Office of Integrated Health
Health & Safety Information

Stroke Awareness

Health and Safety Alert

A cerebrovascular accident (CVA), more commonly known as a stroke, occurs when there is insufficient blood flow to a part of the brain, or when a hemorrhage occurs in the brain that results in brain cell death (Center for Disease Control and Prevention, 2019). Stroke is the 5th leading cause of death/long-term disability in the US. This equates to 795,000 yearly. Nearly 160,000 people each year die due to stroke related causes. The fact that 80% of strokes are preventable is alarming (American Stroke Association, 2019). Focusing on the immediate necessity for medical care is critical in avoiding potential long-term outcomes such as permanent disability or death.

WARNING SIGNS AND SYMPTOMS OF STROKE

Call 911 and Get Medical Attention Immediately if Individuals Have One or More of these Symptoms:

- Slurred speech (difficulty repeating a simple sentence).
- Sudden trouble seeing in one or both eyes.
- Sudden, intense headache.
- Difficulty walking, dizziness, loss of balance and coordination.
- Sudden confusion or difficulty being understanding.
- Facial drooping (on one side of face or other, mouth droops, eye droops downward).
- Numbness, weakness, paralysis of the face, arm, or leg especially on one side of the body.
- Note the time that symptoms start and get the individual to the ER immediately (American Stroke Association, 2019).

Types of Stroke

Ischemic- occurs when blood vessel supplying blood to the brain is obstructed, this accounts for 87% of all strokes.
Hemorrhagic- occurs when weakened walls of the blood vessel ruptures. This type is associated with uncontrolled blood pressure.
TIA (Transient Ischemic Attack)-often referred to as a “Mini-Stroke”, is caused by a serious temporary clot. This is a warning sign. 15% of major strokes are preceded by a TIA.
Cryptogenic-a term that refers to a stroke without a known cause (American Stroke Association, 2019).

Recognition of Stroke Symptoms for Individuals with DD:

Being observant is key to awareness for individuals with developmental disabilities. Careful monitoring is especially important for those who are non-verbal and cannot perform the speech test; those who cannot raise both arms to test weakness in one side or the other and reliably follow a command in order to test these. Follow the basic First Aid and CPR instruction for stroke recognition along with these helpful hints:

- Changes in swallowing. This could be holding food in mouth or delayed swallowing. They may suddenly be unable to control food in their mouth or may suddenly lack the ability to keep food in mouth.
- Coughing during meals, or a sudden onset of aspiration pneumonia.
- Noted changes in facial presentation (drooping eye lid, turned down mouth, onset of drooling). Tongue, jaw, or lip weakness. Again, this might be indicated by food spilling over their lips.
- Weakness on one side of the body. Changes in their normal gait, dragging one foot, using the wall or furniture to steady themselves. Decreased strength in their hand that might lead to them dropping items, and/or a sudden inability to control their spoon or fork when eating.
- Balance and coordination changes. You may see a sudden increase in falls. They may be unable to perform tasks such as feeding self or holding a cup in their stroke affected hand.
- Changes in vision. The individual may not be able to report changes in vision. Watch for squinting or signs that might indicate that they are having difficulty with vision.
- Pain. The individual may not be able to report pain. Note sudden holding of head, crying, grimacing or behavior problems that might be due to their inability to communicate that they are experiencing pain. (ASA, 2019)

Immediately call 911 or take individual to the nearest hospital if the above symptoms are present.

Stroke Prevention

The most effective way to decrease the risk of Stroke is PREVENTION. Managing risk factors and areas of life that can be modified can provide a positive outcome (NINDS, 2019).

Non-Modifiable Risk Factors (Things We Cannot Change)

- **Age, Ethnicity/Race, Gender and Family History**

These are risk factors that none of us has control over. African Americans have 2 times the risk for a stroke than Caucasians. If a person has a parent that has suffered a stroke before the age of 65 then they are at 3 times the risk for having one (ASA, 2019).

- **Chronic Medical Conditions**

In a study completed by Ibarra and Johnson (2012), people living with lifelong disabilities are more likely to have chronic conditions, and the degree of disability increases the risk of poor health when compared to people with no disability (Ibarra, 2012). The following genetic conditions can increase the risk of stroke: Cerebral Autosomal Dominant Arteriopathy, Cerebral Autosomal Recessive Arteriopathy, Cerebral Amyloid Angiopathy, Moyamoya Syndrome, Fabry Disease, Ehlers-Danlos Syndrome type IV, Marfan Syndrome, Sneddon Syndrome, and Mitochondrial Encephalomyopathy (Arboix, 2015).

Modifiable Risk Factors *(Things We Can Change)*

- **Regular Check-Ups**

Regular medical check-ups give medical professionals a chance to review, discuss and monitor issues like diet, smoking, weight and blood pressure (ASA, 2019). Help individuals to remember scheduled appointment and assist them with any transportation issues they may have so that they return to their physician for recommended and/or scheduled appointments. Try to be a good healthcare advocate.

- **Hypertension (High Blood Pressure)**

According to the American Stroke Association 3 out of 4 people who suffer a stroke have high blood pressure (also known as hypertension) (ASA, 2019). However, in the European POMONA II Study (Haveman, et al., 2011), hypertension rates in the IDD population was not significantly higher than the rates of the general population. Those that participated in the POMONA II study had a hypertension rate of 5.8% in ages 19-34, that increased to 30.4% in those age 65 or older. History of stroke or cerebral hemorrhage was 1.5% (Haveman, et al., 2011). Another research study by Haveman, et al. (2010) entitled, *"Major health risks in aging persons with intellectual disabilities: an overview of recent studies"* revealed little to no difference in the rates of stroke prevalence between individuals with intellectual disability and those in the general population.

- **Physical Activity**

Evidence suggests that adults with IDD are more likely to lead a sedentary lifestyle than the general population. In a study completed by Emerson of 1458 participants only 4% met the criteria to be labeled "physically active" and 44% or (635) of participants were deemed "physically incapable" (Emerson, 2005). In the European POMONA II Study, individuals with intellectual disabilities had low levels of physical activity and poor diets that played a major role in numerous preventable health conditions: Type II Diabetes, cardiovascular disease, osteoporosis, arthritis and obesity (Haveman, et al., 2011).

- **Obesity**

Obesity contributes to cardiovascular disease and stroke risk. Similarly, leading a sedentary lifestyle and consuming a diet high in fat also increases the risks for stroke (Arboix, 2015). Having a BMI of 25.5-30 is considered overweight and a BMI greater than 30 is considered obese (Emerson, 2005). Evidence suggests that health-promoting interventions that incorporate physical activity, balanced nutrition, and healthy behavior education can have a positive influence on the health and function of adults with ID (Heller, 2011). Being able to motivate activity and be a positive role model for healthy eating habits is a key role for caregivers and direct service providing (DSP) staff.

- **Smoking**

Smoking is a risk factor for both cardiovascular disease and stroke (Arboix, 2015). Smokers have a risk for acute ischemic stroke that is almost 2 times higher when compared to non-smokers. Smoking also increases the risk of thrombus formation and atherosclerotic plaque formation (heart disease) (Arboix, 2015). The European POMONA II Study by Haveman, et al. (2011) entitled, *"Aging and health status in adults with intellectual disabilities: results of the European POMONA II study"* found that smoking was more common in individuals with DD who were 65 years of age and older, than in younger adults. The study also revealed that 7% of those individuals with DD who smoked, smoked more than 20 cigarettes a day.

- **Health Disparities**

The POMONA II study also revealed that many health disparities among older individuals with DD (65 and over) were preventable health conditions that had been under-diagnosed, late-diagnosed, or inadequately managed in some way (Haveman, et al., 2011).

Existing Conditions that Could Elevate Stroke Risk *(but not limited to)*

- **Thromboembolism**

  Blood clotting disorders and genetic defects affect the proteins needed for blood clotting. Individuals are at higher risk for stroke when they have family members who have had serious blood clots, the individual has a history of blood clots before age 40, and/or has had any unexplained miscarriages. Smoking, obesity, pregnancy, surgery, long trips, prolonged sitting, use of birth control and hormone therapies also are contributing factors to blood clot formation (ASA, 2019).

- **Atrial fibrillation** (AF or Afib)

  Is an irregular heartbeat and increases the risk of stroke by 5 times. Afib is a condition where the upper chambers of the heart beat irregularly and cause blood to collect in the heart, (possibly where a clot forms), which then travels to the brain causing a stroke (ASA, 2019).

- **Patent Foramen Ovale** (PFO)

Is a hole between heart chambers (usually diagnosed at birth) that usually closes naturally by adulthood? 1 in 5 Americans have PFO's, but do not have any symptoms, so many are unaware that they have the condition (ASA, 2019).

- **Large Artery Atherosclerosis**

  Is a build-up of fat, cholesterol, and fibrous tissue that grows in and on artery walls causing narrowing (ASA, 2019).

TIA's (Transient Ischemic Attacks)-are a serious warning sign for the risk of stroke that is often overlooked or undiagnosed. Risk may be as high as 17% within 90 days of TIA, and the greatest risk being the week after a TIA (ASA, 2019).

Recommendations

- **Recognition of Risk Factors and Early Warning Signs**

The key to success in lowering the risk of death or disability from stroke is controlling the risk factors and recognizing the early warning signs of a stroke. The American Stroke Association (ASA, 2019) recommends the following strategies to prevent a stroke:

- **Monitor Blood Pressure**

Help individuals monitor their blood pressure on a regular basis and/or per their physician's orders. Many pharmacies have blood pressure monitoring stations available at no charge to check blood pressure. It is recommended that individuals with a diagnosis of Hypertension have their blood pressure taken daily and especially daily for two weeks after treatment changes. Keeping a journal or record of readings is helpful when attending physician appointments (American Stroke Association, 2019). Home monitoring helps to obtain long-range data for the physician to evaluate, improves the assessment of hypertension drug effects, and improves compliance (Parati, 2008).

If an elevated reading occurs, wait five minutes and retake. If the reading is elevated above 180/120mm Hg and the individual is experiencing symptoms such as difficulty breathing, chest pain, weakness, back pain, difficulty speaking, or vision changes call 911 immediately (American Stroke Association, 2019).

In order to increase the accuracy of all blood pressure measurements, caregivers should encourage and assist the individual to remain as still and quiet (as possible) while their blood pressure is being measured. Instruct individuals to sit in an upright, well-supported position with legs uncrossed. Discourage smoking, talking, eating or drinking while taking the measurement. Caregivers should not take a blood pressure reading over clothing. Discourage physical activity and drinking caffeinated beverages for 30 minutes prior. It is important to take the measurement at the same time every day and at regular intervals (per physician recommendations) (American Stroke Association, 2019), (Parati, G, 2008).

Signs of elevated blood pressure are dizziness, facial flushing, and vision changes. Most people do not realize that their blood pressure is elevated, thus the reason why high blood pressure (hypertension) is known as the "silent killer". (American Stroke Association, 2019).

- **Manage Diabetes**

Help and encourage individuals to keep their daily blood sugars down via diet modifications and make sure they have A1C checks on a regular basis and/or per their physician's orders. Consider a consultation with a nutritionist for meal planning (ASA, 2019).

- **Physical Activity**

Help individuals increase their physical activity (if cleared with their physician). The recommendation for exercise for the general public is 30 minutes of exercise daily. Check with the individual's primary care physician prior to initiating ***any*** exercise program for ***any*** individual to ensure their health and safety (ASA, 2019).

- **Healthy Diet**

Encourage a healthy diet to reduce cholesterol and lower BMI. Help the individual to understand the benefits of a heart healthy diet that will lower high fat consumption. Consider a consultation with a nutritionist for meal planning. Check with the individual's primary care physician for clearance and approval, prior to assisting the individual to begin any kind of weight loss or dieting program (ASA, 2019).

- **Smoking Cessation**

Encourage individuals to stop smoking. Find appropriate teaching tools to help individuals understand the negative health impact of smoking. If the individual is interested in medication to help with smoking cessation, help them address the issue with their primary care physician (ASA, 2019).

- **Aspirin Therapy**

Ask the individual's primary care physician if they might be a candidate for aspirin therapy to lower their stroke risk. (For some individuals, aspirin therapy is contraindicated). ***Never*** give any medication (prescribed or over the counter) to any individual without a physician's written order and instructions (ASA, 2019).

Resources

- **American Heart Association** https://www.heart.org/ click on Health Topics to find information geared to the individual or caregiver learning experience such as healthy living, healthy eating, mental health and well-being, sleep, stress management, smoking cessation, fitness and AMA recommendations for activity. Click on Professional to get up to date information on new therapies, quality improvement, workplace health, guidelines and statements.
- **Smoking Cessation Programs for Individuals with Intellectual Disabilities**

  The CDC (CDC, 2019b) has approved funding for all-inclusive smoking cessation programs in 19 states. You can find out more about these programs here: https://www.cdc.gov/features/disability-quit-smoking/index.html

- **National Stroke Association** https://www.stroke.org/understand-stroke/what-is-stroke This site offers detailed imagery to help explain the different types of stroke, understanding of what a stroke is, recognition of symptoms of a stroke, prevention of a stroke, the impact of a stroke, etc.

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