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Faints, Seizures, and Strokes

Sudden loss of consciousness is among the most alarming of medical emergencies. Fainting spells are generally the least serious of such events—some perfectly healthy people faint at the sight of blood, for example, only to recover completely in a matter of minutes. But all faints, seizures, and strokes must be treated as potentially serious medical emergencies. The unconscious individual should receive immediate and appropriate care.

Fainting Spells

The medical term for fainting is syncope. It occurs when the supply of blood to the brain is momentarily inadequate. The person becomes pale as too little blood reaches the skin, and consciousness is temporarily lost.

In syncope, the loss of consciousness is by definition brief. Usually within a minute of lying flat, blood flow is restored and the individual who fainted is again aware of the world around him or her.

Fainting spells can occur as a result of various causes. Several medical disorders, including heart disease, severe coughing spells, and circulatory problems, can produce syncope. Some people, however, faint when they are extremely tired, when they receive news that is emotionally upsetting, or when they simply see blood. The heart slows, the blood vessels dilate, and blood pressure falls.

A fainting episode can have no medical significance or it can be a symptom of a serious disorder. No matter how trivial the cause, however, loss of consciousness is to be treated as a medical emergency until the symptoms are relieved and the cause is known.

Emergency Treatment.

If Lying Down. If a fainting spell results in the person slumping to the floor, position the individual on his or her back. Be aware that people who lose consciousness frequently vomit: Their airway must be watched carefully.

Check for Vital Signs. Is the person breathing? Position your ear over the person's mouth to listen for breathing sounds. Can you feel a pulse? It may be weak and slow, so check carefully. If breathing and heartbeat have ceased, the problem is more serious than a fainting spell and CPR must be initiated (see Cardiopulmonary Resuscitation).

Raise the Legs Above the Level of the Head. If the person is breathing, position the individual's legs on a chair or other object. This position allows gravity to increase blood flow to the brain. Loosen belts, collars, or other constrictive clothing. The person should revive quickly.

If Seated. If a companion complains of faintness or dizziness while sitting, have the person lie down. If there is not space to do so, have him or her remain seated but position the head between the knees. This will help increase circulation to the brain. If a person faints, yet remains seated, quickly lay him or her down on the floor.

Take It Easy. After a fainting spell, the person's facial color should return to normal. Often, however, the person will continue to feel weak for a short time after fainting, so lying down quietly for a few minutes is advisable.

Check for Other Symptoms. Is chest pain present? Does the person complain of head pain? Is there apparent breathing difficulty? Does the person complain of numbness or continuing weakness? These may be signs of underlying medical problems. Seek emergency medical assistance.

Provide First Aid for Injuries. If the person was injured in a fall associated with the faint, treat any bumps, bruises, or cuts appropriately (see Care of Minor Wounds).

Seek medical assistance immediately if:

- This is the person's first fainting spell;
- The symptoms mentioned above are present on awakening;
- The person has sustained an injury during the faint.

Seizures

Normally, the brain cells produce various coordinated electrical discharges. If, however, the electrical discharges by the brain cells become disorganized, a seizure occurs.

A seizure (also called a convulsion) is an involuntary episode of alternating muscular contractions and relaxations with loss of consciousness. Epileptic seizures are perhaps the most familiar variety of seizures, but several other disorders also can produce them. These include uremia (kidney failure); meningitis; toxemia of pregnancy; withdrawal from benzodiazepines (such as Valium), barbiturates, or alcohol; or intake of certain poisons or street drugs. Rarely, a seizure may be the first manifestation of a brain tumor (see Seizures and Tics).

Emergency Treatment.

During the Episode. When a seizure occurs, keep the person from injuring himself or herself. If vomiting occurs, try to turn the head so that the vomitus is expelled and is not aspirated into the lungs or windpipe. Frequently urine or stool will be involuntarily released during a seizure.

To reduce the risk that the individual will injure himself or herself in uncontrolled movements, clear the area around the person of furniture or other objects.

Do not try to limit the movements of a person having a seizure.

Although the person may cease breathing (and occasionally turn blue) for a part of a minute, breathing almost invariably returns without the need for CPR (see Cardiopulmonary Resuscitation).

If poisoning is suspected, attempt to determine the poison consumed. Call for immediate medical assistance.

In an infant or child, if the seizure seems to be the result of high fever (and your child is awake), lay your child on his or her side and wait until the seizure ends, then cool your child gradually, using a dampened sponge or cool compress and tepid water. An appropriate dose of acetaminophen may be used. Do not, however, immerse your child in a cold bath (see Febrile Seizure). Seek immediate medical assistance.

After the Episode. If the person has never had a seizure before, if the episode lasts more than a few minutes, or if the seizure recurs, seek professional medical care: Call for an ambulance.

Once the seizure is over, position the person on his or her side. This position will allow normal breathing and any vomitus or fluids to drain from the mouth and airway. Frequently, a person will have blood coming from the mouth from biting his or her tongue or cheek.

Confusion may be present for a period of time after the seizure. Watch the affected person until there is complete return of mental function.

If the person injures himself or herself in a fall associated with the seizure, treat any bumps, bruises, or cuts appropriately (see Care of Minor Wounds).

Record details of the seizure for the physician. Important observations include duration of the seizure, extremities involved, apparent precipitating factors, nature of the seizure, and any other characteristics you noticed.

Strokes

A blockage of blood flow or bleeding (hemorrhage) in the brain can result in a medical condition called a stroke. Symptoms of stroke may include:

- Deterioration in vision, speech, or sensation over minutes to hours;
- Sudden weakness, loss of sensation, or partial or complete paralysis in one limb or in an arm and a leg, with or without involvement of the face;
- Acute onset of double vision, slurred speech, vertigo (a sensation of either you or your surroundings spinning), incoordination, vomiting, or swallowing difficulty;
- Headache (accompanied by the above symptoms);
- Abrupt loss of consciousness (not due to injury).

Seek immediate medical assistance. If you suspect you or someone else has experienced a stroke, summon emergency assistance immediately.

Emergency Treatment.

While waiting for an emergency vehicle to arrive, watch the person suspected of having a stroke. If breathing ceases, CPR is necessary (see Cardiopulmonary Resuscitation). Minor breathing difficulty may be alleviated by positioning the head and shoulders on a pillow. Watch for vomiting and potential aspiration of vomitus into the lungs. If vomiting occurs, turn the head to the side.

Do not allow the person to eat or drink anything. If paralysis is present, protect the paralyzed parts.

For a detailed discussion see Stroke.

Hypertensive Crises

High blood pressure is a common ailment—perhaps one in four Americans has high blood pressure (also known as hypertension). It is a serious but treatable ailment (see High Blood Pressure). However, a hypertensive crisis is a medical emergency.

Hypertensive crisis is extremely uncommon. It occurs when the blood pressure in your arteries rises to a dangerously high value (more than 140 mm Hg diastolic; see Normal Blood Pressure). Among the possible causes are stroke, toxemia of pregnancy, kidney failure, and drug interactions. The cause also can be simpler: If a person with hypertension forgets to take his or her medication, blood pressure can become dangerously high.

In addition to a very high blood pressure, the following symptoms may indicate hypertensive crisis:

- Severe headache, accompanied by confusion and blurred vision;
- Chest pain;
- Nausea and vomiting;
- Seizures.

Emergency Treatment.

If the symptoms listed above occur, seek emergency assistance. While waiting for help to arrive, the person experiencing the symptoms should lie down and be encouraged to rest quietly. No food or fluids should be given.

In the event of seizures, care for the person as outlined above (see Seizures).

Diabetic Emergencies

People with diabetes may experience one or more of several different emergencies characteristic of their disorder. Among them are the insulin reaction, coma caused by ketoacidosis, and hyperosmolar coma.

For a detailed discussion see Diabetes Mellitus.

Insulin Reaction.

An insulin reaction is sometimes known as insulin shock or hypoglycemia (low blood sugar). An insulin reaction is most likely to occur in a middle-aged or younger person who is taking insulin for his or her diabetes. Some older persons with diabetes also take insulin and are vulnerable to this problem. Rarely, an individual who is not known to have diabetes also may experience an insulin reaction.

An insulin reaction is most likely to occur several hours after eating. Exercise also can cause an insulin reaction unless the person with diabetes takes less insulin or extra food before exercising.

Symptoms vary, but they usually consist of nervousness, feelings of hunger or apprehension, confusion, cold and clammy skin with sometimes profuse perspiration, loss of consciousness, or a seizure. This progression of symptoms may take place rather quickly, usually in less than an hour. The individual may be wearing a bracelet that identifies him or her as a person who takes insulin. It is also possible for the person taking one of the oral hypoglycemic tablets to have a mild reaction, but this is unusual and the symptoms are often less severe.

Once you recognize the problem, give the person some kind of carbohydrate or sugar. He or she may stubbornly resist taking the food because the thinking process has become affected by the low blood sugar. Fruit juices, candy, or sugar-containing carbonated drinks are effective. If the person vomits, wait a few minutes and then give small amounts of the carbohydrate cautiously. If the person is unable to cooperate in swallowing, a teaspoon or so of a syrup can be placed in the cheek at intervals of a few minutes. There often will be a period of 15 to 30 minutes from the time the sugar is administered until symptoms abate. Call a physician if recovery is not prompt. Administration of glucose in a vein or glucagon given just under the skin (subcutaneously) may be needed to reverse the symptoms.

Someone responsible should remain with the person for an hour or so after apparent recovery because full mental function sometimes does not promptly return.

Diabetic Ketoacidosis.

Diabetic ketoacidosis (diabetic coma) tends to occur in middle-aged or younger persons, but older persons can also be affected. It usually occurs when a person with insulin-dependent diabetes omits an insulin dose, uses too small a dose, or is stricken with a serious illness such as pneumonia. In some cases, it may be the clue that leads to the identification of previously undiagnosed diabetes.

Symptoms begin more slowly than in an insulin reaction and usually will progress over several hours or days before becoming severe. Nausea, vomiting, weakness, thirst, warm and dry skin, increased rate and depth of breathing, and gradual alteration of consciousness culminating in coma are characteristic symptoms.

Treatment is directed by a physician. If you are uncertain initially whether impaired consciousness in someone with diabetes results from an insulin reaction or from ketoacidosis, give sugar by mouth (treat as an insulin reaction). If there is not an improvement in the person's condition, seek immediate medical assistance.

Hyperosmolar Coma.

This condition tends to occur in older persons with diabetes who do not require insulin injections. The most common sequence is an illness, such as gastroenteritis or stroke, that interferes with the person's ability to drink water or perceive thirst. The

combination of the stress of the illness and the inability to consume enough water to maintain normal hydration leads to a progressive elevation of blood sugar to very high levels and a gradual loss of consciousness.

Hyperosmolar coma can be prevented by ensuring that older persons with diabetes consume generous quantities of water and by treating the precipitating illness promptly. Once consciousness is altered, this condition requires emergency evaluation.