

# TriHealth Emergency Journal

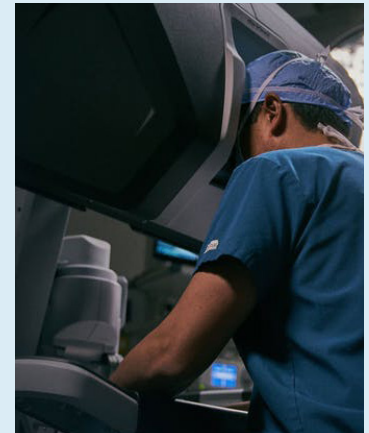


## Bethesda Butler Welcomes Robotic Surgery



Robotic surgery is now available at Bethesda Butler Hospital. The da Vinci Surgical System is called “da Vinci” in part because of how Leonardo da Vinci’s study of human anatomy eventually led to the design of the first known robot in history. The da Vinci System consists of a surgeon’s console, typically in the same room as the patient, and a patient-side cart with three to four interactive robotic arms controlled from the console. The da Vinci System translates the surgeon’s hand movements at the console in real time, bending and rotating the instruments while performing a procedure. The tiny wristed instruments move like a human hand, but with a greater range of motion. The arms are for tools that hold objects, and they can also act as scalpels, scissors, bovies or graspers; the final arm controls the 3D cameras. The surgeon uses the console’s controls to maneuver the patient-side cart’s three or four robotic arms. The instrument size makes it possible for surgeons to operate through one or a few small incisions. The da Vinci System always requires a human operator. It is being used worldwide on adult and pediatric patients.

Kavita Deonarine, MD, and her team perform robotic surgery for urological and gynecological procedures, as well as general



surgery procedures. The da Vinci Surgical System is designed to facilitate surgery using a minimally invasive approach. This progressive system helps enable Dr. Deonarine to perform minimally invasive surgery with an advanced set of instruments and a 3D high-definition view of the surgical area. One of the benefits of using robotic surgery is it may provide improved outcomes for patients.

**Debra Walker**



# Good Samaritan Hospital and Good Samaritan Western Ridge Get "Fired Up" for a Cure for Breast Cancer



# City of Fairfield Fire Department – Butler County



In 1955, the City of Fairfield Fire Department was established. It was initiated when the residents voted to incorporate approximately 20 square miles of Fairfield Township to prevent further annexation by the City of Hamilton. It remained all non-paid volunteers until 1973. This is when the department established a paid-on-call system for volunteers. In 1983, Fairfield began providing paramedic services to its residents using a private contractor, Independent Specialized Paramedics, Inc. The contract was terminated in 2006 when the fire department provided paramedic service itself.

In 1984, the city hired Don Bennett as its first full-time fire chief. With his assistance, the fire department began using part-time personnel during the week from 0600-1800 hours. Five years later, Fairfield Fire Department utilized part-time employees round-the-clock for coverage 24/7.

In 1993, the fire department grew and promoted three

full-time captains to provide supervision over the shifts. Six years later, they hired nine career firefighter/paramedics and continued to hire more as the run volume increased.

Currently, Fairfield Fire Department has 21 career firefighter/paramedics, 48 part-time firefighter/EMTs or paramedics, six career fire lieutenant/paramedics, three career fire captains, two deputy fire chiefs and Fire Chief Don Bennett. It operates three fire stations and protects over 42,000 residents. The fire district is approximately 20 square miles. The frontline apparatus include: two 75-foot quints (combination engine/ladder trucks), one engine, one rescue truck, three medic transport units, two ALS chase cars, one shift supervisor SUV, one brush truck, one 14-foot inflatable boat and one mobile command unit. In 2019, Fairfield responded to 971 fire calls and 5657 EMS calls and completed 1427 fire inspections.

**Debra Walker**



# Goshen Township Fire Department – Clermont County

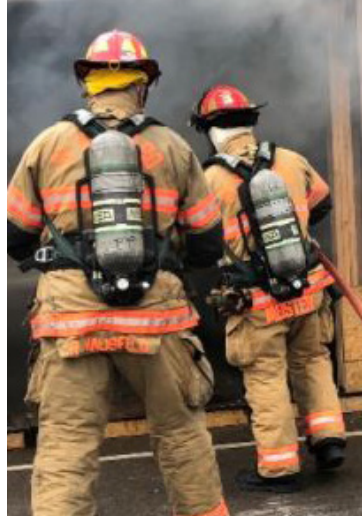


Goshen Township Fire Department started in 1948 as the Goshen Community Fire Department. The Goshen Community Life Squad developed by 1972. The life squad was taken over by Goshen Township in 1995. The fire department and life squad combined in 1997, becoming what is now known as Goshen Township Fire Department.

At the helm today is Fire Chief Steve Pegram. Goshen Township runs out of two stations to cover a population of 17,000 people in 34.2 square miles. In 2019, the department responded to 2140 EMS calls and 755 fire emergencies. It has 54 people on its roster, consisting of 18 full-time personnel, 34 part-time personnel and two volunteers. Staffing is eight personnel per day, running two engines and two medic units. A third medic unit is cross-staffed with an engine.



# St. Bernard Fire Department – Hamilton County



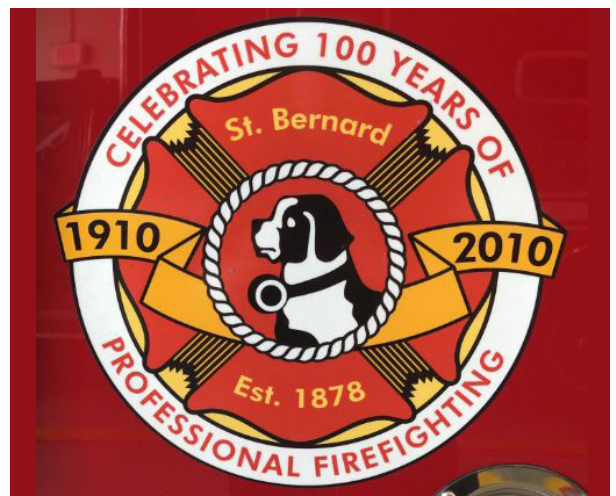
The St. Bernard Fire Department first began as a volunteer fire department back in 1878. The old, used No. 1 Washington pumper took 20 men to operate. At the scene of a fire, 16 men worked the handle bars (eight on each side) to draw water to the hose line manned by the other four men. At the time, there were no fire hydrants so cisterns were built at street intersections.

Fire hydrants were installed in 1895, which introduced a pressurized water source to the fire service. Three hose reels companies were stationed throughout the city. One hose was located at the old City Hall, one at the water tower and the last one at the water works. Horses were used to pull these hose companies to the fire. Each hose company consisted of 15 men, and the hook-and-ladder company had 10 men assigned.

In 1910, the decision was made to change from a volunteer fire department to a full-time fire department. In 1916, the first piece of motorized fire apparatus arrived – an Ahrens Fox fire engine. A second pumper was added in 1919. In 1921, the fire department headquarters was located at Vine and Clay streets. This remained its location until 2014 when the fire department joined the police department in the newly constructed Public Safety Center located at Mitchell and Vine streets.

Today, the fire department is led by Fire Chief Bryan Young and St. Bernard FD is staffed full time with 22 firefighter/paramedics and firefighter/EMTs. The team is also trained in technical rescues, including rope, trench, confined space and HazMat. The district consists of approximately 1.5 square miles of industrial and residential. The department protects approximately 4,700 residents and generates 500 fire details and 1,100 EMS details per year.

**Debra Walker**



# Turtlecreek Township Fire Department – Warren County



The Turtlecreek Township Fire Department was established in November 1969. The first station was housed at 146 Clay Street, along with the Township Administration Building and the Road and Bridge Department. The original department began with 19 volunteers and three pieces of fire apparatus — a 1955 Ford Pumper, a 1963 GMC Grass Fighter and a 1960 Tanker.

As the population increased, so did the need for additional fire protection. In 1974, Turtlecreek trustees built a second fire station at 1255 Oregonia Road and named it in honor of Hobart “Red” Bostick, the first Turtlecreek fire chief. In September 1977, a third fire station was built on the western side of the township at 1550 North State Route 741.

By early 1983, it became clear the Clay Street station was too small to house the addition of fire apparatus — which was needed to offer the township residents adequate fire protection, plus the Administrative Offices and Road and Bridge Department equipment.

The Township trustees seized the opportunity to purchase the old Coates American Motors car dealership on

State Route 63 in early 1983. After renovations were accomplished, the township proudly opened new Administrative Offices, which included Fire Department apparatus and Road and Bridge Department equipment. This building was later named the William A. Stevens Fire Station — in honor of then-current Fire Chief William Stevens — for his many years of service to the township.

On Nov. 3, 2005, Turtlecreek Township celebrated the opening of its new multipurpose building on State Route 123. 30,000-square-foot building includes government offices, road and bridge vehicle garage, fire station, EMS and much more. This building was dedicated as the William A. Stevens Fire Station, named for retired Fire Chief Bill Stevens to honor his 35 years of service to the township Fire and EMS departments.

The current fire chief is Mike Jameson. The fire department covers 61 square miles and protects 16,000 residents. It is a combination department consisting of 15 full-time and 20 part-time employees and 12 volunteers.

**Debra Walker**



## A Win at Bethesda Butler – A Good Catch



Patient Safety, along with Laboratory and Nursing Leadership, presented Debora Barlion (Laboratory) with a Good Catch Award. Debora used Safety and Reliability Tool "Think with a Questioning Attitude" when she noted a lab result that showed a drastically different (Delta) result. Debora stopped and questioned the result. After investigating, she noticed a different patient label placed over the original patient label. Error was caught before being resulted in EMR.



# Congratulations!

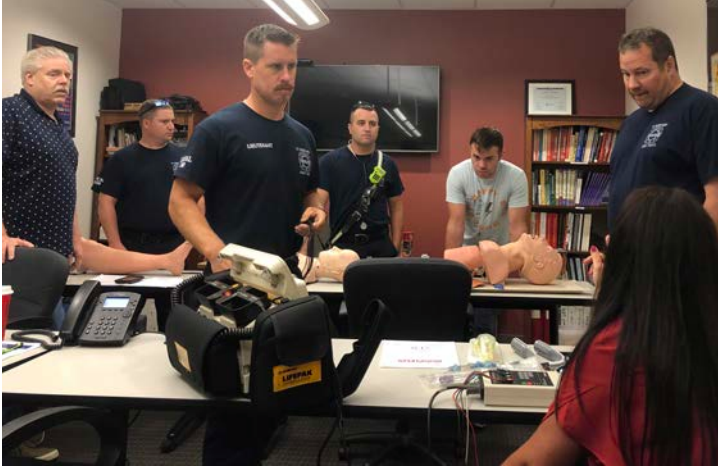
## New Ion Robot Lung Biopsy Technology

TriHealth is first in the region to use innovative new Ion Robot lung biopsy technology. This minimally invasive technology, coupled with our lung screening program, allows us to detect and treat lung cancer in much earlier stages, leading to earlier intervention and better patient outcomes! The Ion Robot lung biopsy procedure is a game changer for patients as it can immediately biopsy lung nodules that were previously unreachable in the early stages of detection.

This means patients no longer have to "wait and see" whether suspicious lung cells grow to a stage that is more difficult to treat before they can be diagnosed. This was the standard of care prior to availability of this groundbreaking new technology. A special "shout out" to Doug Adams, MD, and Craig Eisentrout, MD, for their leadership in building our world-class Lung Nodule and Thoracic Surgery programs.

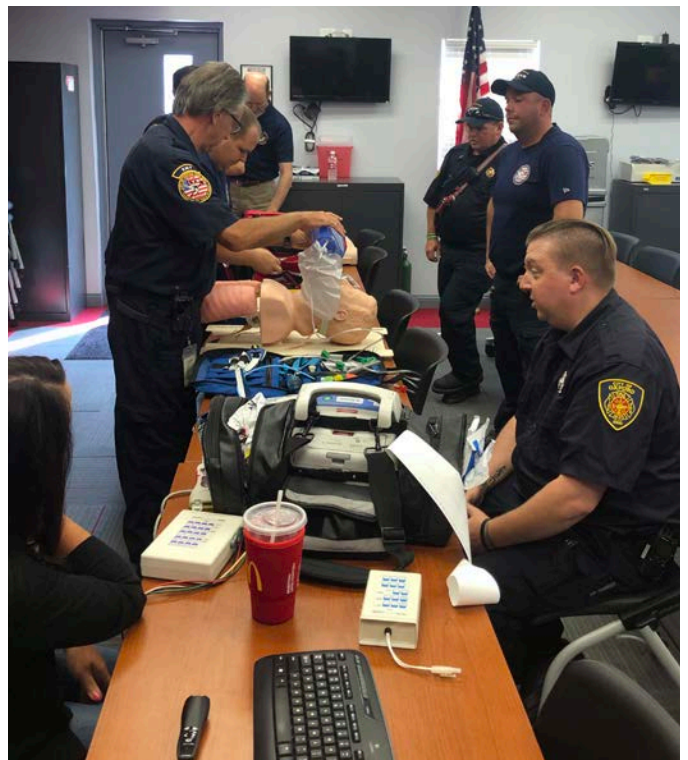


## ACLS and PALS Classes



TriHealth EMS Coordinators are bringing AHA ACLS and PALS classes to local Fire and EMS departments. ACLS and PALS classes can be scheduled at your station on the second and fourth Wednesday of the month. The \$15 cost/person includes the AHA e-card.

**To register: Contact Randy Johann at 513 865 5208 or [randall\\_johann@TriHealth.com](mailto:randall_johann@TriHealth.com)**



*Photos were taken prior to CDC mask recommendation. Our personnel continue to follow COVID-19 safety protocols.*



# ACLS and PALS Classes



Photos were taken prior to CDC mask recommendation. Our personnel continue to follow COVID-19 safety protocols.



## Body Armor for EMS

I found this topic to be ironic because only a few weeks ago, I found myself, along with the rest of the crew that night, in the middle of a shooting with no vest on. The call was a routine complaint, but a completely unrelated incident occurred in the parking lot next to us. So, the question becomes, "Do you wear a vest on every run?" Sadly, over the last several years, we have seen an increase in mass shootings, gang violence, targeted assaults on first responders, and violent protesting. With the increase in violence, we are seeing more fire departments purchasing body armor for their employees.

Many would argue that body armor is a necessity for EMS personnel to perform their jobs safely and should be worn on every run. Others would take the stance that more de-escalating training is needed or the "stage until the scene is safe" approach should be enough, in addition to wearing vests only on such calls as violent assaults, overdoses and domestic calls. But are these runs the only types of situations that can turn violent? What about the person who has a head injury who is confused and becomes combative? The dementia patient we do a wellness check on who views us as an intruder? Or the angry family member who is now approaching you in a threatening manner?

Intentional or not, we sometimes get complacent at scenes and don't recognize the potential for violence. So, the question again becomes, "Do we wear body armor on all runs?" According to an international survey, 76% of paramedics stated that vests should be issued to all paramedics; however, 62% of the survey respondents didn't want to see the vests become compulsory. Many paramedics want their departments to provide them but want to wear the vests on their own terms. In many of the articles I read, reasons for not wanting to wear body armor ranged from they're too cumbersome and hot to they make paramedics look too much like the police. Of course, like most things, cost is a big deterrent for departments purchasing body armor. But once the decision is made to invest in the body armor, the department needs to decide what type of armor will be ordered.

Personally, I had no idea that a bullet proof vest could not stop an edged or spiked weapon. According to Friese in an article from EMS 1, "most of the violent assaults reported on medics are



Stock Photo

from knives and box cutters, not guns." So even with bullet proof vests on, medics are still quite vulnerable. I don't know what the right answer is. I do know that on that particular night a couple of weeks ago, a vest would not have 100% protected me, but I would have felt safer with it on. Like many of the other medics I have spoken to, I would have never imagined that my morning checks would include making sure my vest was the right size and my Kevlar helmet fit properly.

### Wendy Walters

*EMS Coordinator, Good Samaritan Hospital and  
Good Samaritan Western Ridge*

### References:

- Friese, G. (1/15/2016). Body armor for EMS: Is it time for every medic to wear a ballistic vest? *EMS1*. Retrieved from <https://www.ems1.com/ems-products/education/patient-simulation/articles/how-to-buy-patient-simulation-devices-ebook-yZPrAp10U16XxVZG/>
- Taylor, C. (12/3/2015). Protecting EMS: Insight into Body Armor. *EMS WORLD*. Retrieved from <https://www.emsworld.com/article/12145727/protecting-ems-insight-into-body-armor>

# Winter Emergencies

Winter is just around the corner, and it is important to understand the potential dangers that the cold weather can bring. Awareness and prevention is the key to staying safe.

According to Bethesda North Hospital trauma registry statistics, falls and related injuries remain the number one reason for trauma admission to the hospital. It is important to take your time with slower and smaller steps and to wear shoes with good rubber tread for traction. Shoveling or even using a snow blower to remove snow can put you in the Emergency Department with injuries ranging from torn ligaments and muscles to broken bones or even hand or finger amputations.

Hypothermia occurs when the body's core temperature is less than 95° F. The elderly are at greater risk for developing hypothermia because they often have difficulty regulating their temperature. Diseases such as Parkinson's, diabetes, strokes and hypothyroidism also can impair the body's ability to regulate heat. The initial treatment for hypothermia is to move the patient to a warm area and remove any clothes, and if they are awake and alert, give them warm non-alcoholic beverages. Never apply direct heat to extremities because it can cause a further drop in the core temperature. Frostbite can occur to an exposed area of skin within five minutes when the temperature is between 0° and -19° F. The extreme cold can also put an extra strain on the heart, and overexertion can cause heart attacks or strokes, especially in people prone to cardiovascular problems.

Winter sports-related injuries account for approximately 65,000 visits nationally to the ED every year.

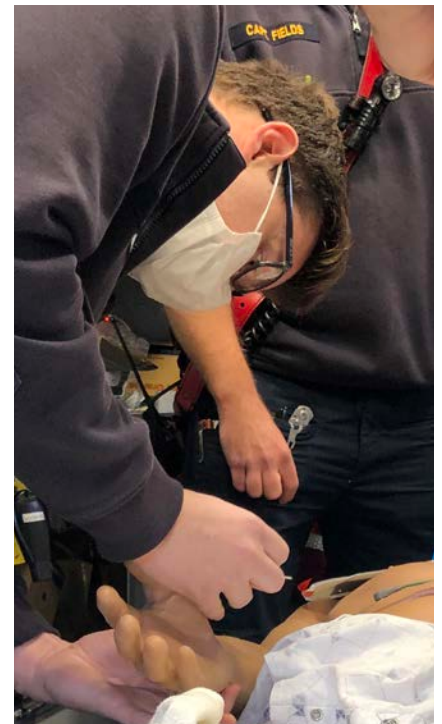
Sledding is the most common cause of injury, with skiing, ice skating, hockey and snowboarding being a close second. Traumatic brain injuries are the leading cause of death and disability among skiers and snowboarders. It is very important to always check for signs of brain injury when someone takes a fall, including loss of consciousness, blurred vision, confusion, swelling at the site of the injury and vomiting.

Other injuries can include dislocated or broken bones, spinal injuries and significant soft tissue injuries. Always remember to wear proper safety gear when participating in winter activities.

Remember, awareness and prevention is important in staying safe during the winter months.

**Katie Stegman**





## STEMI Training at McCullough-Hyde Memorial Hospital with Oxford Fire Department





**Harrison Fire Department Participated in TriHealth Stroke Training**



I recently went shopping for a new SUV, and I was completely blown away by the features and safety systems available on all of the vehicle make and models. Almost all manufacturers are building cars with advanced technologies that can help you avoid or mitigate a crash in all kinds of situations. Detection and mitigation for such things as closing in on another car too quickly, changing lanes into a blind spot or obstacle, backing out into traffic in a parking lot or even opening a door on the street side of the vehicle are monitored and sometimes controlled.

Some of the safety systems include:

**Forward Collision Warning:** Detects a potential collision while traveling forward and alerts driver. Some systems even include pedestrian and/or other object detection.

**Automatic Emergency Braking:** Detects potential collisions while traveling forward, provides a warning then applies the brakes to avoid or lessen the severity of impact. Some systems include pedestrian and/or other object detection.

**Pedestrian Detection:** Systems can detect pedestrians then issue a warning and trigger automatic emergency braking, if necessary. Some can detect cyclists.

**Lane Departure Warning:** This system monitors the vehicle's position within the driving lane and alerts driver as the vehicle approaches or crosses lane markers.

**Lane Keep Assistance:** Working with LDW above, this system assists with steering to maintain vehicle within driving lane.

**Blind Spot Warning:** Detects objects and vehicles in adjacent lanes while driving and alerts the driver to their presence.

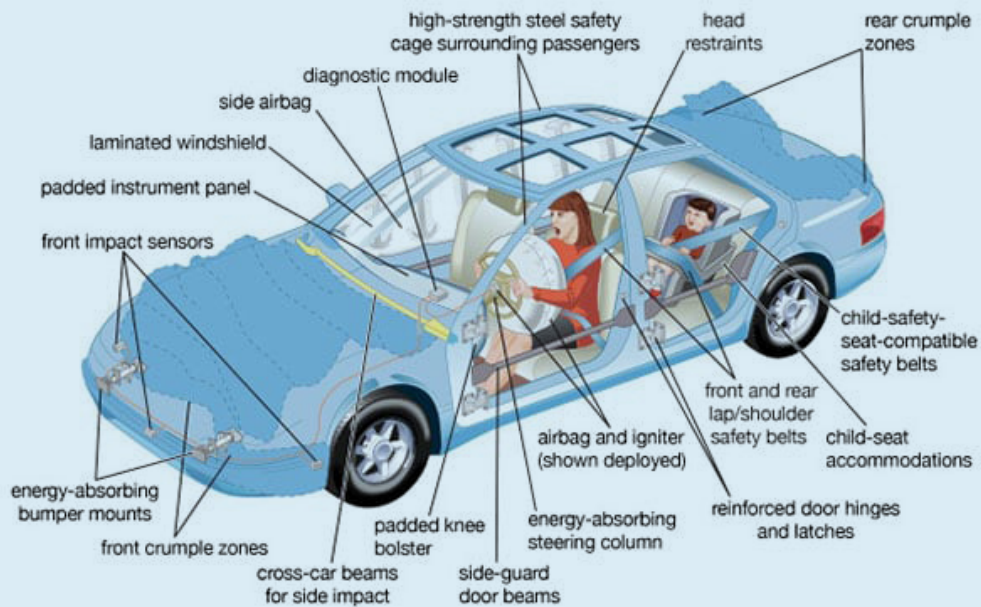
**Rear Cross Traffic Warning:** Detects vehicles approaching from the side and rear of vehicle while the vehicle is in reverse, alerting the driver.

**Rear Automatic Emergency Braking:** Detects potential collision while in reverse and automatically applies the brakes to avoid or lessen the severity of impact. Some systems include pedestrian or other object detection.

**Lane Centering Assist:** Continuously active steering to help the driver stay in the lane (also known as active steer, auto-steer, etc.)

**Adaptive Cruise Control:** Assists the driver with vehicle acceleration and/or braking to maintain a defined distance between it and a vehicle in front.





Other convenience features frequently seen on new cars:

- Lock and unlock the car doors, start the engine, honk the horn and turn on the lights remotely, either from a key fob or a phone app.
- Find a destination in the manufacturer's app and then send it to the vehicle's navigation system.
- Check the fuel levels, battery charge, tire pressure, oil health or mileage from the app.
- Automatically send maintenance updates to you and the vehicle's home dealership.
- Check the vehicle's diagnostics, including vehicle recall information and general vehicle health.
- Some will automatically notify EMS/first responders and family members in the event of an accident or



emergency. Some can get assistance in a crisis or during severe weather; request roadside assistance as needed.

- Find a stolen vehicle with the help of law enforcement and even remotely disable the parked vehicle or slow it, if it is on the move, to enhance law enforcement's apprehension.
- Many make phone calls without using your hands or your phone.
- Some deliver updates on the vehicle's location when other family members are driving it.
- And some have a WiFi hotspot and serve as a wireless router for multiple devices.

Aside from the great advances in safety features over the past decade, this collection of features is simply amazing! So many choices, so many options! I ultimately chose a Hyundai Palisade for my needs. Boy was it fun shopping.

**Randall Johann**

Resources:

Consumer Reports

<https://www.consumerreports.org/car-safety/cars-with-advanced-safety-systems/>

Car & Driver

<https://www.caranddriver.com/research/a32879494/on-star-plans/>





## Delhi Township Fire Department Assisted Good Samaritan Hospital with Maternity Delivery Simulation





# Flying Paramedics

Does your district have steep cliffs, miles of rivers or rough terrain? You may now have a new tool for the toolbox. Start saving your pennies — it retails for \$400,000. It allows you to defy gravity, hover over water, zip across rocky landscapes and land with pinpoint accuracy.

The Gravity Industries' jetpack is being tested by The Great North Air Ambulance Service in the United Kingdom. The UK's Lake District is a beautiful national park that attracts millions of spectators each year.

From an EMS standpoint, this national park in Britain can be problematic due to its size and mountainous terrain. Each year, the critical care team is dispatched to medical and trauma incidents involving the treacherous topography. The tremendous peaks and valleys often mean a helicopter cannot safely land close to the casualty, forcing the team to travel by vehicle or foot.

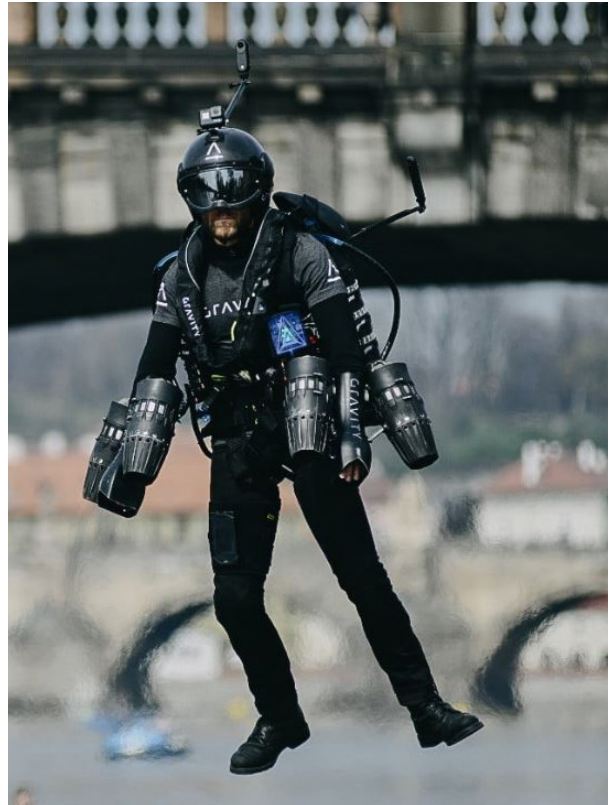
The jetpack allows paramedics and first responders to fly up the mountain and safely reach the victim in a few minutes instead of hours. That could mean the difference between life and death.

The flying paramedic would be equipped with a medical kit, pain relief for walkers who may have suffered fractures, and a defibrillator for those suffering a heart attack.

This lightweight jet suit is powered by five turbines, has 1050 HP and can reach speeds of up to 85 mph. It is capable of reaching an altitude of 12,000 feet. In its present form, the jetpack can fly for five minutes at a time.

It would be awesome to quickly reach someone in dire need of medical attention. This is an exciting time for EMS.

**Debra Walker**



## Lions, Tigers and Caterpillars

One of the most dangerous caterpillars in America was recently discovered in Virginia. It's called the Fuzzy Puss Caterpillar. The body is covered in venomous spines. They have long, hairy bodies that range in color from yellow to tan to brown. This creature typically measures no more than 1.6 inches but can cause a serious, painful reaction to human skin. They are dangerous from the time they hatch until they spin into a cocoon — about 46 days. Once they emerge as the southern flannel moth, they no longer have those toxic spines.

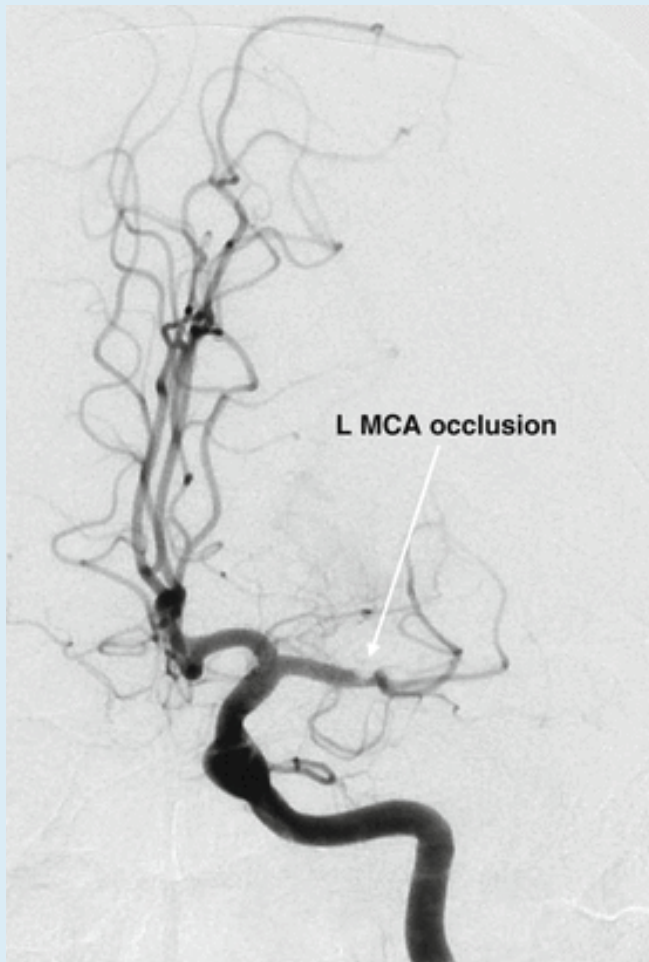
One touch and it could send a person to the hospital. Within minutes of contact, the person could suffer intense pain, swelling, itchy rash and blotches. More serious side effects, such as fever, cramps, nausea, vomiting or even shock symptoms, are also possible.

The Fuzzy Puss Caterpillar lives in an area from New Jersey to Florida, including a few eastern Virginia counties. The Virginia Department of Forestry has seen more of these poisonous creatures throughout its wooded areas. The caterpillars are commonly found on oak, elm and wild plum trees. The Forestry Department believes these fuzzy critters will potentially head west across the U.S.

**Debra Walker**



# What is an MCA Stroke?

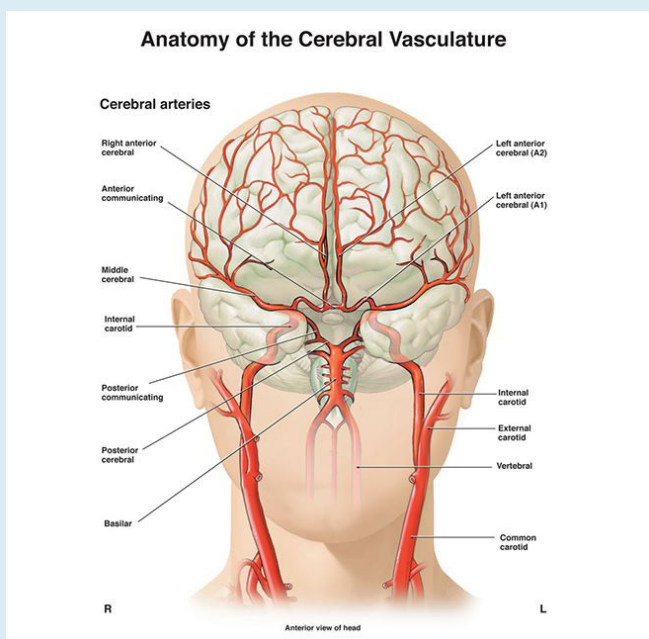


A middle cerebral artery (MCA) stroke is one of the most widely recognized large vessel strokes. The MCA is the most common location for a cerebral infarction due to the size of the artery and the direct flow from the internal carotid artery into the MCA. This direct passage provides the easiest path for a thromboembolism. An MCA stroke is an interruption of blood flow to the areas of the brain that receive blood through the middle cerebral artery.

This artery branches directly from the internal carotid artery. These branches feed parts of the frontal, temporal and parietal lobes of the brain. They also supply blood to the caudate, internal capsule and thalamus. The MCA contributes to the primary motor and sensory areas of the face, throat, hand and arm, and in the dominant hemisphere – the areas of speech.

Interventions for this type of ischemic stroke are IV tissue plasminogen activator (tPA) and thrombectomy. The time of onset will determine if the patient qualifies for these interventions. tPA begins to break down the clot and keeps it from growing. A thrombectomy is a surgical procedure. A catheter is threaded into an artery at the groin and up the neck until it reaches the blood clot. A stent-retriever is then slid into the catheter. The retriever traps and encases the blood clot. The surgeon removes the stent and the blockage from the blood vessel at the same time. Once removed, blood supply is restored.

Debra Walker



**All of TriHealth hospitals have The Joint Commission stroke certifications:**

- Good Samaritan Hospital - Comprehensive Stroke Center
- Bethesda North Hospital - Primary Stroke Center
- Bethesda Butler Hospital - Acute Stroke Ready
- Bethesda Arrow Springs - Acute Stroke Ready
- Good Samaritan Western Ridge - Acute Stroke Ready



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