Forget What You Heard About Amnesia.

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Forget What You Heard About Amnesia

Sometimes you hear or see something so many times, you think it must be true. But while watching a movie, "The Majestic," I was reminded how wrong that can be. In the movie, the main character, played by Jim Carey, survives a terrible automobile accident and loses all past memory. He is otherwise fine, but as the result of his trauma, he cannot recall his name, his job, his relationships -- it's all gone.

It's a remarkably common device for fictional plots in books, television and movies -- "Desperately Seeking Susan" also comes to mind -- and in many cases, the character with amnesia has a second injury that prompts his or her recovery. It may make for good
entertainment, but it's unlikely you have ever known someone to go through this sort of problem because it rarely (if ever) happens that way; and certainly amnesia does not require another blow to the head to resolve.

Amnesia and Memory

The word "amnesia" means loss of memory. But, because memory formation
and brain function are complex, there are many types of amnesia. For example, memory can be divided into:

Immediate -- Recalling information for a few seconds after learning it

Short-term -- Recently learned information that can be recalled minutes or more after presentation

Long-term -- Remote memory of events occurring long months or years ago

A distinction also can be made between procedural memory (recalling how
to do something, such as riding a bicycle), and declarative memory (recalling
past information or experiences). Finally, researchers recognize additional
types of memory including semantic (information that is independent of
time, such as vocabulary), episodic (information tied to a particular time,
such as recalling one's wedding day), and prospective(remembering that
an event in the future will occur, such as bringing change for the bus
fare).

One's identity is among the most durable long-term memories -- forgetting
who you are is rare, especially without other significant neurological
and/or psychiatric illness. In "The Majestic," the amnesiac cannot recall
anything about himself or recent events and struggles to play the piano,
demonstrating that he'd lost not only all remote long-term memory, but
procedural memory as well. Remarkably, his immediate recall seems normal,
as he is able to remember the names and faces of people he meets after
his accident without difficulty. This situation is highly unusual in real
life.

Researchers have discovered that different parts of the brain are important
for forming and storing different types of memory. For example, several
areas of the brain called the limbic system are important in memory storage.
Injury to both the right and left sides of the limbic system is usually
necessary to cause amnesia, but if injury is greater on the right, visual
memories may be lost while the left side of the brain is more involved
with verbal information.

Forms of Amnesia -- Many Ways to Forget

Just as there are many types of memory, there are several forms of amnesia:

Anterograde amnesia -- The most common type of amnesia, it is characterized
by difficulty forming new memories, a particular problem in dementing illnesses
such as Alzheimer's disease.

Retrograde amnesia -- This involves loss of past memories, involving those
from a few seconds to a few months ago; it most commonly follows head injury
and tends to improve over time.

Transient global amnesia -- A temporary loss of all memory, but it particularly
affects the ability to form new memories (severe anterograde amnesia),
with milder loss of past memories (retrograde amnesia) going back a few
hours. It is rare and is most common among older persons with vascular
disease. A study published in June 2004 shed light on why brain scans are
often normal in people with this type of amnesia: Abnormalities may not
show up right away. Researchers found that it can take a day or two for
abnormalities in the memory-forming portions of the brain to show up. These
findings suggest that impaired blood supply, as may occur with a stroke,
is to blame. This form of memory loss typically goes away entirely within
hours.

Almost any disease or injury to the brain can affect memory. The most
common are Alzheimer's disease and other dementias, stroke, trauma or seizures.
Amnesia is a common, initial symptom of Alzheimer's disease or related
disorders. Some people with amnesia suffer from psychiatric illness --
so-called psychogenic amnesia; in those circumstances, loss of past memories
and identity may be prominent despite normal ability to learn and remember
new information.

Head Injury Is a Common Problem; Amnesia Is Not

Although head injuries are common and may be serious, head trauma leading
to complete and persistent loss of memory of past events, including one's
identify, is extremely rare. When amnesia follows head trauma, it most
often follows a concussion or more severe injury and typically affects
past memories (that is, the amnesia is retrograde). A host of other problems
may be caused by head injuries that cause amnesia, ranging in seriousness
from life-threatening skull fractures, bleeding around or into the brain,
or swelling of the brain to self-limited symptoms such as headache, fatigue
or dizziness. When amnesia is prominent, many of these other symptoms are
often present. Recovery of memory usually parallels resolution of these
other problems.

Many, perhaps most, head injuries can be prevented: Wearing protective
headgear (for example, during athletic activities, or while riding a bicycle
or motorcycle), not driving after drinking alcoholic beverages, and taking
appropriate precautions when working in high places are examples of effective
measures to reduce the risk of head injury.

The Bottom Line

The movies are often not the best place to get medically accurate information.
Recognize that head injury is a common problem, but sudden, complete and
persistent memory loss is not. Enjoy the movies, but take the medical events
you see on the screen with a grain of salt (and popcorn).

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