Healthy People Newsletter

MARCH 2019

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ONEDIGITAL
HEALTH AND BENEFITS

This newsletter is interactive! Click a topic to jump directly to the article.

National Health Observances

MARCH | 2019

Athletic Training Month

Child Life Month

Colorectal Cancer Awareness Month

Kidney Month

Nutrition Month

Save Your Vision Month

Workplace Eye Wellness Month

Dental Assistants Recognition Week (3-9)

Kidney Day (14)

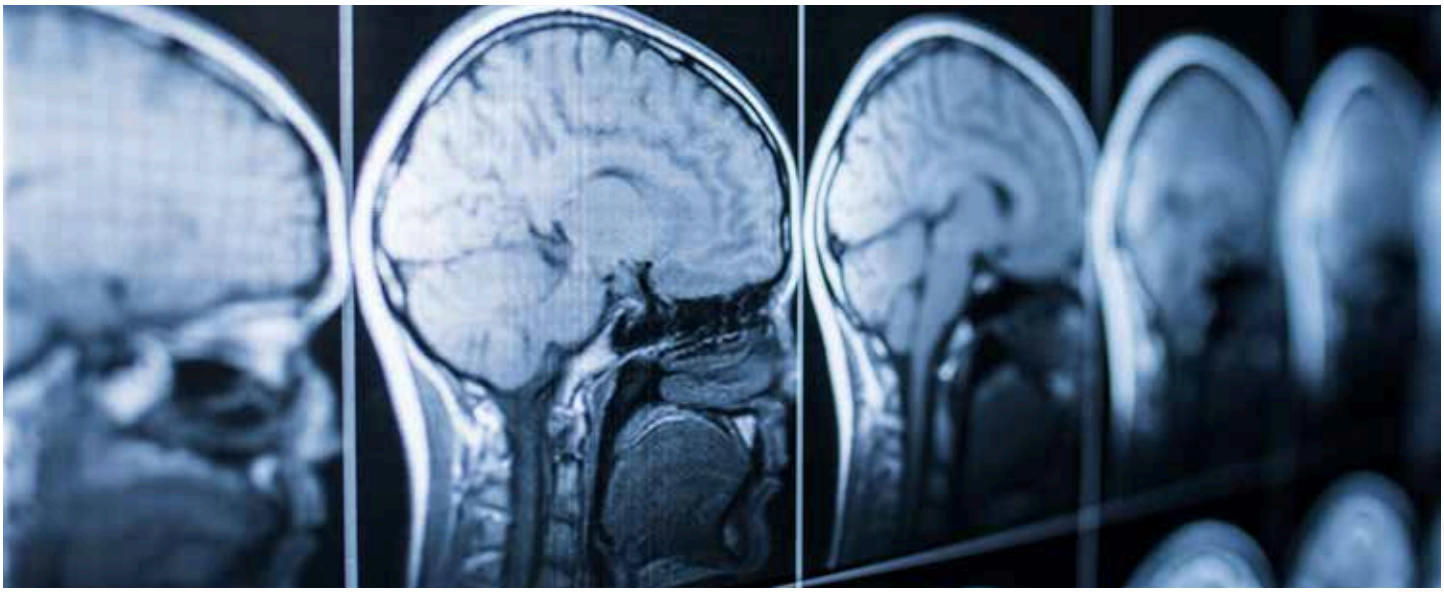
MS Education and Awareness Week (10-16)

LGBT Health Awareness Week (25-29)

Diabetes Association Alert Day (26)

Doctor's Day (30)

BETTERSAFE
WELCOA'S ONLINE BULLETIN FOR YOUR FAMILY'S SAFETY



WHAT YOU NEED TO
About Traumatic Brain Injuries

A traumatic brain injury (TBI) is a sudden injury from an external force that affects the functioning of the brain. It can be caused by a bump or blow to the head (closed head injury) or by an object penetrating the skull (called a penetrating injury). Some TBIs result in mild, temporary problems, but a more severe TBI can lead to serious physical and psychological symptoms, coma, and even death.

TBI includes (but is not limited to) several types of injury to the brain:

» **Skull fracture** occurs when the skull cracks. Pieces of broken skull may cut into the brain and injure it, or an object such as a bullet may pierce the skull and enter the brain.

» **Contusion** is a bruise of the brain, in which swollen brain tissue mixes with blood released from broken blood vessels. A contusion can occur from the brain shaking back and forth against the skull, such as from a car collision or sports accident or in shaken baby syndrome.

» **Intracranial hematoma** (pronounced *in-truh-KREY-nee-uhl hee-ma-TOH-muh*) occurs when damage to a major blood vessel in the brain or between the brain and the skull causes bleeding.

» **Anoxia** (pronounced *an-OK-see-uh*), absence of oxygen to the brain, causes damage to the brain tissue.

The most common form of TBI is concussion. A concussion can happen when the head or body is moved back and forth quickly, such as during a motor vehicle accident or sports injury. Concussions are often called "mild TBI" because they are usually not life-threatening. However, they still can cause serious problems, and research suggests that repeated concussions can be particularly dangerous.

SIGNS & SYMPTOMS

A person who has a TBI may have some of the same symptoms as a person who has a non-traumatic brain injury. Unlike TBI, this type of injury is not caused by an external force, but is caused by an internal problem, such as a stroke or infection. Both types of injury can have serious, long-term effects on a person's cognition and functioning.

Anyone with signs of moderate or severe TBI should receive medical attention as soon as possible. Because little can be done to reverse the initial brain damage caused by trauma, medical personnel try to stabilize an individual with TBI and focus on preventing further injury. Primary concerns include insuring proper oxygen supply to the brain and the rest of the body, maintaining adequate blood flow, and controlling blood pressure. Imaging tests help in determining the diagnosis and prognosis of a TBI patient.



TREATMENT & PROGNOSIS

Patients with severe head injuries often need surgery to remove or repair hematomas (ruptured blood vessels) or contusions (bruised brain tissue). Disabilities resulting from a TBI depend upon the severity of the injury, the location of the injury, and the age and general health of the individual. Some common disabilities include problems with cognition (thinking, memory, and reasoning), sensory processing (sight, hearing, touch, taste, and smell), communication (expression and understanding), and behavior or mental health (depression, anxiety, personality changes, aggression, acting out, and social inappropriateness).

More serious head injuries may result in stupor, an unresponsive state, but one in which an individual can be aroused briefly by a strong stimulus, such as sharp pain; coma, a state in which an individual is totally unconscious, unresponsive, unaware, and unarousable; vegetative state, in which an individual is unconscious and unaware of his or her surroundings, but continues to have a sleep-wake cycle and periods of alertness; and a persistent vegetative state (PVS), in which an individual stays in a vegetative state for more than a month.

DAY IN DAY OUT
WELCOA'S ONLINE BULLETIN FOR YOUR LIFESTYLE



NEW TECHNOLOGIES

In Prosthetics

When you lose the use of a limb, even the simplest of daily tasks can turn into a challenge. High-tech devices can help restore independence. New technologies are even making it possible to connect the mind to an artificial limb. These artificial limbs are called bionic prosthetic devices.

Traditional prosthetic devices use a body-powered harness to control a hand device. These are easy to use. With a shrug of your shoulder, the prosthetic hand or hook opens. With the release of your shoulder, the prosthesis closes. Through the feel of the cable tension across your shoulders, you know whether the prosthesis is open or closed without looking at it.

Newer, motorized hands are not as easy to learn how to use. To close the device, you contract the remaining muscles in your arm. An electrical sensor placed over those muscles detects the contraction and tells the hand to close. Since the original muscles that controlled the hand are gone, the remaining muscles must be retrained. Learning how to open and close a prosthetic hand in this way takes some time. And you still need to watch the device to know what it's doing.

To make motorized hands more intuitive to use, researchers are developing ways to detect the electrical signals in your brain and nerves to help control advanced bionic prosthetics. This can be done many ways, such as by implanting tiny sensors in the parts of the brain that control movement or by attaching small electrodes to the amputated nerves. Either way, the patients simply think about moving their hand and computers translate it into the movements of a bionic prosthetic hand.

CONNECTING MIND & BODY

To regain a sense of wholeness, a person with a bionic limb needs to do more than control the device. They also need to "feel" what it's doing. New bionic devices can send sensation from the device back to the brain. This allows a person with a bionic device to feel like they are using their own limb.

One way to help a person feel their prosthetic hand is to move the remaining sensory nerves from the amputated hand to the skin of the upper arm. You can then use small robots to press on the skin of the upper arm when the hand is touching something.

WEARABLE ROBOTS

Research teams are also trying to help people who have lost the use of their legs. By wearing a robotic device called an exoskeleton, some people with leg paralysis have been able to regain the ability to walk.

A group of biomedical engineers at the NIH Clinical Center, created a wearable exoskeleton for children with cerebral palsy. Cerebral palsy is a brain disorder that makes it hard to stand up straight, balance, and walk. The motorized, robotic exoskeleton changes the way the children walk by helping them straighten their knees at key points during the walking cycle. While the exoskeleton can make walking easier, children must be able to navigate at least small distances on their own to use it.

The ultimate goal is to have a person wear this outside of the lab, or even outside of the clinical setting. Of course, to do that you have to have a really robust control system that makes sure that the robot is behaving properly in all different kinds of environments. The team is now writing software so that the robotic device can be worn while navigating bumps in the terrain and other real-world conditions.

FINDING THE RIGHT DEVICE

Many types of prosthetic devices are now in development. If you'd like to find a clinical study to help test one, you can search for one in clinicaltrials.gov.

If you're interested in a clinical study for prosthetic devices, ask:

- Why is the study being done?
- How long will I be in the study?
- What kinds of tests and treatments are involved?
- What are the possible side effects or risks of the new treatment?
- What are the possible benefits?



TAKECHARGE

WELCOA'S SELF-CARE BULLETIN



SHEDDING LIGHT

On Shingles

Did you ever have chickenpox? If so, you're at risk for getting a disease called shingles. After you've had chickenpox, the virus becomes inactive and hides in your body. Shingles is caused by the virus becoming active again, but its symptoms can be much more severe. As you get older, your risk for getting shingles grows. Shingles most commonly occurs in adults over 50, but it can appear at any age.

SIGNS & SYMPTOMS

The first symptom of shingles is often burning or tingling pain, or itch, generally in a band-like distribution on one side of the body, i.e., around the waist, chest, stomach, or back. Shingles pain can be mild or intense. Some people have mostly itching; some feel severe pain from the gentlest touch, such as the weight of bed linens or clothing. A few people may have general symptoms of a viral infection, like fatigue, fever, and headache.

After several days or up to two weeks after the first symptoms are felt, a rash of fluid-filled blisters (vesicles) appears. These are similar to chickenpox but occur in a cluster rather than scattered over the body. The number of vesicles is variable. Some rashes merge and produce an area that looks like a burn. Other people may have just a few small scattered lesions. The clusters most often appear in a band called a dermatome, which contains nerves that branch out from the virus-affected nerve root exiting the spine. The second most common location is on one side of the face around the eye and on the forehead. However, shingles can involve any part of the body, including internal organs.

Recent studies have shown that subtle cases of shingles with only a few blisters, or none, are more common than previously thought. These cases may remain unrecognized.

TREATMENT

Currently there is no cure for shingles, but attacks can be made less severe and shorter by using prescription antiviral drugs such as *acyclovir, valacyclovir,* or *famcyclovir* as soon as possible after symptoms begin. Early treatment can reduce or prevent severe pain and help blisters dry faster. Antiviral drugs can reduce by about half the risk of being left with postherpetic neuralgia, which is chronic pain that can last for months or years after the shingles rash clears. Doctors recommend starting antiviral drugs at the first sign of the shingles rash, or if the telltale symptoms indicate that a rash is about to erupt. Other treatments to consider are anti-inflammatory corticosteroids such as *prednisone.* These are routinely used when the eye or other facial nerves are affected.

Most people with shingles can be treated at home. People with shingles should also try to relax and reduce stress (stress can make pain worse and lead to depression); eat regular, well-balanced meals; and perform gentle exercises, such as walking or stretching to keep active and stop thinking about the pain (but check first with your physician). Placing a cool, damp washcloth on the blisters—but not when wearing a topical cream or patch—can help blisters dry faster and relieve pain. Keeping the area clean can help avoid a secondary bacterial infection.

CAN SHINGLES BE PREVENTED?

In May 2006, the Food and Drug Administration (FDA) approved a VZV vaccine (Zostavax) for use in people 60 and older who have had chickenpox. In March 2011, the FDA extended the approval to include adults ages 50-59. A new shingles vaccine called Shingrix was licensed by the FDA in 2017 for adults age 50 and older. Talk with your healthcare professional if you have questions about shingles vaccination.



TOYOURHEALTH
WELCOA'S ONLINE GENERAL WELLNESS BULLETIN



THE IMPORTANCE OF *Social Connections*

Human beings are social creatures. Feeling like we're part of a community helps us thrive. But we sometimes have a hard time making and keeping the relationships that sustain us. Many Americans report feeling lonely for long periods of time. Connections with others are important for your health.

Social isolation and loneliness can both cause problems. Isolation is about whether other people are physically there or not. Being lonely is about not feeling connected to others. You can feel lonely in a room full of people.

Loneliness not only feels bad, it may also be harmful to your health. People who feel lonely are at higher risk of many diseases. These include heart disease, high blood pressure, and Alzheimer's disease. Loneliness may also increase the risk of death for older adults.

Some of the increased risk of disease may come from changes in behavior. People who feel isolated may not have friends or family encouraging them to eat right, exercise, or see a doctor. New research suggests that loneliness can also directly harm our health.

Experts note that lonely people have differences in their biology that make them more vulnerable to disease. Researchers have found that loneliness may alter the tendency of cells in the immune system to promote inflammation. Inflammation is necessary to help our bodies heal from injury. But when it goes on too long, it may raise the risk of chronic diseases.

People who feel lonely may also have weakened immune cells that have trouble fighting off viruses. So that leaves lonely people more vulnerable to a variety of infectious diseases.

People often associate loneliness with getting older. But you can feel lonely at any age. A recent survey found that young Americans are more likely to feel lonely than older adults. Some research suggests that social media tools and resources are preventing younger people from connecting in real life. However, more studies are needed to know whether this is true.

It can be hard for people to talk about loneliness. They may feel like something is wrong with them, even though feeling lonely happens to almost everyone at some point.

Researchers are looking into ways to help people break the cycle of loneliness. Studies have shown that feelings of loneliness can be reduced by helping others. Caregiving and volunteering to help others may therefore help people to feel less lonely.

Having a sense of purpose in life may be another way to fight the effects of loneliness. Research has found that having a strong sense of mission in life is linked to healthier immune cells. When you start to pursue a goal that's important to you, you almost always have to cooperate with others to do that. That helps bring people together.

Being active in your community and helping others can reduce feelings of loneliness. You can get more involved with others by:

- serving meals or organizing clothing donations for people in need.
- helping an organization send care packages to soldiers stationed overseas.
- caring for dogs and cats at an animal shelter.
- volunteering to run errands for people with disabilities.
- helping with gardening at a community garden or park.
- volunteering at a school, library, museum, or hospital.




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