor may even request that the patient be awoken regularly to make sure the patient awakens normally.

IMAGING TESTS

In less severe concussion cases, a neurological exam and cognitive testing may be enough for a doctor to determine a diagnosis. If symptoms become debilitating such as severe headaches, repeated vomiting, or seizures, brain imaging may be recommended . [4] The results acquired from imaging testing may determine whether the injury is severe and has caused bleeding or swelling in your skull. Examples of brain imaging tests include:

- Computerized Tomography (CT) scan: This test assesses the brain by using a series of X-rays to obtain cross-sectional images of the cranium and brain.
- Magnetic Resonance Imaging (MRI): With the help of powerful magnets and radio waves this test can determine if any bleeding is occurring in the brain or to diagnose any other complications that may occur

COGNITIVE TESTING

Along with the assessment of the nervous system, a doctor will also evaluate your cognitive (thinking) skills. This post-concussion testing is equally important because it is often the cognitive skills that are functionally impaired for an extended period of time. Cognitive testing may evaluate several factors, including your : [3]

- Memory: short-term and working
- Concentration: ability to pay attention and how quickly you process information
- Ability to recall information: you reaction time and visual spatial capacity

[3] Moms Team
[4] Mayo Clinic