

Delaware Stroke Initiative



Stroke Resource Guide



Trust your health to experience.

Leading the way in stroke care for Delaware families

When you or someone you love needs stroke care, trust the experience of Christiana Care's emergency, cardiovascular, neurological and rehabilitation experts.

- Prevention programs to help those with a family history of stroke reduce their own risk.
- Life-saving clot-busting treatment to lessen damage to the brain.
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- Full-range of rehabilitation programs to help stroke patients recover.



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DELAWARE
ACADEMY *of*
MEDICINE

“To enhance the well-being of the community through education and the promotion of public health”
www.delamed.org

INTRODUCTION

By the time you finish reading this article, three Americans will suffer and one will die from a brain attack/stroke. Annually, brain attacks are the leading cause of serious, long-term disability in the United States and the third leading cause of death (160,000 fatalities annually). Brain attacks strike approximately 750,000 Americans every year.

The purpose of this resource guide is to provide information about different aspects of stroke. It is hoped information presented here will help readers to better understand stroke. Prevention of stroke is an important goal of the Delaware Stroke Initiative (DSI). We hope to help stroke survivors avoid recurrent stroke and help those at risk to prevent a first stroke. This guide also provides stroke survivors as well as their families, friends, and caregivers with useful information to help them adjust to life following a stroke or brain attack.

It has been estimated that approximately one-third of all stroke survivors will have another stroke within 5 years of their initial stroke. In America today, approximately four out of five families will be touched by a stroke. According to the Framingham Study data collected in 1991 and published by the American Heart Association in 1996, approximately 31% of stroke survivors will require assistance following a stroke; about 20% will require help walking and 16% become institutionalized.

This guide includes educational information about the types of stroke, warning signs of stroke, stroke risks as well as a collection of articles that walk you through the steps following a stroke and what you can expect along the road to recovery. Resources listed in this publication include a glossary of stroke terms, suggested

web sites, and national and state organizations that provide information, social activities and assistance for stroke survivors.

DSI, a 501 (c) (3) non-profit association, was founded in 1999 by Ellen Barker as the only non-profit organization in Delaware that is totally dedicated to stroke. DSI's mission is to reduce the incidence of stroke and to improve outcomes. The organization is comprised of a Board of Directors with representation from the medical community, corporate sponsors, support groups, local businesses, stroke survivors and a passionate base of volunteers. DSI recognizes stroke as a major health problem and the third leading cause of death in Delaware and the leading cause of adult disability. With the knowledge that more women die each year from stroke than die of breast cancer and that every minute in the United States someone experiences a stroke, DSI's mission is to reduce death, disability and dependency from stroke in Delaware. The best treatment is prevention.

DSI has consistently maintained a strong belief that because of its single-minded focus on stroke, we are uniquely capable of collaborating with other organizations in the state to marshal resources, activities and commitment to deliver consistent and complementary stroke programs for stroke within the state of Delaware.

To obtain a "Stroke Risk Screening Questionnaire" visit our Web site at: www.delstroke.org. You can also reach us at (302) 757-4886 or, destrokeinitiative@yahoo.com.

DSI SUPPORT GROUP

Following a stroke, individuals may need support in understanding and dealing with stroke-related effects and physical and social functioning. Stroke survivors may be young or older adults, minimally or severely physically or cognitively impaired, employed or unemployed, and have few family and community resources available to them. Successful recovery from a stroke is not limited to physical recovery or return to the pre-stroke level.

Reintegration to normal life at home may require many adjustments. There may be very subtle or very noticeable changes in personality after a stroke that affects mood, sexual functioning, problem solving, and sensory changes that affect the quality of life. DSI is pleased to sponsor a support group as an important community service to help stroke survivors and their families learn about community resources, get educational information and share their personal experiences in a positive and supportive environment.

Anyone who has recovered from a stroke, their families, and friends are welcome to attend. Health care professionals are also invited to attend and participate in meetings. For more information please call (302) 757-4886 or email destrokeinitiative@yahoo.com.

FREE DELAWARE STROKE INITIATIVE SUPPORT GROUP

Meetings: 2nd Thursday of every month
Time: 7pm-8:45pm
Location: Newark Senior Center
200 White Chapel Road
Newark, DE 19711



Note: This publication is presented for the purpose of education about stroke. Nothing herein should be construed as medical diagnosis or treatment advice. The information contained should not be used in the place of calling your physician or health care provider. Please contact your physician or health care provider for your individualized health care, questions or additional information about stroke.

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DSI Needs Your Support!

The Delaware Stroke Initiative is a 501(c)(3) non-profit that is working to reduce the incidence of stroke and improve stroke outcomes in Delaware. We provide Delaware residents with educational materials like this resource guide, a monthly support group, and risk assessment screenings. These services are all provided free of charge. DSI is only able to survive on donations. Please consider making a tax deductible donation or designate Delaware Stroke Initiative (Code 9430) on your United Way of Delaware Pledge Form.

Thank you.

STROKE EDUCATION

ANTHONY MUNSON, M.D.
NEUROLOGIST, MEDICAL DIRECTOR,
CHRISTIANA CARE STROKE PROGRAM

What is Stroke?

The brain is responsible for coordinating how we move, think, speak, hear, see, feel, and behave. To function properly, brain cells must have a continuous supply of oxygen and other nutrients from the blood. When the blood supply is disrupted, even for a few minutes, areas of the brain may be damaged and a person may suddenly lose some of the functions controlled by that region of the brain. This sudden loss of function is referred to as a stroke.

Blood is continuously pumped from the heart to the brain via several artery groups. Within the brain, these arteries branch into smaller and smaller arteries and then into tiny thin-walled vessels (called capillaries) which supply the oxygen and nutrients that the brain tissue needs. It is when this continuous blood supply is disrupted that brain cells die and a stroke results.

A stroke is the result of a sudden blockage caused by a clot, narrowing of an artery, or bursting of a blood vessel. It is this distinction that defines the main types of stroke. The two main kinds of strokes are known as ischemic and hemorrhagic.

Ischemic Stroke

Ischemic is the most common type of stroke and constitutes an estimated 80 percent of all strokes. An ischemic stroke results when a blood vessel leading to the brain becomes blocked. This type of stroke may occur for three main reasons:

1. A blood clot (or thrombus) forms inside an artery in the brain, blocking the flow of blood. Referred to as thrombotic stroke, this is the most common type of ischemic stroke. Blood clots form most often in arteries

damaged by atherosclerosis, a disease in which rough fatty deposits, or plaque, build up on the walls of the artery. These deposits can crack and expose substances that induce clots to form.

2. A clot forms in the blood, but unlike thrombotic stroke, it originates somewhere other than the brain. This type of stroke is referred to as an embolic stroke and occurs when a piece of clot (an embolus) or plaque fragment breaks loose and is carried in the bloodstream to the brain. An embolus can form in many places in the body, including the heart and the arteries of the neck that transport blood to the brain. The embolus travels through the arteries, which branch off into smaller vessels. When it reaches a point where it can go no further, it plugs the vessel and cuts off the blood supply to the area of the brain that is supplied by that vessel.

Note: Both thrombotic and embolic strokes are referred to as ischemic because the blood supply has been blocked to the brain area. You may hear of the term cerebral infarction in connection with thrombotic and embolic types of stroke. Cerebral refers to the brain. An infarct is an area of tissue death due to a blockage of blood flows, such as a blood clot. It is also a result of ischemia, which refers to an inadequate blood (and therefore oxygen) supply to a certain part of the body.

3. Blood flow decreases to the brain which can result from poor overall blood flow in the body due to heart damage or dysrhythmia (irregular heart rhythm that makes pumping inefficient or ineffective). This type of ischemic stroke is called hypoperfusion or watershed and is less common than the other two types.

Hemorrhagic Stroke

The second main type of stroke is hemorrhagic and occurs when a blood vessel in or around the brain ruptures or leaks. This rupture not only denies the blood from reaching its destination, it also causes a leakage of blood into the brain or the area surrounding the brain. When this happens, the cells nourished by the artery are unable to obtain their normal supply of nutrients and stop functioning properly. Blood begins to accumulate and clot soon after the rupture of the artery, causing a disruption of brain function and potentially increased pressure on the brain itself. Cerebral hemorrhage is most likely to occur in people who suffer from a combination of atherosclerosis and high blood pressure.

Transient Ischemic Attack (TIA)

About one-third of all strokes are preceded by one or more transient ischemic attacks (TIAs) or what are sometimes referred to as “mini-strokes.” TIAs can occur days, weeks, or even months before a stroke and

are caused by temporary interruptions in the blood supply to the brain. The symptoms resemble those of a stroke, but last a relatively short time and completely resolve.

Because TIAs are temporary, it is easy to ignore them or to believe the problem has disappeared. However, the underlying problem that caused the TIA continues to exist. Therefore, attention must be paid to these symptoms and a TIA should be viewed as early warning of a potentially serious stroke in the future.

If you or someone you know experiences a TIA, it is important to seek the assistance of a health care professional. Call your doctor immediately or go to the closest emergency department, even if the symptoms seem to be getting better or have resolved.



EMERGENCY EVALUATION AND TREATMENT OF STROKE

ANTHONY MUNSON, M.D.
NEUROLOGIST, MEDICAL DIRECTOR,
CHRISTIANA CARE STROKE PROGRAM

Neurologists have a saying when it comes to stroke treatment: “Time is Brain.” Like a heart attack, the key to good stroke treatment is early and rapid evaluation. In the last decade, we have seen amazing advances in the treatment of stroke, but most of these treatments can only be given in the first few hours. As such, I cannot emphasize enough the most important factor: Get to the hospital as soon as possible! If you suspect someone is having a stroke, do not wait, call an ambulance right away. Do not attempt to drive the person (or yourself) to the hospital. Try to note the time that the person’s symptoms began. When they arrive, tell the paramedics what happened, including the time, and any medical history you may know. If you are not the patient, follow the ambulance to the hospital (if possible), as the doctors may want to speak with you as well.

The focus in the emergency room will be on two things: determining if the patient is having a stroke, and then determining the appropriate treatment. If a stroke is felt likely, the next step is to find out if it is an ischemic (blockage) or hemorrhagic (bleeding) type of stroke. They will then use that information to determine how to treat that stroke. To get this information, the doctors and nurses will likely perform a series of procedures and tests in a very quick and efficient manner:

- A physician will ask about the symptoms and any recent medical problems
- An emergency room physician and likely a neurologist will look for signs of stroke on a physical examination
- Blood will be drawn for certain laboratory tests
- A CT scan (a type of X-ray) will be done to look for any signs of bleeding or early signs of the stroke

If there is bleeding found on the CT scan, treatment will likely consist of blood pressure control and watching closely for complications. They may call a neurosurgeon as well, although this is usually a precaution and most patients will not require any sort of surgery. They will admit the patient to the hospital so a close watch can be kept and any problems can be treated early.

If there is no bleeding and a blockage-type stroke is suspected, the next step will be to determine if the person is a candidate for therapy with a “clot-buster” drug, usually a medication called tissue plasminogen activator, or t-PA for short. This medication is designed to help break up the clot that is blocking blood flow to the brain, and therefore improve the chances of a good recovery. While it does not usually improve things right away, it has been shown that patients who receive this medication have less long-term problems from their stroke.

The medication does have some risk, however, and a small number of patients who receive the medication have bleeding problems that can actually make things worse. The physicians therefore have a list of things they look for to identify who would be less likely to have bleeding problems and more likely to benefit. The most important factor in this decision is the time since the stroke began. They will try to find out when the last time was that the patient was without symptoms. If the problems have been present for more than 4 1/2 hours, the risk of giving the medication will be too high. That is one of the reasons why it is very important to get to the emergency room as soon as possible. Patients on warfarin (Coumadin) (a strong blood thinner medication) are also at a higher risk of bleeding and in general will not be given the medication. Finally,

patients who are already showing improvement are usually not given t-PA, as they are more likely to do well even without the medication.

No matter what type of stroke or what happens in the emergency room, the patient will almost certainly be admitted to the hospital for further testing and to keep a close watch for problems.

Remember, stroke is a true emergency and time is the key. If you or someone around you may be having a stroke, please do not delay. Call an ambulance and seek treatment immediately!

FACTS AND FIGURES

...in the United States:

- On average, every 40 seconds, someone has a stroke.²
- On average, every 4 minutes, someone dies of a stroke.²
- Stroke is one of the leading causes of adult disability.¹
- An estimated 7,000,000 adults have had a stroke.²
- Over 15,000 living Delaware adults report having had a stroke.¹
- Stroke is the third leading cause of death.¹
- Each year, about 55,000 more women than men have a stroke.²
- Smoking more than doubles your risk of stroke.²
- African-Americans' risk of a first stroke is almost twice that of Caucasians.²
- Approximately 500,000 people suffer their first stroke every year and 200,000 more experience recurrent strokes.¹
- 14% of people who survive a first stroke or TIA will have another within one year.¹
- It is estimated that Americans paid over \$70 billion in 2010 for stroke-related medical costs and disability.³

1 Delaware Stroke Task Force. Stroke Systems of Care: A Stroke Prevention and Treatment Strategy for Delaware. Rep. Jan. 2007. Web. 5 Mar. 2012. <<http://dhss.delaware.gov/dhss/dhcc/files/2007strokesystemofcare.pdf>>.

2 "Heart Disease and Stroke Statistics-2012 Update." Circulation. Web. 05 Mar. 2012. <<http://circ.ahajournals.org/content/early/2011/12/15/CIR.0b013e31823ac046>>.

3 "Impact of Stroke." Www.strokeassociation.org. Web. 05 Mar. 2012. <http://www.strokeassociation.org/STROKEORG/AboutStroke/Impact-of-Stroke_UCM_310728_Article.jsp>.

PREVENTING STROKES:

CALL 911 AT THE FIRST SIGN OF A BRAIN ATTACK/STROKE!

R.W. FRELICK, M.D.

The most common type of stroke is caused by the lack of a blood supply to one or more vessels of the brain. A stroke is more likely to occur after the age of 50, but can even develop in children. It is often associated with a history of high blood pressure (hypertension), and/or a disturbance of the blood lipids (most commonly measured by the level of cholesterol in the blood). Those lipids develop into plaques that can slowly grow to obstruct one of the main arteries to the brain, and/or within one of the smaller end arteries to a localized area of the brain. These smaller arteries in the brain are called “end arteries” because they lack the rich capillary network found in most other parts of the body. An obstruction of one of these small end arteries can cause damage to a specific part of the brain such as speech or control of an arm.

Bleeding from a leak in one or more brain blood vessels can frequently be related to a small “bubble” called an aneurysm of a blood vessel which may be inherited. It may rupture at any age but more commonly after 50 years of age. Some may never leak. High blood pressures may be a factor. A brain tumor -whether a primary or secondary cancer starting in another part of the body- can also cause a stroke like attack.

Brain Attack/Stroke Risk Factors:

High blood pressures, increased weight (obesity), elevated cholesterol, increased blood sugars (diabetes), use of tobacco, excessive alcohol consumption and recreational drug use such as cocaine and amphetamines. The presence of multiple risk factors increases stroke risk. It is extremely important to keep the blood pres-

sure under control. That is usually possible by taking prescribed blood pressure medications, avoiding salt, exercising and having the blood pressure checked regularly.

The Surgeon General reported a few years ago that approximately 300,000 Americans die each year from illnesses related to obesity. 60% of adults are overweight and childhood obesity is an epidemic.

People using warfarin (Coumadin) for an irregular heart rate called atrial fibrillation need to have their blood tests carefully and frequently checked to prevent bleeding. Hitting one’s head when falling is responsible for 24% of bleeding in the brain in older individuals (called intracranial hemorrhage).

Healthy Lifestyles

Adopting a healthy lifestyle can not only reduce the risk of a stroke, but of many other diseases. A diet low in saturated fats, excessive sodium (salt), and sugar has been shown to help prevent stroke and heart disease. Likewise the importance of 30 minutes of physical exercise at least 3 times per week has been scientifically shown to be an effective way to maintain a healthy life. Everyone should avoid smoking, exposure to second hand smoke, recreational drugs of all kinds and drinking more than two alcoholic beverages in any one day.

Annual Physical Exams and Medical Follow-up

Everyone should have regular check ups by their primary health care provider as is appropriate for their age and gender. It is important to monitor weight, blood

pressure, blood cholesterol and blood sugar. In addition to stroke risk factors, having mamograms, Pap smears and colonoscopy as recommended can help catch cancers early.

Take Action When Symptoms Occur! If you or someone with you experiences:

Sudden weakness or numbness

Sudden change in vision

Sudden difficulty in speaking

Sudden dizziness or severe headache

Call 911 immediately!

Do not wait for such symptoms to go away. It is very important to get to the hospital immediately when stroke symptoms begin. This can help limit injury and improve recovery from a stroke/brain attack.



HOSPITAL CARE FOR THE STROKE PATIENT

LEE P. DRESSER, M.D. NEUROLOGIST.
WILMINGTON NEUROLOGY CONSULTANTS

Stroke patients are often admitted to specialized sections of the hospital where they can be monitored closely. If the patient has received T.P.A., the clot dissolving medicine, they will spend the first day in the intensive care unit (I.C.U.). Often they wear leads on their chests to monitor the electrical activity of their hearts. To make sure the injured part of the brain receives a rich supply of oxygen, it is frequently supplied to stroke patients by nasal tubes or a mask. Most patients are given fluids through tubes in their veins to help prevent dehydration. Nurses will check their neurological status frequently to make sure the symptoms of stroke are not worsening. The stroke patient may not be given anything to eat or drink until they are seen by a speech therapist. This is to make sure they can safely swallow and do not choke or have food or drink go into their lungs and cause an infection. Patients may be instructed not to get out of bed and to lie flat for the first 24 hours after they suffer a stroke. After that they may be told to only get out of bed with help since balance problems are common with stroke and can lead to falls. One of the problems that can occur after a stroke is the development of blood clots in the legs. This happens because of lying in bed and being unable to move one side of the body. To prevent this, some patients will be given injections of low doses of a blood thinner or fitted with air powered compression stockings. A catheter tube may be temporarily used to help drain the bladder of stroke patients immediately after admission to the hospital.

The first day in the hospital for stroke patients is often filled with testing. They may have a computerized tomography (C.T.) picture of their brain made if it was not done in the emergency room. A magnetic resonance imaging (M.R.I.) scan of their brain may be performed. At the same time a M.R. angiogram (M.R.A.) picture of the blood vessels supplying the brain may be made. The

blood vessels in the neck can be investigated with a carotid ultrasound. Because a blood clot coming from the heart is a common cause of stroke, sound wave pictures of the heart may be ordered. Sound waves can be bounced off the heart from the chest (transthoracic echocardiogram) or from a probe placed in the swallowing tube (transesophageal echocardiogram or T.E.E.). Blood tests are often taken during the first few days in the hospital. If a blood thinner is used to prevent stroke, it may be necessary to do blood tests more than once a day. Most tests are done to find out what caused the stroke and help doctors prevent any more strokes.

Usually within 48 hours of entering the hospital the stroke patient is evaluated by a number of therapists. These include speech therapists who help evaluate and treat problems with talking and swallowing. Physical therapists help patients recover the strength in their arms and legs and improve their ability to balance and walk. Occupational therapy helps patients with skills needed to take care of themselves, such as feeding, cleaning, dressing and bathing. Patients may be evaluated by a physiatrist, which is a doctor who specializes in rehabilitation. The physiatrist will help determine where the stroke patient should go to continue rehabilitation after leaving the hospital. If the patient has minor problems, they may go home. If they have more severe problems, they may go to a rehabilitation hospital or a nursing home (also called an extended care facility). Most extended care facilities offer speech, physical and occupational therapy. Stroke patients are usually evaluated by social workers and discharge planning nurses, who work with the doctors to help decide what is the best place for the patient to go when they leave the hospital. Most stroke patients leave the hospital 3-7 days after they had their stroke.

ATRIAL FIBRILLATION AND STROKE

HELEN SENSENY, M.S.N., R.N., DTCC NURSING FACULTY

Atrial fibrillation is an irregular heart rhythm where the top chambers of the heart (atria) quiver. Normally these chambers beat in sequence with the lower parts of the heart (ventricles). This quivering or fibrillating does not allow for complete emptying of the upper chambers. Without complete emptying the blood can pool and this increases the risk of blood clot formation. The blood clots can then break loose and travel into the brain, lungs and other parts of the body. The blood clot that travels to the brain can cause a stroke because it will block circulation to that part of the brain.

The biggest danger of atrial fibrillation is stroke. Atrial fibrillation is found in 2.2 million Americans. Atrial fibrillation is responsible for 140,000 strokes annually, which is about 25% of all strokes. If you have atrial fibrillation, you can greatly decrease your risk for stroke with appropriate treatment.

Some people may have atrial fibrillation and not know it. Others may start to feel tired and a little unwell, while others may feel acutely ill. Atrial fibrillation may cause the heart to beat very fast which can be life threatening and slowing down the heart is an important way to prevent heart failure.

The goals of treating atrial fibrillation are to convert to a normal rhythm and to prevent clot formation. Converting to a normal rhythm is not always possible, so preventing the blood from clotting while remaining in atrial fibrillation, is an important part of therapy.

Medications can be used to slow down the heart rate, stop atrial fibrillation and to keep the blood from clotting. When medications are not successful, there are several different treatments to try to convert the rhythm. These include electrical cardioversion, radiofrequency ablation and/or surgery.

In electrical cardioversion, sedation is given, and then an electric shock is delivered to the heart to restore normal heart rhythm.

In radiofrequency ablation, a thin flexible catheter is inserted through a blood vessel and guided to the heart muscle. Sophisticated equipment is then used to determine the exact area of the heart that is causing the abnormal electrical responses that are causing the atrial fibrillation. Once identified, this tissue is then altered using radiofrequency energy to stop the abnormal stimulus which causes the atrial fibrillation.

Surgery can also be used to destroy the abnormal electrical pathways that cause atrial fibrillation. “Maze” is a surgical procedure where a heart surgeon makes multiple cuts into the atria in a Maze type pattern. The scars created from these cuts do not conduct electrical energy so the abnormal electrical impulses which caused atrial fibrillation do not spread through the atria. This helps prevent atrial fibrillation and restores a normal rhythm.

The most common place for clot formation in the atria is an area called the left atrial appendage. Anticoagulation medications can be given to prevent clot formation in this area. New procedures and devices such as the Watchman Device and the Lariat II are being used to close off this appendage and are showing success in preventing clot formation.

To prevent blood clot formation, anticoagulant and antiplatelet medications make the blood less prone to clotting. Warfarin (Coumadin) and Pradaxa (dabigatran) are the anticoagulants most often used. Aspirin and Plavix (clopidogrel) are the antiplatelet drugs most often used. Antiplatelet medications are not as effective as anticoagulants in preventing stroke, but have a lower risk of bleeding complications. Long-term use of warfarin in patients with atrial fibrillation and other stroke risk factors can reduce stroke by 68 percent.

A stroke caused by atrial fibrillation is often worse than other causes of stroke. It is therefore very important that patients with atrial fibrillation get treatment.

References and Further information on Atrial Fibrillation:

<http://www.a-fib.com/Overview.htm>

<http://www.mayoclinic.org/maze-heart-surgery/>

[http://www.strokeassociation.org/STROKEORG/LifeAfterStroke/HealthyLivingAfterStroke/UnderstandingRiskyConditions/When-the-Beat-is-Off--Atrial-Fibrillation UCM 310782 Article.jsp](http://www.strokeassociation.org/STROKEORG/LifeAfterStroke/HealthyLivingAfterStroke/UnderstandingRiskyConditions/When-the-Beat-is-Off--Atrial-Fibrillation_UCM_310782_Article.jsp)



MY EXPERIENCE WITH STROKE

BRUCE CASALES

It was Friday about 4:00 pm when I got the worst headache ever. Of course I totally ignored it (denial is a powerful thing). My wife and I went to dinner (tried to mask the slurring) and went home. The next day I didn't feel good (the stroke was getting worse). My wife took me to the hospital but they weren't sure if I had a stroke.

They found out I had a hemorrhage stroke. A week later I had a ischemic stroke also. I had severe short term memory loss, couldn't read, write, walk, plus it turns out, for 2 year, I couldn't talk. I was in the hospital for 2 months.

I always felt that I would get better. Now, did I know that? No.....but I did work on it. At the rehab hospital I was in it was 5 days a week of speech therapy, physical therapy, and occupational therapy. Another 2 months. I spent 4 months of my life (and my wife's) there and I went home.

Now the real work got started. Fortunately, I had my wife to help. She did everything for me. She was my friend, caregiver and advocate. I was lucky. A lot of people are not so lucky.

Don't do what I did...prevention is the real key. Know the signs:

- WALK (Is your balance off?)
- TALK (Is your speech slurred or face droopy?)
- REACH (Is your vision all or partly lost?)
- FEEL (Is your headache severe?)

If you not sure...don't go to the hospital.....call 911 NOW!

Now, 9 years later I can do pretty much everything I used to do. The downside: I wasted 9 years of my (and my wife's) lives.

That's why support groups are so important. It's a place to talk to other people who had the same experience as you. How they dealt with different things...education ...and not feeling I'm the only one had to deal with this.

When I was in the hospital, the golden rule was: 6 months...if the person got better fine, if not, that's it. Now doctors know when a person has a stroke they will continue to get better for their rest of the lives. It's not the end of the line...it's the beginning...it's about hope.



WHAT CAN I EXPECT FROM PHYSICAL THERAPY?

BECKY BROCKSON, P.T.

Physical therapy (PT) after a stroke aims to help the stroke survivor to regain skills that were lost when part of the brain is damaged. The degree of disability that follows a stroke depends upon which area of the brain is damaged. The physical therapist will usually focus on helping the patient in regaining strength, balance, coordination and the ability to move and walk. Physical therapy cannot “cure” or reverse the brain damage, which was caused by the stroke. Participation with an early physical therapy program can, however, help the patient to achieve the best level of recovery possible.

PT in the acute care hospital begins as soon as the patient is medically stable, often in the first or second day of admission. If stable, the patient will be assisted out of bed to a chair. Patients progress from sitting to standing, to transferring and walking with physical therapy. Exercises may involve teaching the stroke patient how to coordinate leg movements, how to regain balance, or walking with an assistive device. Physical therapy sessions may also include reviewing good safety practices, or involving the patient’s family to teach them how to help assist the patient.

As the time for discharge from the acute care hospital approaches, the staff will work with the patient and family to decide which type of rehabilitation will be best suited for the patient. This depends on many factors: if the patient lives alone or how much help is available to the patient at home, how safe the patient is when moving or walking, and how much therapy and activity the patient is able to tolerate. The rehabilitation options after discharge include:

- Outpatient therapy - usually 2-3 times per week
- Home care therapy - this would involve a therapist coming to your house, usually 2-3 times per week
- Sub-acute inpatient rehabilitation - this therapy is usually provided in a nursing home, 3-5 days per week, for approximately 1 hour per day, with a goal of the patient returning to home.
- Acute inpatient rehabilitation - this therapy is usually provided in a rehabilitation hospital, 5-7 days per week, for approximately 3 hours per day.

**DYNAMIC PHYSICAL THERAPY
& AQUATIC REHABILITATION**



OCCUPATIONAL THERAPY FOR STROKE

SARAH EKBLADH, OTR

The primary goal of Occupation therapy (OT) in the treatment of patients who have had a stroke is to increase their independence with activities of daily living (ADL's). In acute care, this would focus on assisting patients with the ability to dress and bathe themselves. Initially, this involves training patients in compensatory techniques to complete these activities as patients may have weakness on one side, balance deficits or visual deficits. Adapted equipment may also be issued for feeding or dressing if this increases independence.

OT also focuses on the use of the arms and hands. Since strokes often cause weakness or incoordination on one side of the body, treatment may include range of motion exercises, strengthening or coordination activities on the affected side. Additionally, OT may provide braces or splints for the affected limb to prevent contractures (if needed).

OT may also evaluate visual and perceptual skills as patients may have visual deficits after a stroke. These deficits may include not being able to see one side, “forgetting” about one side or double vision. Treatment includes re-training visual skills as well as compensating for deficits.



SPEECH THERAPY'S ROLE IN STROKE REHABILITATION

JAMIE MANCE, SPEECH PATHOLOGIST

After a stroke, a person may experience language deficits and swallowing difficulties. Other impairments may include slurred speech, voice disorders and cognitive deficits. The severity of these may vary depending on the location and size of the damage caused by a stroke. A speech therapist (ST) is a health care professional who specializes in assessing and treating communication disorders and swallowing problems.

When a patient is medically stable and cleared by the physician, the rehabilitation process begins. Early intervention with a stroke patient is crucial to obtaining the greatest recovery potential from therapy services. A speech therapist is part of rehabilitation team which includes physical therapists (PT) and occupational therapists (OT). This team is responsible for helping the patient regain as much lost function as possible.

In an acute care setting, a speech and swallowing therapist is consulted by the physician when the patient exhibits difficulty with talking and/or eating meals. A speech and swallowing evaluation is completed. The result of this evaluation determines the strengths and weaknesses of the patient and guides the development of an individualized rehabilitation program. This plan may include compensation strategies and strengthening exercises to assist the patient to improve their communication and swallowing function.

An emphasis is applied to the family's education so that there is continuity with therapy strategies and exercises. Handouts are given to patients so that they can continue with their therapy daily.

Therapy does not end when the patient is transferred to another facility or discharged home. Rehabilitation services are available in a rehab hospital, nursing home or extended care facility. Home care services provide

a therapy setting in your own house. If the patient requires further therapy then outpatient clinics will provide for their needs.

Terms commonly used in speech therapy:

Aphasia – A difficulty producing and processing language. One example is when the patient states, "I know what it is, but I can't say it," when trying to identify an object.

Apraxia – The inability to coordinate (planning, sequencing) the muscles involved in speech production.

Dysarthria – A weakness in the muscles involved in the speech mechanism. This is often described as having slurred speech.

Cognitive deficits – These impairments affect the ability of an individual to think and process information. This may include memory, sequencing and problem solving.

Dysphagia – A weakness in the muscles that are involved with swallowing.

Dysphonia – The inability to produce voiced sounds in speech.

HOW WILL THIS STROKE CHANGE MY DAILY LIFE?

MARY CIECHANOWSKI, MSN, ACNS, BC, CCRN
TERESA ZACK, MSN, RN, NE-BC

When someone suffers a stroke a portion of the brain becomes damaged. Since the brain is the command center of the human body, a stroke can affect the signals coming from the brain. The brain controls all aspects of the person, from the physical to emotional aspects. Functions that can be affected by stroke can include reading, writing, walking, talking, thinking, and seeing as well as the memories we form and our moods. Having a stroke has the potential to affect and change any part of who we are and result in problems with intellectual abilities, emotions and personality, in addition to the physical disabilities.

Speech and Language:

Some stroke survivors can have problems with speech and language. This can make it difficult to communicate with others which can become very frustrating. After a stroke, one can have difficulty naming objects correctly, expressing themselves or even comprehending what others are saying. Some people may also experience problems in related skills such as math, reading or writing. This does not mean these skills are lost forever. Many times with speech and language therapy these skills can be relearned or alternate ways of communication are formed.

Memory:

Memory, especially short-term memory, can be affected by a stroke. One may not be able to retain what has just happened 5 minutes ago or one may not be able to retrieve memories from the past. Strokes can affect verbal memory, such as naming items on a shopping list or visual memory, such as recall for faces. A stroke can cause problems with recalling information, but that does not mean these skills cannot be re-learned.

Visio-perceptual Skills:

A stroke can affect one's ability to pay attention to one side of one's physical space or visual field. Even though there may not be problems with one's eyesight, the visual field loss may cause a person to bump into

walls while walking or trip on objects in the walking path. Sometimes this neglect of space can be so severe the person may deny that a body part even belongs to them or will not use one side of the body despite no actual loss of physical ability. There can also be difficulty with solving problems such as puzzles or drawing. If there is a problem with the visual system, a stroke can also cause problems with reading. Physical and occupational therapy are terrific sources to help compensate for one-sided neglect or eyesight issues.

Emotional functioning:

Patients can develop emotional problems after a stroke such as depression and mood swings. Depression often goes undiagnosed and untreated. Some of the symptoms of depression include: persistent sadness, anxiousness or "empty mood", feelings of hopelessness, guilt, worthlessness, decreased energy, fatigue, difficulty concentrating, insomnia or excessive sleepiness, appetite changes, or thoughts of suicide. If these symptoms are present, seek an evaluation from a medical practitioner. Social workers, pastoral services, physicians, and other counseling services are available and offer insight and help with these symptoms.

Personality Changes:

Personality changes can also occur after stroke. Some common changes that may happen are doing things without thinking, social inappropriateness, impulsiveness, or a lack of interest in activities. Communication with loved ones is key – making sure everyone knows that these behaviors can occur after a stroke may make it easier to seek help if needed.

The most important thing to remember is that, although having a stroke may change many aspects of your daily life, these changes can be overcome in time.

STROKE REHABILITATION

JOHN P. SCHOLZ, PT, PhD
PROFESSOR, DEPARTMENT OF PHYSICAL THERAPY,
UNIVERSITY OF DELAWARE

A brain attack or stroke can have a devastating effect on the patient as well as his/her family. Movement and, sometimes, cognitive functions that were once performed automatically now require great effort and new strategies, if they can be performed at all. The patient's family is often torn between sympathy combined with the compulsion to do as much as possible for the patient and anger at the additional burden this tragedy brings to their own lives.

In the early stages following a stroke, the patient is often bewildered by the sudden loss of even the most basic functions. As initial recovery progresses, he/she becomes understandably torn between the expectation that full recovery is only a matter of time and the frequent reality that some functional deficit is likely inevitable. What can the patient expect from rehabilitation?

Immediately after the stroke, the focus of the medical staff is to medically stabilize the patient. At this stage, physical therapy (PT) consists largely of attempts to prevent the loss of joint motion that can occur due to tightening of muscles and ligaments that are not moved through their full available range. Early exercise also helps to minimize the loss of muscle strength that occurs with disuse of the limb. As soon as the patient's medical condition has stabilized, however, aggressive therapy becomes an essential ingredient to promote the patient's long-term recovery.

Rehabilitation. Because of time limitations resulting from the rising cost of health care, initial rehabilitation often emphasizes teaching the patient to compensate for the loss of control of the extremities on the side affected by the stroke. Although recovery of function is of greatest importance following a stroke, it is important for clinicians not to be short sighted about the long-term implications' of neglecting the patient's most affected side. Failure to help the patient develop strategies that actively and appropriately incorporate

the affected extremities into daily tasks often leads to a greater risk of falls and other accidents because the patient has no practice in controlling the impaired side of the body. Moreover, an aspect of rehabilitation that is often neglected is control of the trunk. The trunk is essential for postural stability in sitting and standing, serves as a base of support from which the arms and legs are able to work, and allows extension of the functional use of our extremities when objects are beyond our typical reach length. Thus, coordinated function of the trunk with the extremities is an essential aspect of rehabilitation that should not be neglected.

Although a course of inpatient rehabilitation is typically shorter today than in the past, most patients receive some form or continued therapy after discharge, either as an outpatient or with the guidance of a home health therapist. This additional therapy provides an important opportunity to address control issues of the trunk and the extremities affected by the stroke. Unfortunately, an important window of opportunity may have already closed by this time if early rehabilitation focused solely on learning compensations for the affected extremities. Thus, early treatment aimed at getting the patient functional enough for discharge must be tempered by an understanding of the need to foster use of the most affected side of the body as much as possible.

Guidelines for improving motor skill. A number of implications for rehabilitation come from recent studies of the brain's ability to recover function after a lesion. Some important lessons follow:

1. Begin practice as soon as possible following a stroke (i.e., once the patient is stable medically).
2. Treatment should emphasize the practice of functional skills that incorporate use of affected extremities as much as possible.

3. Treatment should challenge the patient's abilities, within appropriate limits of other medical conditions/contraindications and the need to ensure safety.

4. Treatment should vary as many aspects of a task's practice as possible (e.g., the size, shape, texture and weight of objects being manipulated) and should allow the patient opportunities to self-evaluate their performance so that they do not become dependent on outside assessment.

5. Feedback is important for learning. Providing external feedback too frequently, however, can be detrimental to learning.

6. Extensive practice is essential for recovery of function. The amount of practice available in most therapy sessions is not adequate to maximize functional recovery. Patients must engage in frequent and quality practice of skills outside of formal therapy if recovery is going to be optimal.

Newer Therapies for Stroke Rehabilitation: In recent years, a number of therapeutic approaches have been introduced to help re-train movement function in persons following a stroke. Examples of more commonly used clinical approaches to rehabilitation include Constraint-Induced Movement Training (CIMT) and Body-weight supported treadmill training (BWSTT). CIMT, in particular, is based on point #6 above. Participants agree to keep their non-impaired upper extremity in a splint while intensively practicing functional tasks with their impaired extremity. Treatment is both intense and short-term, typically lasting 6-hours per day for about two weeks, although modified versions have been recently implemented in some clinics. CIMT was developed to improve arm function, although a variant of the approach also has been applied to train walking post-stroke.

BWSTT attempts to improve a patient's confidence in bearing weight on the affected leg by providing partial body weight support while the patient walks on a treadmill. The support is maximal at first and then gradually decreased to no additional support over a

number of treatment sessions. In addition, it is useful to increase the treadmill speed to help the patient gain confidence walking at faster speeds.

More recent experimental innovations introduced in recent years include Robotic Assisted Training (RAT), either applied to improve arm function or walking ability, Split-Belt Treadmill Training (SBTT) and Fast-FES Treadmill Training (FFTT) for walking. FFTT involves practice of walking at higher than normal speeds while functional electrical stimulation (FES) is applied to the ankle muscles to assist their contraction. SBTT attempts to help the subject learn to bear weight for equal time periods on both the impaired and non-impaired legs. RAT uses computer-controlled robots to assist or resist movement of the arm or leg while patients attempt to perform functional tasks. None of these approaches are in standard use clinically but have potential to improve function in persons post-stroke. Most insurance companies do not pay for these latter treatments because they are still considered experimental. However, variants of all three are currently under study at the University of Delaware Department of Physical Therapy and volunteers are currently being enrolled for trial therapy with them.

Some treatments like CIMT have been shown to be effective only in individuals with mild impairment of their hand function. Patients with more significant impairments of their arm and hand would not qualify for this therapeutic approach at the present time. Thus, while these and a number of related treatments not mentioned here provide hope for the stroke survivor, it is still too early to know how widely useful they will be.

Local Rehabilitation Studies. As mentioned above, the Department of Physical Therapy at the University of Delaware is engaged in a number of ongoing research projects aimed at better understanding functional losses after a stroke and to develop improved treatment methods. For further information on how you can become involved in this research, please contact Ruby, our research scheduling coordinator, at (302) 831-0150 or UDPTRResearch@udel.edu.

BEING A STROKE CAREGIVER

KATIE CASALES

Nine years ago my husband Bruce had two strokes. These left him in pretty bad shape. He couldn't walk, talk, read, or write. He was unable to do small tasks for himself like getting dressed or taking care of his personal hygiene.

I was so scared! I was overwhelmed trying to deal with so much. The shock of a life-changing event, the near loss of my husband, overseeing his hospital care, dealing with the insurance company and our financial situation, and realizing that our lives would never be the same again. I was just worn out dealing with the day to day life I now led.

Once Bruce had been stabilized and had received four months of rehab it was time for him to come home. Now there was a whole new set of things to be afraid of. I was afraid I would not be up to caring for him, I might mess up all the medications he took, and he might have another stroke. I was also afraid of some of the effects of his stroke. I wasn't sure how I would get along with this stranger.

In the coming days I was sleep deprived, overworked, frustrated, stressed, and just plain worn out. I remember one afternoon Bruce and I just sat at the kitchen table and cried. I was at the end of my rope.

I decided to attend a meeting of a support group recommended by the rehab hospital. It was one of the best things I have ever done for myself and Bruce. The group was for caregivers of stroke survivors. Just being there with people who in the past had been through the same thing as I made me realize that there can be a life after stroke. They helped me become realistic about the fact that life would never be the same as before, but things would get easier with time. We talked about stroke survivors and caretaking and it was a relief to

know I was not alone. It was nice to hear that some others had times when they were angry with the survivor and that was okay. We talked about insurance and therapy and about friends who never came around anymore. We talked about depression. We talked about the best way to bathe someone who couldn't do it themselves. We talked, we laughed, we cried, we supported each other. We were all in the same boat and I wasn't so frightened anymore. I thought, "I know this is going to be hard but maybe, I CAN do it."

I urge anyone dealing with stroke to search out a support group. This may be hard for the stroke survivor who is still trying to deal with new limitations, depression, and embarrassment over his or her condition but it really helps to talk to someone who has walked in your shoes and had those same feelings.

This stroke may be one of the most frightening things in your lives. Considering that it is a blessing that there are people out there who have been through it and are willing to help you. Don't be afraid to lean on others for help. You are not alone.



YOU ARE NEVER TOO YOUNG!

MRS. DAWN McHUGH

My life was quite busy – I had a fantastic job, was caring for my Mom and dealing with the recent death of my Father who suffered a stroke. My husband and I were raising our 16 year-old son and dealing with the holiday festivities. It was December 30, 2002 – I woke up on a Monday morning to begin my normal workweek. I felt listless and tired and thought maybe I was coming down with the flu. Like most working women, I moved forward and left for work – things, however, were about to change!

Once at work, I became even more listless - I experienced memory loss and had trouble forming words. I called my husband and had him pick me up and take me home. I was only home for a few hours when my son noticed that I was not improving, but seemed to be getting worse. He and my husband took me to the hospital. At the age of 45, with high cholesterol, family history of stroke, and taking an oral contraceptive ... I was suffering a stroke!

After 7 days in the hospital, 12 weeks of physical, speech and occupational therapy, and an overwhelming network of support from my family and friends, I went back to work. I have some residual short-term memory loss but overall, I am very lucky. What did I learn? You're never too young to suffer a stroke.

"At the age of 45, with high cholesterol, family history of stroke, and taking an oral contraceptive ... I was suffering a stroke!"

More women die each year from a stroke than die from breast cancer!

Understand your risk factors for stroke and discuss your medical history with your healthcare provider. Take a proactive approach to healthcare management

and stroke prevention.

Recognize the warning signs and symptoms of a stroke . . . and most importantly, don't ignore the warning signs and don't wait! Call 911 for emergency medical attention.

As a member of the Delaware Stroke Initiative's Board of Directors, I feel obligated to share my story and work to improve stroke prevention and awareness! Remember, you're never too young to suffer the devastating effects of a stroke!

Taking action can prevent a stroke!

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GLOSSARY OF TERMS

Activities of Daily Living: abbreviated as ADL, include daily hygiene, such as bathing, showering, or washing; grooming, shaving, combing one's hair or dressing; eating and drinking; and walking or standing for mobility.

Acute: a disease or condition that begins abruptly.

Advance Directive: A legal document (as a living will) signed by competent person to provide guidance for medical and health-care decisions (as the termination of life support or organ donation) in the event the person becomes incompetent to make such decisions.

Ambulation: the act of walking or moving with or without assistive devices.

Aphasia: a complete or partial loss of or impairment of the individual's ability to use or understand language. It may be temporary or permanent: Expressive aphasia in which words cannot be formed or expressed, or Receptive aphasia in which language is not understood.

Atherosclerosis: a common abnormal condition that refers to the plaques or "hardened areas" along the inner walls of the arteries causing the blood vessel to become narrowed with reduced blood flow to the different regions of the brain. This condition is seen with aging and build up of lipids, cholesterol, proteins, and calcium that may create a risk for thrombosis. It is associated with use of tobacco, high blood pressure, obesity and other conditions that are risk factors for stroke.

Atrophy: a wasting or reduction in size, e.g., smaller muscles as a result of "disuse" or not using the muscles, diseases, or lack of physical exercise, or a reduction in the size of the brain due to the aging process or reduced blood flow over a long period of time.

Brain Stem: The part of the brain composed of the midbrain, pons, and medulla oblongata and connecting the spinal cord with the forebrain and cerebrum.

Bruit: an abnormal blowing or "swishing" sound or murmur heard while placing a stethoscope over the carotid artery. When the artery is approximately 70% blocked, a bruit may be heard by the experienced examiner. If the artery is almost totally blocked, there is usually no audible sound.

Carotid Artery: the major arteries on each side of the neck that are responsible for carrying a large amount of blood supply to the head and neck. A carotid "bruit" or murmur may be heard by using a stethoscope placed gently over the carotid artery that suggests an arterial narrowing.

Cerebral Embolism: a blood clot, or embolism that blocks a vessel in the brain and prevents oxygen and circulation to the areas beyond the clot.

Cerebral Hemorrhage: bleeding from a bold vessel in the brain that can lead to displacement or destruction of brain tissue.

Cerebral Thrombosis: a clotting of bold in any cerebral vessel that block flow to parts of the brain.

Cholesterol: a waxy lipid or fat-like substance that is produced by the body and found almost exclusively in foods of animal origin. Increased levels of low-density lipoprotein cholesterol may be associated with atherosclerosis, whereas higher levels of high-density lipoprotein cholesterol appear to lower the person's risk for heart disease and stroke.

Contracture: an abnormal shortening of muscles or other soft tissue around a joint that may result in pain and discomfort and loss of function.

CT Scan or Computed Tomography: a radiographic diagnostic test that produces a film representing a detailed cross section of the head and brain (or other parts of the body). The procedure is a quick, safe, painless test that can be performed with or without contrast dye.

Dementia: a progressive organic mental state that may be characterized by personality changes, confusion and decreased intellectual capacity, memory, judgment and impulses.

Diastolic Blood Pressure (DBP): the blood pressure in the arteries when the heart muscle is relaxed.

Dysarthria: difficulty with speech output due to muscle weakness or in coordination causing slurred speech.

Dysphagia: difficulty with swallowing.

Edema: the abnormal collection of fluid or swelling in the tissue spaces.

Electrocardiogram (ECG of EKG): a graphic recording of the electrical heart activity.

Electroencephalogram (EEG): a graphic chart that records the electrical impulses produced by the brain cells detected by placing electrodes on the scalp that provide information about neurological conditions, e.g., seizures.

Endarterectomy: the surgical removal of an abnormal plaque formation or deposit in the lining of an artery that has contributed to the narrowing of the artery and causing decreased blood flow to the brain.

Flaccid: weak, soft and flabby, e.g., an arm or leg that has no muscle tone that can occur following a brain attack.

Gait: the manner or style of walking. The normal gait has a swing phase and a stance phase for each lower limb that includes rhythm, cadence, and speed.

Hemiparesis: muscular weakness on one-half of the body. When caused by a brain attack, the weakness is on the opposite side of the body from the brain damage or brain attack.

Hemorrhage: loss of a large amount of blood when a vessel in the brain, for example, ruptures or bleeds.

Hemiplegia: paralysis on one-half of the body on the opposite side of the brain damage or brain attack.

Hypertension: the number one cause of a brain attack is an elevated blood pressure that exceeds the normal limits for an individual's blood pressure.

Incontinence: the inability to control the bowel or bladder from emptying. The individual with incontinence may need to have a prescribed bowel and bladder program.

Ischemia: a decreased supply of oxygenated blood to an organ.

Living Will: A document in which the signer requests to be allowed to die rather than be kept alive by artificial means if disabled beyond a reasonable expectation of recovery.

MRI (Magnetic Resonance Imaging): a noninvasive diagnostic study that uses radiofrequency radiation as its source to image areas of the body. The procedure is pain-free but may cause claustrophobia that can be relieved with appropriate medication.

Paresis: weakness of a muscle group that can occur following a brain attack. The partial loss of muscle power or sensation.

Paraplegia: paralysis that is characterized by motor and sensory loss in the legs and trunk on both sides of the body.

Physiatrist: a physician who specializes in physical medicine and rehabilitation who deals with problems following a brain attack: directs the rehabilitation team for long-term follow-up and home care for individuals with disabilities.

Rehabilitation: the restoration of an individual using therapies with the goal of maximizing independence or restoring the individual to their highest level of functioning after an illness.

Seizure: abnormal brain wave activity that can cause changes in behavior. A seizure may be clonic, tonic, focal or generalized and is usually diagnosed following a test, e.g., an EEG by a neurologist.

Spasticity: increased tension or tightness in a muscle that resists efforts to stretch. This condition can result in pain and discomfort, weakness, loss of function and independence that can require medications, therapy, or a surgical implantation of an intrathecal baclofen device for relief.

Systolic Blood Pressure (SBP): the pressure inside the arteries when the heart contracts with each beat.

Transient Ischemic Attack (TIA): described as a mini-stroke, it causes symptoms just like a brain attack but is transient lasting only a few minutes and completely reverses when the cerebral blood vessel that was temporarily blocked or was in a spasm resolves spontaneously. A TIA could be a warning sign of a serious cerebrovascular event and should be taken seriously.

Ventricles (Cerebral): small, fluid-filled cavities within the brain that are filled with cerebrospinal fluid (CSF) that is continuously being produced and circulating in the brain, to cushion and protect the brain.

Visual Field Defect (VFD): refers to impaired vision affecting the outer half of one eye and the inner half of the other eye and is similar to a “blind spot.” The loss is generally on the side that is paralyzed after a brain attack.

Vocational Rehabilitation: the process of retraining an individual to perform job-related activities after they have experienced a disability, such as a brain attack.

RESOURCE DIRECTORY

NATIONAL ORGANIZATIONS

Alliance for Aging Research

202/293-2856

<http://www.agingresearch.org/>

Independent, non-profit organization founded to promote medical research into conditions affecting human aging

Leading Age

202-783-2242

www.AAHS.org

LeadingAge is an association of 5,400 not-for-profit organizations dedicated to expanding the world of possibilities for aging.

American Association of Retired Persons (AARP)

1-888-687-2277

www.aarp.org

AARP Delaware

1100 N. Market St

Suite 1201

Wilmington, DE 19801

866-227-7441

destate@aarp.org

Membership required (eligible at age 50). Provides health information brochures, supplemental medical insurance, financial investment program. Offers discounts on medications, lodging, and car rentals.

American Heart Association (AHA)

American Stroke Association

200 Continental Dr.

Suite 101

Newark, DE 19713

Phone: (302) 286-5723

www.americanheart.org

www.strokeassociation.org

The American Stroke Association is the division of

the American Heart Association that is solely focused on reducing disability and death from stroke through research, education, fundraising and advocacy.

American Speech, Language and Hearing Association

2200 Research Blvd

Rockville, MD 20852

800-638-8255

www.asha.org

Augmentative and Alternative Communication – Rehabilitation Engineering Research Center on Communication Enhancement

<http://aac-rerc.psu.edu/>

Agency for Health Care Research and Quality

540 Gaither Rd

Suite 2000

Rockville, MD 20850

301-427-1104

www.ahrq.gov

Centers for Medicare and Medicaid Services (CMS)

1-800-MEDICARE

www.medicare.gov

Federal agency that administers Medicare (for elderly or disabled individuals) and Medicaid (for individuals with low income). Offers free publications and operates a telephone hotline/information service.

Gerontological Society of America

202-842-1275

www.geron.org

Multidisciplinary association that deals with research, practice, and education in aging.

**National Association of Professional Geriatric
Care Managers**

520-881-8008

www.caremanager.org

*Referral source for geriatric care managers
nationwide.*

**National Committee to Preserve Social Security
and Medicare**

800-966-1935

<http://ncpssm.org>

National Council on Aging

202-479-1200

www.ncoa.org

National Institute on Aging

U.S. Dept. of Health and Human Services, Public
Health Service, National Institutes of Health
301-496-1752 or 800-222-2225

www.nia.nih.gov

*NIA conducts and supports research to increase
knowledge of the aging process and associated
physical, psychological, and social factors. Call for a
list of publications.*

National Library of Medicine

301-594-5983 or 888-FINDNLM

www.nlm.nih.gov

National Stroke Association

800-STROKES (787-6537)

www.stroke.org

National Aphasia Association

350 Seventh Ave

Suite 902

New York, NY 10001

800-922-4622

www.aphasia.org

*An organization dedicated to promoting the care,
welfare, and rehabilitation of those with aphasia
through public education and support of research.*

Easter Seals National Headquarters

233 S. Wacker Dr

Suite 2400

Chicago, IL 60606

800-221-6827

www.easterseals.com

National Health Information Center (NHIC)

US Dept. of Health and Human Services

301-565-4167 or 800-336-4797

www.health.gov/nhic/

Health information referral service.

National Rehabilitation Information Center

8201 Corporate Dr

Suite 600

Landover, MD 20785

800-346-2742

www.naric.com

**National Institute of Neurological Disorders and
Stroke (NINDS)**

National Institute of Health

NIH Neurological Institute

PO Box 5801

Bethesda, MD 20824

800-352-9424

www.ninds.nih.gov

Smokefree.gov

1-800-QUIT-NOW

*www.smokefree.gov is intended to help you or
someone you care about quit smoking.*

Social Security

920 W Basin Rd

Suite 200

New Castle, DE 19720

800-772-1213 (English and Spanish)

www.ssa.gov

STATE AND LOCAL ORGANIZATIONS

Alzheimer's Association

2306 Kirkwood Hwy
Wilmington, DE 19805
www.alz.org
302-633-4420; Sussex: 302-854-9788; 800-272-3900

Architectural Accessibility Board

302-739-5644
www.dfm.delaware.gov

Delaware Assistive Technology Initiative (DATI)

DuPont Hospital
PO Box 269
Wilmington, DE 19899
302-651-6790 or 800-870-DATI
www.dati.org
DATI connects Delawareans who have disabilities with the tools they need in order to learn, work, play, and participate in community life safely and independently. DATI operates resource centers that

offer training as well as no-cost equipment loans and demonstrations.

Delaware Division of Services for Aging and Adults with Physical Disabilities

Dept. of Health & Social Services
1901 N. DuPont Hwy
New Castle, DE 19720
800-223-9074
<http://dhss.delaware.gov/dsaapd>
Offers a "Guide to Services for Older Delawareans and Persons with Disabilities."

Delaware Helpline

211 (in Delaware)
800-560-3372 (outside Delaware)
www.delaware211.org
This is a free service that provides information on state agencies and referrals to community resources.



Open to the Public!



Neurologic and Older Adult Clinic

- Providing outstanding outpatient physical therapy services for older adults and persons with neurologic conditions:
 - Stroke, MS, Spinal Cord, Parkinson's, Brain Injury
 - Osteoarthritis and Total Knee Replacement Rehab
 - Balance and Fall Prevention
- Maximize independence and functional abilities
- Performing and incorporating cutting edge physical therapy research into patient treatments
- Care delivered by award winning board-certified specialists
- Body Weight Supported Treadmill Training



053 McKinly Laboratory
University of Delaware
Newark, DE 19716

Phone: (302) 831-8893
Fax: (302) 831-4468
www.udel.edu/PT/

Call today to schedule an appointment and to verify your insurance.

University of Delaware – Department of Physical Therapy

301 McKinly Laboratory
Newark, DE 19716
302-831-0150

Studies problems in movement coordination in individuals who have had a stroke and to identify more effective treatment approaches. Individuals who have had a stroke are encouraged to participate. Contact Ruby Carey, Stroke Studies Coordinator: racarey@udel.edu

Osher Lifelong Learning Institute at UD

2700 Pennsylvania Ave
Wilmington, DE 19806
302-573-4417
www.lifelonglearning.udel.edu

AARP Delaware

1100 N. Market St
Suite 1201
Wilmington, DE 19801
866-227-7441
destate@aarp.org

Freedom Center for Independent Living

302-376-4399 or 866-OURFCIL
www.fcilde.org
The Freedom Center is a consumer-driven organization committed to promoting independent living options for individuals with disabilities.

www.HeartTruthDelaware.org

Provides free web-based professional education, statewide community resource directory for women with cardiovascular risk factors, patient education materials, websites and videos, updated clinical guidelines and clinical tools, schedule of local professional and community health events, and health new updates.

CARE DELAWARE:
CAREGIVER RESOURCE
CENTERS

STAFFED RESOURCE CENTERS

Alexis Morris, Coordinator
Newark Senior Center
200 White Chapel Drive
Newark, DE 19713
(302) 737-2336 ext. 12
amorris@newarkseniorcenter.com

Patricia Anderson-Rice, Coordinator
Wilmington Senior Center
1901 N. Market Street
Wilmington, DE 19802
(302) 651-3420
pla_andersonrice@wilmingtonseniorcenter.org

Cindy Clark, Coordinator
Modern Maturity Center
1121 Forrest Avenue
Dover, DE 19904
(302) 734-1200 ext. 186
mmc_caregiver@hotmail.com

additional contact:
Cheryl Gallagher
(302) 734-1200 ext. 173
cherylgallager@modern-maturity.org

Kathleen Woolman, Coordinator
CHEER Community Center
20520 Sandhill Rd
Georgetown, DE 19947
(302) 854-2886
kwoolman@scss.org

Kathleen Woolman, Coordinator
Harbour Lights CHEER Center
34211 Woods Edge Drive
Lewes, DE 19958
(302) 645-9239 or (302) 854-2886
kwoolman@scss.org

Kathleen Woolman, Coordinator
Coastal Leisure Center
Ocean View CHEER Center
Cedar Neck Road
Ocean View, DE 19970
(302) 539-2671 or (302) 854-2886
kwoolman@scss.org

Kathleen Woolman, Coordinator
Pelican Cove
Long Neck CHEER Center
The Shoppes at Long Neck
26089 Long Neck Road
Millsboro, DE 19966
(302) 945-3551 or (302) 854-2886
kwoolman@scss.org

NON-STAFFED RESOURCE CENTERS:

Appoquinimink Community Library
118 Silver Lake Road
Middletown, DE 19709
(302) 376-4190

Bear Public Library
101 Governor's Place
Bear, DE 19701
(302) 838-3300

Corbit-Calloway Memorial Library
2nd & High Street
Odessa, DE 19730
(302) 378-8838

Hockessin Public Library
1023 Valley Rd
Hockessin, DE 19707
(302) 239-0706

Howard Weston Senior Center
1 Bassett Ave
Manor Park
New Castle, DE 19720
(302) 328-6094

Kirkwood Highway Library
6000 Kirkwood Hwy
Wilmington, DE 19808
(302) 995-7662

Mid-County Senior Center
First Regiment Road
Wilmington, DE 19808
(302) 995-6555

St. Anthony's Senior Center
1703 W. 10th St. (1st. Floor)
Wilmington, DE 19805
(302) 421-3735

Women's Resource Center
800 N. Walnut St
Wilmington, DE 19801
(302) 654-3103

Senior Companion Program
First State Community Action Agency
Stanford L. Bratton Building
308 North Railroad Ave
Georgetown, DE 19947
(800) 372-2240

Delmar Public Library
101 N. Bi-State Blvd
Delmar, DE 19940
(302) 846-9894

Greenwood Public Library
Mill Street
Greenwood, DE 19950
(302) 349-5309

Laurel Senior Center
P.O. Box 64
13 N. Central Ave
Laurel, DE 19956
(302) 875-2536

Milford Senior Center
111 Park Avenue
Milford, DE 19963
(302) 422-3385

Milton Public Library
121 Union Street
Milton, DE 19968
(302) 684-8856

Millsboro Public Library
203 Main Street
Millsboro, DE 19966
(302) 934-8743

Nanticoke Senior Center
310 Virginia Avenue
Seaford, DE 19973
(302) 629-4939

Rehoboth Beach Public Library
226 Rehoboth Ave
Rehoboth, DE 19971
(302) 227-8641

Seaford District Library
402 N. Porter Street
Seaford, DE 19973
(302) 629-2524

South Coastal Library
43 Kent Ave
Bethany Beach, DE 19930
(302) 539-5231

ADULT DAY CARE

Adult day care centers offer a safe and caring environment for adults who need supervision or assistance and might not be safe or actively engaged if left at home, but who do not require 24-hour institutional care. Most adult day care centers provide transportation.

National Adult Day Services Association
www.nadsa.org

Active Day of Newark
200 White Chapel Drive, Newark, DE 19713
Newark, DE 19713
Phone: (302) 533-3543

Christiana Care Adult Day Program at Riverside
700 Lea Blvd., Main Bldg., 1st Floor
Wilmington, DE 19802
Phone: (302) 765-4175

Easter Seals
61 Corporate Circle
New Castle, DE 19720
Phone: (302) 324-4444
www.de.easterseals.com

Easter Seals Delaware & MD's Eastern Shore, Inc
22317 DuPont Boulevard
Georgetown, DE 19947
Phone: (302) 856-7364

Elwyn Delaware
321 E. 11th Street
Wilmington, DE 19801
Phone: (302) 658-8860 or (302) 657-5607
www.elwyn.org

Evergreen Center I: Alzheimer's Adult Day Care
3000 Newport Gap Pike, Bldg. F
Wilmington, DE 19808
Phone: (302) 995-8448

Evergreen Center II: Alzheimer's Adult Day Care
611 S. DuPont Hwy.
Milford, DE 19963
Phone: (302) 422-1575
Fax: (302) 422-7136

Gilpin Hall Adult Day Program
1101 Gilpin Ave
Wilmington, DE 19806
Phone: (302) 654-4486

Gull House Adult Activity Center
38149 Terrace Rd.
Rehoboth Beach, DE 19971
Phone: (302) 226-2160

Laurel Senior Center, Inc./Laurel Adult Care
113 N. Central Ave., P O Box 64
Laurel, DE 19956
Phone: (302) 875-2301 or (302)875-2536

Modern Maturity Center, Inc./Daybreak Mature Adult Care
1121 Forest Ave.
Dover, DE 19904
Phone: (302) 734-1200

New Horizons Adult Care
100 Sunnyside Rd.
Smyrna, DE 19977
Phone: (302) 223-1000

Riverside Adult Day Program

700 Lea Boulevard
Wilmington, DE 19802
Phone: (302) 328-6425 or (302) 765-4175

Weston Adult Day Care Center

1 Bassett Avenue
New Castle, DE 19720
Phone: (302) 328-6425
Organization Type: center
Member Type: Non-Member

**CARE OR CASE
MANAGEMENT**

Care Management involves the services of care managers (also called “case managers”) who assist clients by assessing physical and mental well-being; providing information and referral regarding appropriate resources; and coordinating social, medical, and housing services. Geriatric care managers are experienced in assisting older people and their families/caregivers with issues relating to long term care options and arrangements. Many care managers offer crisis intervention, counseling, and support services.

Mid- Atlantic Professional Geriatric Care Managers, Inc.

www.gcmonline.org

Case Management Society of America

www.cmsa.org

DHSS Division of Services for Aging and Adults with Physical Disabilities

New Castle County (302) 391-3500
Kent/Sussex County (302) 424-7310
Statewide Toll Free (800) 223-9074
dsaapdinfo@state.de.us

Friends Life Care

531 Plymouth Road, Ste. 500
Plymouth Meeting, PA 19462
(302) 426-1510

IKOR Inc.

P.O. Box 287
Yorklyn, DE 19736
(302) 489-3100
(877) IKOR-USA
www.ikorusa.com

Ingleside Senior Services

1010 W. Broom Street
Wilmington, DE 19806
(302) 575-0283, ext. 2260

Jewish Family Service

99 Passmore Road
Wilmington, DE 19803
(302) 478-9411

Life Solutions, Inc.

P.O. Box 1507
Wilmington, DE 19899
(302) 622-8292

Senior Partner, Inc.

P.O. Box 1908
Wilmington, DE 19899
(302) 425-4001

Division of Senior Social Services/Family Benefit Homecare

3322 Englewood Drive
Wilmington, DE 19810
(302) 725-4022
(877) 220-9755

Supportive Care Services

507 West 9th Street
Wilmington, DE 19801
(302) 655-5518

Brandywine Senior Transitions

P. O. Box 731
Hockessin, DE 19707
(302) 234-1999

**Children and Families First/
Family and
Workplace Connection**

2005 Baynard Blvd.
Wilmington, DE 19802
(302) 658-5177

Decisions 4 Life

P.O. Box 7603
Wilmington, DE 19803
(302) 528-3789
(302) 893-8947
Decisions4life.com

**Financial Records Management
for Seniors**

411 Delaware Street
New Castle, DE 19720
(302) 322-6234

COMPANION PROGRAMS

Companion programs for seniors are designed to provide companionship to older people who are lonely and may not be in contact with family or friends for a variety of reasons.

SENIOR COMPANION PROGRAM

This program links older volunteers to other older individuals who need assistance with the activities of daily living.

Generations Home Care

15 Ashley Place
Wilmington, DE 19804
(302) 658-6731, (302) 734-7005, (302) 856-7774

First State Community Action Agency

P.O. Box 877, Georgetown, DE 19947 (302) 856-7761

FRIENDLY VISITING PROGRAMS

CHEER

Sussex County Senior Services, Inc.
546 S. Bedford Street, Georgetown, DE 19947
(302) 856-5187

TELEPHONE REASSURANCE PROGRAM

These programs provides telephone calls to individuals over the age of 60 who are homebound and/or live alone to check on the individual's well being and see if they require any assistance. For more information, call:

CONTACT Delaware, Inc. - Reassurance Program

P.O. Box 9525
Wilmington, DE 19809
(302) 761-9800 / (800) 262-9800

**Interfaith Volunteer Caregivers
Delaware Ecumenical Council**

240 N. James St. B-2
Wilmington, DE 19804
(302) 225-1040

Modern Maturity Center

Kent County TRIAD
1121 Forrest Avenue
Dover, DE 19904
(302) 734- 1200, ext. 128 or 129

CHEER

Sussex County Senior Services, Inc.
546 S. Bedford Street
Georgetown, DE 19947
(302) 856-5187

SENIOR ROLLCALL LIFELINE

(302) 395-8159
The New Castle County Police "Senior RollCall Lifeline" is a telephone reassurance program that offers daily contact to senior citizens over the age of fifty-five residing in New Castle County who live alone or have a disability that inhibits mobility and have no daily contact with friends or family.

COUNSELING/MENTAL HEALTH SERVICES

Contact your health insurance provider for the services and agencies covered under your health plan.

Mental Health Association

800-287-6423

www.mhainde.org

Provide a "Mental Health Community Resources Directory"

Delaware Division of Substance Abuse and Mental Health

800-6652-2929 or (800) 345-6785

Provide a list of community mental health clinics

Catholic Charities

2601 W. 4th Street

Wilmington, DE 19805

(302) 655-9621

(302) 856-9578

Christiana Counseling

Woodmill Corporate Center,
Ste. 47 and 48

Wilmington, DE 19808

(302) 995-1680

Connections CSP

500 W. 10th Street

Wilmington, DE 19801

(302) 984-3380

(866) 477-5345

Delaware Division of Substance Abuse and Mental Health

(DSAMH)

1901 N. DuPont Highway

New Castle, DE 19720

(302) 255-9399

Community Mental Health Centers (DSAMH)

(302) 453-4104 (Newark)

(302) 778-6900 (Wilmington)

(302) 857-5073 (Dover)

(302) 856-5490 (Georgetown)

Family Counseling Services Claymont Community Center

3301 Green Street

Claymont, DE 19703

(302) 792-2757

Jewish Family Service of Delaware

99 Passmore Road

Wilmington, DE 19803

(302) 478-9411

(302) 286-1402

Kent County Counseling

1525 Lebanon Road

Dover, DE 19901

(302) 735-7790

La Red Health Center

505 W. Market Street

Georgetown, DE 19947

(302) 855-1233

Newark Family Counseling Center

P.O. Box 5505,

Newark, DE 19711

(302) 368-6895

Open Door (Senior Evaluation and Assistance Program)

3301 Green Street

Claymont, DE 19703

(302) 798-9555

(302) 731-1504

People's Place

1129 Airport Road

Milford, DE 19963

(302) 422-8026

**Phoenix Behavioral Health
of Dover**

567 S. Governors Avenue
Dover, DE 19904
(302) 736-6135

**Psychotherapeutic
Community Services**

630 W. Division Street,
Dover, DE 19904
(302) 674-3366

Sussex County Counseling

20728 N. DuPont Blvd.
Georgetown, DE 19947
(302) 854-0172

Adult Protective Services

(800) 223-9074

ELDER LAW PROGRAM

**Community Legal Aid Society, Inc.
Elder Law/Disabilities Law Program**

100 W. 10th Street, Suite 801
Wilmington, DE 19801
(302) 575-0666

Elder Law/Disabilities Law Program

840 Walker Rd.
Dover, DE 19904
(302) 674-3684

Elder Law/Disabilities Law Program

144 E. Market St.
Georgetown, DE 19947
(302) 856-4112

EMPLOYMENT

DELARF

www.delarf.org
(302) 622-9177

*A list of Delaware agencies that offer employment
training and placement services for persons with
disabilities and older adults.*

**Delaware Department of Labor/Disability
Program Navigator**

(302) 761-8094 (302) 857-5871
(302) 368-6980 (302) 858-5247
Delawareworks.com

**Delaware Department of Labor
Division of Employment and Training**

4425 North Market Street
Wilmington, DE 19802
(302) 761-8085

Pencader Corporate Center
225 Corporate Blvd. Suite 211
Newark, DE 19702
(302) 453-4350

P.O. Box 616
1114 S. DuPont Highway
Suite 104
Dover, DE 19903-0616
(302) 739-5473

P.O. Box 548,
Route 113
Georgetown, DE 19947-0548
(302) 856-5230

**Division of Services for Aging and Adults with
Physical Disabilities, Senior Community Service
Employment Program**

Wilmington Senior Center, Inc.
1901 N. Market Street, Wilmington, DE 19802
(302) 651-3440

Modern Maturity Center, Inc.
1121 Forrest Ave., Dover, DE 19904
(302) 734-1200

First State Community Action Agency
P.O. Box 877, Georgetown, DE 19947
(302) 856-7761

PERSONAL EMERGENCY RESPONSE SYSTEMS (PERS)

These systems let you call for help in an emergency by pushing a button worn around the wrist or neck.

Advanced Alert
(302) 436-9406

Critical Signal Technologies
(888) 547-4462

Life Station
(866) 235-1747

Link to Life
(877) 442-3232

Lifeline Systems
(800) 368-2925

Med Scope
(610) 642-9881, ext. 709

Phillips Lifeline
(800) 451-0525

Response Link
(302) 456-9012 or (302) 644-6990

HOME HEALTH CARE (HHC)

Home health care includes a wide range of health care services provided in the patient's home. It can include skilled care such as physical therapy and medical care and homemaker services such as meal preparation, housekeeping, and shopping. Hospice provides care, comfort, and emotional support when recovery is no longer possible. Hospice listings can also be found at www.hospicedirectory.org

HHC-NEW CASTLE COUNTY

Absolute Home Health Care
262 Chapman Road
Newark, DE 19702
(302) 369-1050

ADDUS HealthCare
5614 Kirkwood Highway
Wilmington, DE 19808
(302) 995-9010

Amedisys Home Health
260 Chapman Road, Ste. 200
Newark, DE 19702
(302) 294-2001

Aston Home Health
1021 Gilpin Ave.
Wilmington, DE 19806
(302) 421-3686 / 3687

Bayada Nurses, Inc.
750 Shipyard Dr.
Wilmington, DE 19801
(302) 658-3000
(302) 655-1333

Bayada Nurses, Inc.
1400 Peoples Plaza
Newark, DE 19702
(302) 836-1000

**Christiana Care/Visiting
Nurse Association**
One Read's Way, Suite 100
New Castle Corporate Commons
New Castle, DE 19720
(302) 327-5200

Comfort Care at Home
260 Chapman Road
Newark, De 19702
(302) 737-8078

Comfort Keepers

35 Salem Church Road
Newark, DE 19713
(302) 286-0100

Companion Hearts, LLC

276 E. Main St., Ste.9
Newark, DE 19713
(302) 731-9270

Compassionate Care Hospice

702B Kirkwood Highway
Wilmington, DE 19805
(800) 219-0092

Compassionate Home Care

5239 W. Woodmill Drive
Wilmington, DE 19808
(302) 999-8864
(302) 253-8417

Delaware Hospice, Inc.

3515 Silverside Road
Wilmington, DE 19810
(302) 478-5707
(800) 838-9800

Eldercare Molter Associates

3203 Concord Pike, Suite 2
Wilmington, DE 19803
(302) 479-5200

Family Benefit Homecare

3322 Englewood Road
Wilmington, DE 19810
(302) 725-4022

Generations Home Care

15 Ashley Place
Wilmington, DE 19804
(302) 658-6731

Griswold Special Care

1915 Kirkwood Highway
Newark, DE 19711
(302) 456-9904

Guava Homecare, Inc.

307 Valley Brook Drive
Hockessin, DE 19707
(302) 399-6389
(302) 898-1563

**Heartland Home Health
and Hospice**

256 Chapman Road
Newark, DE 19702
(302) 737-7080

**Heartland Hospice House
of Delaware**

5661 Ochletree Lane
Wilmington, DE 19808
(302) 239-2961

Home Helpers

Serves all 3 counties
910 Gilpin Ave.
Wilmington, DE 19806
(302) 633-6090

Home Instead Senior Care

1701 Shallcross Ave.
Suite A
Wilmington, DE 19806
(302) 654-4003

**Homewatch Caregivers
of Delaware**

5560 Kirkwood Highway
Wilmington, DE 19808
(302) 442-4260

Ingleside Home Health Care

1005 N. Franklin St.
Wilmington, DE 19806
(302) 575-0250

Interim Health Care

2 Reads Way, Suite 123
New Castle, DE 19720
(302) 322-2743

Jewish Family Service

99 Passmore Road
Wilmington, DE 19810
(302) 478-9411

Maxim Healthcare

1409 Foulk Road, Suite 203
Wilmington, DE 19803
(302) 478-3434

Neuro Care/Total Care

201 Ruthar Drive, Suite 5
Newark, DE 19711
(302) 738-6400

Odyssey Health Care

1407 Foulk Road, Ste. 200
Wilmington, DE 19803
(302) 479-7500

Oncology Care Home Health

267 E. Main St.
Newark, DE 19711
(302) 455-1500

Right at Home

1500 N. French Street
Wilmington, DE 19801
(302) 652-1550

St. Francis Home Health Care

7th and Clayton Streets
Wilmington, DE 19805
(302) 575-8240

Saints Home Health Care

1601 Concord Pike
Wilmington, DE 19803
(302) 652-4617

Seasons Hospice

220 Continental Drive
Newark, DE 19713
(302) 533-3800

Senior Helpers

726 Yorklyn Road, Suite 410
Hockessin, DE 19707
(302) 234-1274

Vitas Innovative Hospice

100 Commerce Drive
Suite 302
Newark, DE 19713
(800) 938-4827

Your Own Home, LLC

3622A Silverside Road
Wilmington, DE 19810
(302) 478-7081

HHC-KENT COUNTY

ADDUS Health Care

1003 Mattlind Way
Milford, DE 19963
(302) 424-4842

Amedisys Home Health

1221 College Park Dr.
Dover, DE 19904
(302) 678-4764

**Bayhealth at Kent General
Home Health Care**

560 S. Governors Avenue
Dover, DE 19904
(302) 744-7300

**Bayhealth at Milford Memorial
Home Health Care**

104 N.E. Front Street
Milford, DE 19963
(302) 424-8200

Choices for Seniors, Inc.

1030 Forrest Ave Stes. 125-126
Dover, DE 19904
(518) 954-3303
(302) 678-3430

**Christiana Care Visiting
Nurse Association**

2116 S. DuPont Highway
Suite 2
Camden, DE 19934
(302) 698-4300

Comfort Keepers

282 Milford-Harrington Hwy.
Milford, DE 19963
(302) 422-0955

Delaware Hospice

911 S. DuPont Hwy.
Dover, DE 19901
(302) 678-4444
(800) 838-9800

Generations Home Care, Inc.

1125 Forrest Ave.
Dover, DE 19904
(302) 734-7005

Home Instead Senior Care

PO Box 39 (mail)
11550 Willow Grove Rd.
Wyoming, DE 19934
(302) 697-6435

Interim Health Care

1679 S. DuPont Highway
Dover, DE 19901
(302) 734-3131

Saints Home Health Care

3985 N. DuPont Highway
Dover, DE 19904
(302) 883-2047

Senior Helpers

9 E. Loockerman St., Ste. 306
Dover, DE 19901
(302) 674-2234

HHC-SUSSEX COUNTY

Absolute Home Health

31039 Country Gardens Blvd.
Dagsboro, DE 19939
(302) 369-1050

Addus Home Health

1003 Matlind Way
Milford, DE 19963
(302) 424-4842

Amedisys Home Health

21309 Berlin Rd.
Georgetown, DE 19947
(302) 855-0310

Beebe Home Health Agency

20232 Ennis Rd.
Georgetown, DE 19947
(302) 854-5210

**CHEER Inc. Homemaker and
Home Health Services**

20520 Sandhill Road
Georgetown, DE 19947
(302) 856-5187

**Christiana Care Visiting
Nurse Association**

600 N. DuPont Hwy.
Suite 203
Georgetown, DE 19947
(302) 855-9700

Compassionate Care Hospice

31038 Country Garden Blvd.
Ste. D2
Dagsboro, DE 19931
(302) 934-5900

Delaware Hospice

100 Patriots Way
Milford, DE 19963
(302) 856-7717
(800) 838-9800

Generations Home Care, Inc.
205 East Market Street
Georgetown, DE 19947
(302) 856-7774

Griswold Special Care
109 Market Street
Lewes, DE 19958
(302) 644-6990

Heartland Hospice
17577 Nassau Commons Blvd.
Lewes, DE 19958
(302) 645-6237

Peninsula Home Care
8470 Herring Run Road
Seaford, DE 19973
(302) 629-4914

Vitas Hospice
1016 N. Walnut Street
Milford, DE 19963
(302) 451-4000

EXERCISE PROGRAMS

The following is a brief list of local YMCA organizations offering accessible exercise programs. Please consult your doctor or rehabilitation therapist before participating in such activities.

Bear-Glasgow Family YMCA
351 George Williams Way
Newark, DE 19702
302-836-YMCA

Brandywine YMCA
3 Mount Lebanon Road
Wilmington, DE 19803
302-478-YMCA

Central YMCA
501 West Eleventh St
Wilmington, DE 19801
302-254-YMCA

Central Delaware YMCA
1137 South State Street
Dover, DE 19901
302-346-YMCA

Sussex Family YMCA
20080 Church Street
Rehoboth Beach, DE 19971
302-296-YMCA

Walnut Street YMCA
1000 North Walnut Street
Wilmington, DE 19801
302-472-YMCA

Western Family YMCA
2600 Kirkwood Highway
Newark, DE 19711
302-709-YMCA

TRANSPORTATION

AMTRAK
(800) USA-RAIL

Greyhound Bus
800- 231-2222
www.greyhound.com

National Highway and Transportation Safety Administration
www.nhtsa.gov/cars/rules/adaptive
Provides information on automotive safety issues for persons with disabilities.

National Mobility Equipment Dealers Association
(800)833-0427
www.nmeda.org for information

Accessible Van and Mobility
(800) 784-8267 / (856) 829-9449
www.avmvans.com

M.I.T.S. Corporation
(800) 243-6487
www.mitscorp.com

Accessible Vans of America
(888) 306-8320
www.accessiblevans.com

American Mobility
(302) 276-1801
www.americanmobilitysales.com

Wheelchair Getaways
(800) 642-2042
www.wheelchairgetaways.com

Wheelers
(800) 456-1371

ScootAround
Wheelchair and scooter sales and rentals
888-441-7575

Accessible Journeys
Arranges accessible vacations across the world.
800-846-4537
www.disabilitytravel.com

DART First State
www.dartfi rststate.com
(800) 652-DART
In New Castle County (302) 652-DART

PARATRANSIT SERVICE Reservations
(800) 553-DART
Door to door transportation for persons who are certified as having a qualifying disability, renal dialysis and the aging. Reservations must be made by 4:30 p.m. the day before.

SCAT (Senior Citizen Affordable Taxi)
(800) 652-DART for information.
Provides half-price taxi service for persons aged 60 and over and qualified disabled persons.

SEPTA
Commuter trains
(215) 580-7800

FISH of Northern Delaware
(302) 658-2954
FISH volunteers provide transportation to appointments at doctors, clinics and hospitals in Delaware. This is for ambulatory persons when no other agency or resource is available. No service is available on Friday, weekends, or holidays, nor is service available at the last minute or for repetitive appointments or for physical therapy.

Generations Home Care, Inc.
New Freedom Funds Transportation Program
New Castle County (302) 658-6731
Kent County (302) 734-7005
Sussex County (302) 856-7774
This program provides transportation to Delaware residents with disabilities of all ages at \$5.00 per trip. A 3-day advance notice is suggested, but requests will be considered on a space available basis.

Delaware Transit Corporation
(800) 553-DART or www.dartfi rststate.com/directory/
Provides a Directory of Transportation Services in the state of Delaware listing additional transportation providers.

Travelin' Talk
This is a network of people and organizations worldwide willing to provide assistance to travelers with disabilities.
P.O. Box 3534
Clarksville, TN 37043
Travelintalk.net

SENIOR SERVICES & HEALTH ORGANIZATIONS

Claymore Senior Center and Fitness Center

504 S. Clayton St.
Wilmington, DE 19805
(302) 428-3170

Fraim Center for Active Adults

669 S. Union Street
Wilmington, DE 19805
(302) 658-8420

Francis X. Norton Senior Center

920 N. Monroe Street
Wilmington, DE 19801
(302) 654-5407

Jimmy Jenkins Senior Center

2300 Bowers Street
Wilmington, DE 19802
(302) 764-9022

Latin American Community Center (Centro Los Abuelos)

403 N. Van Buren Street
Wilmington, DE 19805
(302) 655-7338, ext. 7746

People's Settlement Association Senior Center

408 E. 8th Street
Wilmington, DE 19801
(302) 658-4133

Salvation Army Senior Center

400 N. Orange Street
Wilmington, DE 19801
(302) 472-0770

St. Anthony's Senior Center

1703 W. 10th St. (1st floor)
Wilmington, DE 19805
(302) 421-3735

St. Patrick's Center

107 East 14th Street
Wilmington, DE 19801
(302) 652-6219

St. Peter's Adult Center

523 Tatnall Street
Wilmington, DE 19801
(302) 571-8394

South Wilmington Senior Adult Program

455 Townsend Street
Wilmington, DE 19801
(302) 655-7751

West Center City

Senior Adult Center
501 N. Madison Street
Wilmington, DE 19801
(302) 658-5332

Wilmington Senior Center

1901 N. Market Street
Wilmington, DE 19802
(302) 651-3400

Absalom Jones Senior Center

310 Kiamensi Road
Wilmington, DE 19804
(302) 998-0363

Brandywine Senior Center Claymont Community Center

3301 Green Street
Claymont, DE 19703
(302) 798-5562

C & D Senior Center Liberty Terrace Apts.

Community Room
Freedom Rd
Newark, DE 19702
(302) 323-2630

Cornerstone Senior Center

3135 Summit Bridge Road
Bear, DE 19701
(302) 836-6463

De La Warr Senior Center

19 Lambson Lane
New Castle, DE 19720
(302) 429-0581

Howard Weston Senior Center

1 Bassett Ave., Manor Park
New Castle, DE 19720
(302) 328-6094 or 328-6626

**Jewish Community Center
(Bernard and Ruth Siegel Center)**

101 Garden of Eden Road
Wilmington, DE 19803
(302) 478-5660

Mid-County Senior Center

First Regiment Road
Wilmington, DE 19808
(302) 995-6555

M.O.T. Senior Center

300 South Scott St.
Middletown, DE 19709
(302) 378-3041 or 378-4758

New Castle Senior Center

400 South Street
New Castle, DE 19720
(302) 326-4209

**Newark Senior Center and
Fitness Center**

200 White Chapel Drive
Newark, DE 19713
(302) 737-2336

Oak Grove Senior Center

11 Poplar Avenue
Wilmington, DE 19805
(302) 998-3310

Sellers Senior Center

500 Duncan Road
Wilmington, DE 19809
(302) 762-2050

First State Senior Center

Kent/Sussex Industry Bldg.
Southern Wing
291 N. Rehoboth Blvd.
Milford, DE 19963
(302) 422-1510 / 422-1511

Frederica Senior Center

216 S. Market Street
Frederica, DE 19946
(302) 335-4555 (24 hr.
answering machine)

Harrington Senior Center

102 Fleming Street
Harrington, DE 19952
(302) 398-4224

Harvest Years Senior Center

30 South Street
Camden, DE 19934
(302) 698-4285

Mamie A. Warren

Maturity Center
1775 Wheatley Pond Road
Smyrna, DE 19977
(302) 653-4078

Milford Senior Center

111 Park Avenue
Milford, DE 19963
(302) 422-3385

Modern Maturity Center

1121 Forrest Avenue
Dover, DE 19904
(302) 734-1200

Lillian Smith Senior Center

P.O. Box 76
410 Main Street
Clayton, DE 19938
(302) 653-6119

Adult Plus+ Program

DTCC, Jack F. Owens Campus
P.O. Box 610
Georgetown, DE 19947
(302) 856-5618

Bridgeville Senior Center

414 Market Street
Bridgeville, DE 19933
(302) 337-8771

Cape Henlopen Senior Center

11 Christian Street
Rehoboth, DE 19971
(302) 227-2055

Georgetown CHEER

Activity Center
546 S. Bedford Street
Georgetown, DE 19947
(302) 856-5187

Greenwood CHEER

Activity Center
41 Schulze Road
Greenwood, DE 19950
(302) 349-5237

Harbor Lights CHEER

Activity Center
34211 Woods Edge Drive
Lewes, DE 19956
(302) 645-9239

Indian River Senior Center

214 Irons Ave.
Millsboro, DE 19966
(302) 934-8839

Laurel Senior Center

P.O. Box 64, 13 N. Central Ave
Laurel, DE 19956
(302) 875-2536

Lewes Senior Center

310 Nassau Park Road
Lewes, DE 19958
(302) 645-9293

Nanticoke Senior Center

23431 Sussex Highway
Seaford, DE 19973
(302) 629-4939

Long Neck CHEER

Activity Center
26089 Shoppes at Long Neck
Millsboro, DE 19966
(302) 945-3551

Ocean View CHEER

Activity Center
30637 Cedar Neck Road
Ocean View, DE 19970
(302) 539-2671

Roxana CHEER Activity Center

34314 Pyle Center Road
Frankford, DE 19945
(302) 732-3662

Slaughter Neck

CHEER Activity Center
22942 Slaughter Neck Road
Lincoln, DE 19960
(302) 684-4819

STROKE SUPPORT GROUPS

SUPPORT - KENT COUNTY

The following support groups are designed for the stroke survivor and/or their family and caregivers. Such groups offer the individual a chance to meet with others who are learning to adapt to life following a stroke, and provide them with community involvement and useful informational sessions regarding stroke.

Delaware Stroke Initiative Stroke Support Group

Newark Senior Center
200 White Chapel Drive
Newark, DE 19713
302-757-4886

Meets the second Thursday of every month from 7pm – 8:45pm.

Milford Stroke Club

Milford Memorial Hospital
21 West Clarke Ave.
Milford, DE 19963

Meets the second Thursday of every other month starting in January from 4pm – 5:30pm.

ACCESSIBLE ACTIVITIES

Easter Seals Camp Fairlee Manor

22242 Bay Shore Road
Chestertown, MD 21620
410-778-0566
www.de.easterseals.com

Located on 250 rural acres near Chestertown, Maryland and the shores of the Chesapeake Bay, Camp Fairlee Manor has been providing a traditional summer camp experience for adults with disabilities since 1954. No adult is too old to experience the fun of a fully accessible camp with activities such as pool, canoeing, horseback riding and many others. Many caregivers find valuable respite in the services of Camp Fairlee. During the off season there are weekend respite sessions. All indoor facilities are modern with heat and air.

Air Mobility Command Museum

1301 Heritage Road
Dover Airforce Base, Dover DE, 19902
302-677-5938
<http://amcmuseum.org>

Barratt's Chapel

6362 Bay Road
Frederica, DE 19946
302-335-5544
www.barrattschapel.org

Biggs Museum of American Art

406 Federal Street
Dover, DE 19901
302-674-2111
www.biggsmuseum.org

Harrington Historical Society Museum

108 Fleming Street
Harrington, DE 19952
302-398-3698

Kent County Theatre Guild

140 East Roosevelt Avenue
Dover, DE 19903
302-674-3568

Smyrna Museum

11 S. Main Street
Smyrna, DE 19977
302-653-1320

SUPPORT - NEW CASTLE COUNTY

County Ashland Nature Center

3511 Barley Mill Road
Hockessin, DE 19707
302-239-2334

Brandywine Zoo

1001 North Park Drive
Brandywine Park
Wilmington, DE 19802
302-571-7747
www.brandywinezoo.org

Delaware Art Museum

2301 Kentmere Pkwy.
Wilmington, DE 19806
302-571-9590
www.delart.org

Delaware Center for the Contemporary Arts

200 South Madison Street
Wilmington, DE 19801
302-656-6466
www.thedcca.org

Delaware History Museum

504 Market Street
Wilmington, DE 9801
302-656-0637

Delaware Museum of Natural History

4840 Kennett Pike / Rt. 52
Wilmington, DE 19807
302-658-9111
www.delmnh.org

Delaware Division of Parks and Recreation

302-739-9220
www.destateparks.com

Delaware Symphony Orchestra

302.652.5577 or 800.374.7263
818 N Market Street
Wilmington, Delaware 19801
www.delawaresymphony.org

Delaware Theatre Company

302.594.1100
200 Water Street
Wilmington, DE 19801
delawaretheatre.org

The Grand Opera House

302-652-5577 or 800-37-Grand
818 N Market Street
Wilmington, Delaware 19801
www.thegrandwilmington.org

Hagley Museum

Rt. 141 & Brandywine River
Wilmington, DE
302-658-2400

Opera Delaware

4 South Poplar Street
Wilmington, DE 19801
302-658-8063

Playhouse Theatre

10th & Market Sts.
Wilmington, DE 19801
302-656-4401

Rockwood Museum

610 Shipley Road
Wilmington, DE 19809
302-761-4340

University of Delaware Center for Black Culture

192 S. College Ave.
Newark, DE 19716
302-831-2991

Wilmington Drama League Community Theatre

10 W. Lea Blvd.
Wilmington, DE 19802
302-764-1172

Wilmington & Western Railroad

2201 Newport Gap Pike
Wilmington, DE 19808
302-998-1930

Wilmington Blue Rocks

801 S. Madison St.
Wilmington, DE 19801
302-888-2015
www.bluerocks.com

Winterthur Museum, Garden & Library

5105 Kennett Pike, Wilmington, DE 19807
302-888-4600
www.winterthur.org

SUPPORT - SUSSEX COUNTY

Georgetown Historical Society

510 S. Bedford St.
Georgetown, DE 19947
302-855-9660

Lewes Historical Society

110 Shipcarpenter St.
Lewes, DE 19958
302-645-7670

Nanticoke Indian Museum

Rt 24 & Oak Orchard Intersection
Millsboro, DE 19966
302-945-7022
www.nanticokeindians.org

Milford 2nd St. Players

2 South Walnut St.
Milford, DE 19963
302-422-0220

Possum Point Players

Old Laurel Highway
Georgetown, DE 19947
302-856-3460

ASSISTIVE TECHNOLOGY

Delaware Assistive Technology Initiative (DATI)

Central Site and University of Delaware and
DuPont Hospital for Children
Center for Applied Science and Engineering
1600 Rockland Road, A and R Building, Room 200
P.O. Box 269, Wilmington, DE 19899
Voice: (800) 870-DATI (in-state only)
Voice: (302) 651-6790
TTY: (302) 651-6794
www.dati.org

DATI Kent County Assistive Technology Resource Center

Easter Seals of Delaware and Maryland's Eastern Shore

100 Enterprise Place, Suite 1, Dover, DE 19904-8200
Voice: (302) 739-6885
TTY: (302) 739-6886

DATI Sussex County Assistive Technology Resource Center

University of Delaware
20123 Office Circle, Georgetown, DE 19947
Voice: (302) 856-7946
TTY: (302) 856-6714

Easter Seals Resource & Technology Demonstration Center

61 Corporate Circle
New Castle, De 19720-2405
302-324-4444
www.de.easterseals.com

The resource center has hundreds of sample items to demonstrate how a person with physical disabilities can remain independent at home or work. In addition, there are DVD's and catalogs with thousands of ideas and products for independence. Other services include the Assistive Technology (financial) Loan Program, Caregiver Resource Center, Aging and Disability Resource Center, Delaware Lifespan Respite Care Network, and AgrAbility assistance for farmers.

Other Easter Seals locations:

100 Enterprise Place Suite 1
Dover, DE 19904-8200
302-678-3353

22317 DuPont Boulevard
Georgetown, DE 19947
302-253-1100

Let Easter Seals help you open the door to new possibilities



EASTER SEALS CAN HELP THE STROKE SURVIVOR REGAIN INDEPENDENCE THROUGH A VARIETY OF SERVICES

Adult Day Health Services – an affordable alternative to a nursing home

A day program for adults with physical disabilities where participants chose from a variety of fun activities each day. Nurse supervision, transportation and meals are included. Physical, Occupational, and Speech Therapy is available. Flexible schedules.

Resource & Technology Demonstration Center

A 3,000 sq ft center filled with hundreds of innovative “tools for independence” like a talking microwave, one handed keyboard, and communications devices that will help you be independent at home, work or school.

Assistive Technology Loan Program

Through collaboration with the Division of Vocational Rehabilitation, this program helps people afford the equipment they need to live independently. Low-interest loans are made in partnership with local lending institutions.

The Caregiver and Assistive Technology Resource Center

Funded through the Division of Services for Aging and Adults with Physical Disabilities, the center has information and resources for persons who are caregivers to another adult.

Respite Services

Easter Seals has a variety of respite services to meet the caregiver’s need for a break. Call for information on grants available on a limited basis to pay for respite services.

Personal Attendant Services

The helping hands of another person can make promote more independence at home, work or school.

Three locations in Delaware to serve you!

New Castle
302.324.4444

Dover
302.678.3353

Georgetown
302.253.1100

See the possibilities at www.de.easterseals.com

OTHER RESOURCES & PRODUCTS

AbilityHub

www.abilityhub.com

Adaptive equipment and methods for accessing computers.

Abledata

800-227-0216

www.abledata.com

National database for adaptive equipment.

Sammons Preston Adaptive Equipment and Device Aids

800-323-5547

www.sammonsprestion.com

Canine Companions for Independence

800-572-2275

www.caninecompanions.org

Offers canine companions for individuals with a disability at virtually no cost.

ElderCorner

www.eldercorner.com

Information on health-related issues.

Home Health Care Products & Adaptive Equipment for Independence

www.thewright-stuff.com

The National Center on Physical Activity and Disability (NCPAD)

800-900-8086

www.ncpad.com

Helps supply databases and information on recreation and sports programs and equipment vendors from across the U.S.

Paralympics

719-866-2035

www.usparalympics.org

Provides services to disabled athletes.

Quartet Technology Incorporated

978-649-4ECU

www.qtiusa.com

Offers units that are voice activated with switches or computer mouse.

RehabMart.com

www.rehabmart.com

Online discount medical equipment and supply company.

Service Monkeys

617-787-4419

www.helpinghandsmonkeys.org

Provides capuchin monkeys to individuals with disabilities.

Let PRO, an ATI Physical Therapy Company, help you reach your highest functional potential!



SPORTS & ORTHOPEDIC | CERTIFIED HAND THERAPY | AQUATIC THERAPY
WORKERS' COMPENSATION SERVICES | F.I.R.S.T.™ (WORK CONDITIONING/HARDENING)

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For more information about PRO's locations throughout
Delaware, Maryland and Pennsylvania:

1.877.PROPT.58 (776.7858) WWW.PROPT.COM



College of
Health Sciences

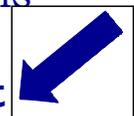
DEPARTMENT OF
PHYSICAL THERAPY



Have you or someone you know had a Stroke?

Researchers at the University of Delaware are conducting studies investigating new techniques supported by the National Institutes of Health to improve walking and reaching after a stroke. You can play a role in helping to advance stroke therapy by participating. No fees are charged for participation and monetary compensation is available for participation in **some** studies.

For more information contact Ruby Carey at
302-831-0150 or racarey@udel.edu



St. Francis Hospital is Stroke Certified Because Seconds Count.



 Saint Francis Hospital

701 N. Clayton Street, Wilmington
stfrancishealthcare.org