

MARCH 2019

BROOKE ARMY MEDICAL CENTER

# FOCUS

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Deadline for submission is six business days before the first of the month. We reserve the right to edit submissions selected for publication.

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## O U R C O M M I T M E N T



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BAMC Family,

Brooke Army Medical Center is celebrating Patient Safety Week March 25-29. Our Patient Safety Team chose the theme, "Partnering with Patients Across the Lifespan." This theme highlights our consummate commitment to patient safety and the CSM and I want you to know that we are fully committed to the safe, quality care our patients deserve.

Our Patient Safety Team has planned several fun and informative events during the week to help educate our staff members and patients about safety.

These include:

- A Patient Education Fair on March 25 and 26 from 8 a.m. to 3 p.m. in the hospital's Medical Mall to educate patients and visitors about the various ways BAMC promotes patient safety. Patients will have an opportunity to learn about healthy eating, enhanced surgery recovery, brain injury, infection control, burn prevention and more.
- A visit by the Safety Team to Robert G. Cole Middle and High Schools March 26 during lunch to educate students about substance abuse, driving safety, mental wellness, the dangers of vaping, cyber-bullying and other hot topics.
- A Blood Drive on March 27 from 6-9 a.m. at the Garden entrance and 8 a.m. to 1:30 p.m. in the Medical Mall. Help save a life by donating blood to the Armed Forces Blood Program.
- Visits by the team to outlying clinics throughout the day on March 27 and 28 to provide patient safety education.
- A limerick competition. People are encouraged to submit their health care-focused limericks via email to [usarmy.jbsa.medcom-bamc.mbx.bamc-patient-safety@mail.mil](mailto:usarmy.jbsa.medcom-bamc.mbx.bamc-patient-safety@mail.mil) by March 19. Consider using one of the following phrases: Patient Safety Week, Fall Prevention, PSR, TeamSTEPPS, or RCA. Limericks should be fun and lighthearted and structured in the standard limerick style (ex. "Hickory, Dickory, Dock")

The week will culminate with a staff poster competition and award ceremony March 29 at noon in the Medical Mall to honor the winners of the poster and limerick competition and highlight staff Super HeRO's.

The CSM and I would like to encourage you to attend as many of these events as you can. Our staff members value you - our patients. Please remember safety is everyone's responsibility.

George N. Appenzeller  
Brigadier General, U.S. Army  
Commanding General

Thomas R. Oates  
CSM, USA  
Command Sergeant Major



### **Mission**

*We protect the Nation by ensuring Total Force Readiness through innovative, high quality care and the development of elite healthcare professionals.*

### **Vision**

*To be the pinnacle of military healthcare  
— Anytime, Anywhere!*



# Leap of Faith **Chance Meeting Brings Soldier to CFI After Jump Accident**

BY LORI NEWMAN

*Brooke Army Medical Center Public Affairs*

The hand-scribbled note taped to his dog tags simply said, "Request to go to the CFI" with a phone number. The note was written from one amputee to another.

Army Staff Sgt. Kayshawn Porterfield was following in his father's footsteps. He joined the Army with a plan of becoming a lifelong Soldier and his Army career was progressing. He was moving up in rank quickly, had finished the basic airborne course at Fort Benning, Georgia and was stationed at Joint Base Elmendorf-Richardson, Alaska.

Aug. 16, 2018 started like any other summer day. Porterfield's unit was scheduled to complete an operational static line parachute jump, which would be his 10th career jump. This time something unexpected happened. As he jumped from the aircraft, the static line that normally deploys the parachute became wrapped around his left arm.

"It yanked my left arm above my head and I was hanging by my arm," Porterfield said. "My arm went numb and I saw my hand detach from my body. I saw it all right before my eyes. I thought I was going to die."

After deploying his reserve chute, he made it safely to the ground.

"God was with me and when I hit the ground I was just thankful to be alive," he said, thinking back on that day. "I purposely landed on my right side so I didn't hit my left arm. When I hit the ground I applied my own tourniquet from my rucksack. The medics were nowhere around me."

There was a road guard about 50 meters away.

"I started yelling at him to call the medic," Porterfield said. "I didn't want to go into shock."

Thankfully, just then the medics were coming over the hill in a Humvee. Once they arrived they placed him on a gurney and applied an additional tourniquet on his arm at his shoulder. He believes having both tourniquets saved him from



U.S. Army Staff Sgt. Kayshawn Porterfield practices picking up objects using a myoelectric prosthesis at Brooke Army Medical Center's Center for the Intrepid, Fort Sam Houston, Texas, Feb. 21, 2019. A myoelectric-controlled prosthesis is an externally powered artificial limb that the user controls with electrical signals generated naturally with his own muscles. U.S. Army photo by Jason W. Edwards

losing much of his forearm. He was airlifted to the nearest hospital.

Porterfield said his adrenaline kept him from passing out.

It was on the rescue helicopter that Porterfield met Air Force Master Sgt. Jeremy Maddamma, 212th Rescue Squadron, Alaska Air National Guard.

Maddamma is an above the knee amputee who spent three years recovering from his injuries at Brooke Army Medical Center and the Center for the Intrepid.

"When we picked him (Porterfield) up I could see that his arm was missing," Maddamma said.

Once Porterfield was at the hospital, Maddamma stuck around to make sure the emergency room personnel had all the information they needed.

"I formally introduced myself to Kayshawn, tapped on my socket and showed him my X3 calf (prosthetic leg). I wanted to assure him that everything was going to be ok."

Maddamma also gave Porterfield some advice from one amputee to another.

"I told him he should request to go to the CFI and I wrote it down for him along with my phone number," Maddamma said. "I made a request to the nurses to ensure that the note stayed with his possessions and I watched the nurse attach it to his dog tags."

Porterfield took his advice and called the CFI.

"The CFI staff started giving me exercises and talking to me about the things I needed to do before I even got to San Antonio," Porterfield said.

As Porterfield continues with his recovery at

the CFI, Maddamma hopes that he will receive the same care and healing he did.

"The personnel at the CFI are amazing," Maddamma said. "I am forever grateful for the love, support, care and respect that I received from everyone at the CFI, Warrior and Family Support Center, the Air Force Wounded Warrior Program and BAMC. I am also forever grateful for the relationships and friendships created with the staff and fellow patients at the CFI."

Porterfield agrees.

"I think it will be a nice journey here," Porterfield said. "I'm trying to take it day by day. It's been a process but I'm loving it so far and I can't wait to see what happens."



U.S. Army Staff Sgt. Kayshawn Porterfield practices using a myoelectric prosthesis at Brooke Army Medical Center's Center for the Intrepid, Fort Sam Houston, Texas, Feb. 21, 2019. A myoelectric-controlled prosthesis is an externally powered artificial limb that the user controls with electrical signals generated naturally with his own muscles. U.S. Army photo by Jason W. Edwards



U.S. Army Staff Sgt. Kayshawn Porterfield exercises in the pool at Brooke Army Medical Center's Center for the Intrepid, Fort Sam Houston, Texas, Feb. 20, 2019. Aquatic therapy is used to improve balance, coordination and flexibility as well as building muscle strength and endurance. U.S. Army photo by Jason W. Edwards



## Brooke Army Medical Center Marks Robust Year for Civilian Trauma Care

BY ELAINE SANCHEZ

*Brooke Army Medical Center Public Affairs*

The numbers are telling when it comes to Brooke Army Medical Center's robust trauma care mission.

Over the past year, the Level I Trauma Center in central San Antonio delivered care to more than 4,000 trauma patients, including 750 burn patients, throughout Southwest Texas, the hospital's top surgeon said. Of these patients, about 85 percent were from the civilian sector and 14 percent were military beneficiaries.

Blunt injuries from car accidents or other causes were most common source of trauma, comprising about 85 percent of the traumatic mechanisms. The remaining 15 percent had penetrating wounds from a gunshot or stabbing.

With a resultant 800-plus operations, BAMC's multidisciplinary Trauma Division was bustling over the past year, said Air Force Col. Patrick Osborn, Deputy Commander for Surgical Services.

"Our team of active duty and civilian health care professionals provide exceptional care to every patient who walks through our doors," he noted.

Numbers aside, as the only Level I Trauma Center in the Defense Department and one of two in San Antonio, BAMC serves an important role on both a local and global level, Osborn said.

"We not only are serving our community with trauma care, but also are serving our Nation by ensuring our military health care professionals are equipped with the skills needed to serve around the world at a moment's notice," he said.

A Level I designation signifies the highest level of trauma care, Osborn explained. BAMC's state designation also has been verified by the American College of Surgeons, which confirms the presence of resources required to be considered Level I. "A Level I Trauma Center is capable of providing total care for every aspect of injury – from prevention to rehabilitation," according to the American Trauma Society. The ACS re-verified BAMC as a Level I center last year.

BAMC receives traumatically injured patients through a written agreement with Bexar County Hospital District. The Southwest Texas Regional Advisory Council, or STRAC, coordinates the region's trauma care, ensuring patients are transported to a health facility that will best meet their treatment needs. BAMC also works closely with its local Level I trauma partner, University Health System, throughout the process, Osborn explained.

"We partner with STRAC and UHS to serve citizens of 22 counties in Southwest Texas, covering over 26,000 square miles," he said.

BAMC's relationship with its local partners extends far beyond patient



Members of Brooke Army Medical Center's medical staff simulate providing emergency care to an exercise role player during the 2018 San Antonio Mass Casualty Exercise and Evaluation at Brooke Army Medical Center Oct. 11. SAMCEE is an annual exercise designed to test the capabilities of hospitals and emergency responders in the San Antonio area. U.S. Army Photo by Jason W. Edwards

care. The hospital also works with local, state and national organizations on prevention efforts.

In the past year, for example, BAMC trained more than 1,700 people in basic bleeding control techniques using the Department of Homeland Security's Stop the Bleed course, explained Gina Pickard, BAMC's trauma division manager. Stop the Bleed is intended to encourage bystanders to become trained, equipped and empowered to help in a bleeding emergency before professional help arrives, according to the DHS website.

"We have been introducing the technique in schools, large businesses and law enforcement," Pickard said. "We are currently working with a local school district to teach employees how to stop bleeding."

Additionally, BAMC offers a monthly class on fall prevention to prevent this common cause of injury among the elderly.

These are just a few of the hospital's prevention efforts. BAMC will continue to strive to make the community better in the years to come, noted BAMC Commanding General Brig. Gen. George Appenzeller.

"We are honored to serve the San Antonio and surrounding communities," the general said. "And we are proud to serve our nation as a premier readiness platform for our military medical personnel."

# SPRING

# EGG

# STRAVA

# GANZA



## Freedom Park

## APRIL 6, 2019

## 1030 to 1400

### EASTER EGG HUNT STARTING TIMES

AGES	AGES	AGES
1-3   1245	4-8   1300	9-12   1315

Join us for prizes & a special visit from the Easter Bunny. All military & BAMC staff are welcome to attend



# Red Cross Volunteer Honored for 60-Plus Years of Service

BY LORI NEWMAN

*Brooke Army Medical Center Public Affairs*

A long-time Brooke Army Medical Center volunteer was honored by the American Red Cross March 7 for more than 60 years of service.

Gretchen Barrett, BAMC patient transfer volunteer, received the Clara Barton Legacy Award during a ceremony in the hospital's Medical Mall. The 92-year-old began volunteering in 1958 in Stuttgart, Germany and continued her volunteer career in San Antonio in 1969 at the Beach Pavilion on Fort Sam Houston.

"This is a great opportunity to recognize someone who has volunteered for the Red Cross and the military for quite a while," said BAMC Commanding General Brig. Gen. George Appenzeller. "This a phenomenal achievement and we are blessed to have people like this who really do wonderful things for our service members and their families."

The general put it in perspective by talking about other events that took place in 1958.

"Eisenhower was president; that's the year we signed Alaska into the United States; Elvis Presley was brought into the military; and most importantly, that was the year the hula hoop was first marketed," Appenzeller said with a smile.

Michael Vela, executive director, San Antonio Red Cross Chapter, presented Barrett with a plaque and a 60-year Red Cross lapel pin featuring a sapphire stone.

"It is my honor to present you with the Clara Barton Legacy Award for outstanding leadership and volunteerism," Vela said. "Like Clara, the founder of the American Red Cross, Gretchen has dedicated much of her life to the service of others, specifically our nation's military."

"Since the Civil War, American Red Cross volunteers have provided comfort and support throughout the world to military members and their families," he added. "Gretchen, thank you for your long, distinguished and dedicated service to the American Red Cross and to our nation's military."

Barrett said she began volunteering in Germany as a young military spouse and continued as she got older.



Michael Vela, executive director, San Antonio Red Cross Chapter, presents Gretchen Barrett with the Clara Barton Legacy Award for outstanding leadership and volunteerism during a ceremony March 7, 2019 at Brooke Army Medical Center. The 92-year-old began volunteering in 1958 in Stuttgart, Germany and continued her volunteer career in San Antonio in 1969 at the Beach Pavilion on Fort Sam Houston. U.S. Army Photo by Jason W. Edwards

"My children were just babies when I started," she said. "My husband was in the infantry."

Henry Roper, regional program manager, Red Cross Service to the Armed Forces, presented Barrett with a Red Cross flag.

"I've been with the Red Cross for quite a while and I have never given out a Red Cross flag," Roper said, noting the honor it conveys.

Several other officials from the American Red Cross came to congratulate Barrett on her accomplishment, including Dudley Baker, Division Service to the Armed Forces director; Michael Chaison, Division Service to the Armed Forces manager; Wade Walrond, Service to the Armed Forces regional program director; Kate Koebbe, Service to the Armed Forces specialist; and Libby Castillo, regional communications officer.

"This is a rare day for someone who has given most of their life in service of others," Baker said. "It's truly amazing and I'm honored just to be here."

## Thank A Doctor On Doctor's Day

BY NYLA PETE

*Brooke Army Medical Center Public Affairs Intern*

March 30 marks Doctor's Day, a day set aside each year to show appreciation for doctors' positive influence on individuals and their communities.

The holiday dates back to March 30, 1933, when Eudora Brown Almond, wife of Dr. Charles Almond, decided to set aside a day to honor physicians, according to the National Doctors Day website. The date marked the anniversary of the first use of anesthetic in surgery. On March 30, 1842, Dr. Crawford Long used ether to remove a tumor from a patient's neck.

President George W. Bush designated March 30 as a national holiday in 1991. In his proclamation of National Doctor's Day, President Bush wrote, "There are countless others who carry on the quiet work of healing each day in communities throughout the United States -- indeed, throughout the world. Common to the

experience of each of them, from the specialist in research to the general practitioner, are hard work, stress, and sacrifice."

The reasoning that resulted in the national holiday still rings true today.

Physicians undergo nine-plus years of academically challenging education and training to become a doctor and serve others. In honor of Doctor's Day, BAMC encourages everyone to take time to show their appreciation for these hard-working individuals.

A BAMC patient recently had high praise for the Rheumatology Service and the care they provided to his wife. "The Rheumatology Clinic front desk staff were incredibly professional and kind upon check-in and check-out," he wrote in an email. "Dr. [Jay] Higgs was, of course, superb -- he performed a thorough evaluation, reviewed all the data in detail, and then discussed his impression at length, taking time to answer all of my wife's (and my own) questions patiently and clearly. He was thorough, compassionate and reassuring."



Fellow BAMC patient Chaya Taylor gave a shout out to several of her doctors. "I appreciate the ophthalmology clinic doctors here at BAMC because they are helping me with my glaucoma issues," she said. "I was scared when I first found out I had it but they are giving me confidence ... that everything will be alright. So I make sure I come to my appointments, and they always make me feel comfortable. Thanks BAMC!"

Doctor's Day places these dedicated medical professionals at the forefront. Whether it's this month or any day of the year, take a moment to thank doctors for what they do.

For more information, click the link to visit us on the web: <http://bamc.amedd.army.mil>



# Black History Month Observance Celebrates Cultural Diversity

BY LORI NEWMAN

Brooke Army Medical Center Public Affairs

Brooke Army Medical Center celebrated Black History Month Feb. 20 with a cultural observance in the hospital's Medical Mall. The theme for this year's observance was Black Migrations.

BAMC Commanding General Brig. Gen. George Appenzeller welcomed everyone to the ceremony.

"I don't believe it's about a month," Appenzeller said. "This is about our country and about who we are. The strength of our nation is in our diversity. All elements of national power are rooted in our people. Our diversity – diversity of heritage, culture, religion, thought – that is really what drives all of our nation's innovations, our greatness."

The general said the same is true about the military. "I see it every day at BAMC, I see it all across Fort Sam Houston. Our diversity brings us strength and when that is combined with our love of country, freedom and each other, that brings us power."

"You are all part of the one percent," Appenzeller said to the military members in the audience. "That one percent that has written a blank check payable to the American people in the amount of everything. That is something special. It is no one group. It is no one religion. It is no one thought process. It's no one culture. It is the American people."

Guest speaker, retired Army Lt. Col. Reverend Otis Mitchell, said he was thrilled to have the opportunity to share information and encourage people to feel good about our nation.

"Before you feel good, I have to remind you about some things that aren't so good," Mitchell said, reminding the audience that "2019 is exactly 400 years since African Americans were taken from their homeland and brought forcibly as slaves to what would become the United States of America."

"How do you sum up 400 years of slavery?" he asked, noting that people of many different ethnic backgrounds have faced discrimination throughout history.

"This is still, has been and always will be, the greatest country the world has ever seen or has ever known," he said. "I believe the commanding general has it right, diversity is our key."

Mitchell spoke about growing up in Alabama in the 1960s. He said he remembered there were two sections of town, the black section and the white section.

"We knew growing up there were certain places you didn't go," he said. "Certain things you didn't do."

As a child Mitchell attended all-white schools. He said it wasn't until he went to college that he realized there were gaps in history that were not



Brooke Army Medical Center Commanding General Brig. Gen. George Appenzeller, left, and Command Sgt. Maj. Thomas Oates, right, present guest speaker, retired Army Lt. Col. Otis Mitchell and Robert G. Cole Middle School students a token of appreciation for participating in BAMC's Black History Month observance Feb. 20, 2019. U.S. Army photo by Jason W. Edwards

taught in the schools he had attended.

"Those gaps included not mentioning what African Americans had done to help build our great country," he said.

Mitchell went on to highlight several black Americans who made significant contributions to our history, including Thomas L. Jennings, the first black man to receive a patent for what is now known as the dry-cleaning process, and Dr. Charles Drew who invented the process of saving and preserving blood products during World War II, as well as several other business entrepreneurs.

The reverend closed his remarks by reciting part of Dr. Martin Luther King Jr.'s last speech, emulating King's voice.

Students from Robert G. Cole Middle School also participated in the observance reading papers about what Black History Month means for them.

BAMC Command Sgt. Maj. Thomas Oates concluded the ceremony by talking about Dr. Carter G. Woodson, an American historian, author, journalist and the founder of the Association for the Study of African American Life and History. Woodson is known as the "Father of Black History."

Oates quoted Woodson, "If a race has no history, if it has no worthwhile tradition, it becomes a negligible factor in the thought of the world, and it stands in danger of being exterminated."

"The African American race is rich in history," Oates said. "We are here today knowing from whence we came is not [where] we are traveling. We are traveling to higher heights. We are traveling through social injustices, we are traveling so we all may be viewed as one nation, under God, indivisible, with liberty and justice for all."

**PATIENT  
SAFETY  
AWARENESS  
WEEK**

Because BAMC believes  
**EVERYDAY**  
is Patient Safety Day!

**MARCH 25-29 2019**

[ihi.org/psaw](http://ihi.org/psaw)

**i** Institute for  
Healthcare  
Improvement

# Weight Maintenance *What No One Talks About*

BY ARMY 2ND LT. SARAH RUPERT  
BAMC Dietetic Intern

As many are aware, obesity has been on the rise in America and around the world. This rise in obesity has also led to an increase in obesity-related research and various solutions to help lower its prevalence. These days it is almost impossible to watch TV, read a magazine, or surf the web without being flooded with weight-loss tips and tricks for how to keep weight off.

Weight maintenance may seem like a straight-forward task, yet many people struggle with this endeavor. This seemingly simple act can be easily complicated by factors such as our daily to-dos, stressors and other priorities that can take our minds off WM. Work, family, friends and day-to-day chores are generally considered to be priorities. In order to be successful at WM, one must also make this task a priority rather than an afterthought.

The media inundates us with “fad” diets and health “gurus” claiming they have found the solution to WM. These claims are typically focused around food and exercise. While both areas are important, they are not the only areas to consider when managing weight.

Consider taking a different approach to WM by focusing on areas that are not frequently talked about: sleep and accountability. Both of these topics play a part in what we eat and our physical activity levels, yet they are often ignored by the fad diets and health gurus.

Research has found that short- and long-term sleep loss often leads to elevated stress, which can affect hormones in the body and raise an individual's risk of weight gain. In addition, researchers have found those who lack sleep tend to have less dietary restraint and are more likely to crave and eat high-calorie foods. Individuals who sleep less often eat more calories in a day when compared to individuals who get the recommended seven to eight hours of sleep per night. The increased calories can be due to an increase in high-calorie foods as well as from people spending greater parts of their days and nights awake. Extra time spent awake gives people more time and more opportunities to eat.

From these studies, there does appear to be a possible link between obesity and sleep. Though it is not a guarantee that less sleep will lead to weight gain, it does appear lack of sleep can influence how a person eats, what a person eats, and how much they exercise, which overall make WM

harder. Thus, one of the first steps to fixing the obesity epidemic may be as simple as getting the recommended eight hours of sleep per night.

Accountability can also be a key factor. It's easy for someone to say they want to eat healthy, exercise, and overall lead a healthier life; however, implementing the necessary steps and holding themselves accountable can present challenges. Without accountability, people are more likely to slip back into old habits when things get hard. Those who are successful at WM typically have ways of self-monitoring to help themselves stay on track. Individuals often use scales or the waist band of their pants to monitor weight changes.

In a study following successful weight maintainers, it was found that many people cited their waist-bands as being their most useful self-monitoring device. These individuals don't allow themselves to buy larger clothes. Tight clothes are taken as a wakeup call to clean up their diet and exercise more. For others, the scale may be an easier way to monitor changes. It is important to

keep in mind mild weight fluctuations are normal, so if people decide to use the scale to self-monitor they should set a healthy weight range to allow for normal fluctuations and avoid getting discouraged.

Additional tools people can use for accountability are friends, family and peers. Support systems are key for successful weight maintainers and can include a variety of people. Telling friends, family, and coworkers your plans allows them to ask questions and remind you of your goals when life gets difficult. Support systems can also be others working on WM so people can hold each other accountable. The key is to not go into weight loss or WM alone. Having people to cheer each other on, check in on their progress, and join in the journey is going to help motivate people to keep going and keep setting new goals.

Eating healthy and exercising regularly are still important steps in the WM process. What people eat and how much they move are huge factors in getting to and maintaining a healthy weight, but if they don't have a solid foundation that includes good sleep habits and a strong support system, their journey to a healthy weight is going to be much harder. A popular quote by Benjamin Franklin states, “If you fail to plan, you are planning to fail.” So, when setting weight-related goals, have a plan and make WM a priority to ensure it does not become an afterthought. There are numerous success stories out there. Being aware of the steps that need to be taken and the challenges ahead are the first steps. Overall, the most important step is simply to have a plan.





# Vitamin C *Beneficial for Good Health*

BY ARMY 2ND LT. RENEE L. JEFFREY  
BAMC Dietetic Intern

Though mild, San Antonio is still in the midst of winter. This means lower temperatures, shorter daylight, early morning PT with hats and gloves, and the ever-so-annoying common cold.

According to research dating back to the 1970s, Vitamin C has been popular for its use as a weapon against the common cold. Many people flock to supplements, which can boast having as much Vitamin C as 10 oranges.

This leads to many questions. Does it really work? Is Vitamin C necessary in our daily lives? How much is too much?

Vitamin C is one of the many vitamins our body needs to function. Some key roles of Vitamin C include being a powerful antioxidant and aiding with iron absorption. It also helps the body make collagen which assists with wound healing.

Vitamin C deficiency is a rare occurrence in developed countries like the United States. A deficiency of Vitamin C is called scurvy and used to be quite common among sailors making long journeys with limited access to food rich in Vitamin C. Scurvy causes general weakness, anemia, gum disease, and purple spots due to bleeding under the skin. If Vitamin C is not replenished, scurvy can eventually be deadly. Once Vitamin C was discovered and understood, scurvy could be stopped.

Today, people with highest risk of Vitamin C deficiency are smokers and people exposed to secondhand smoke; this is due to increased stress on the body. People eating a limited variety of foods may also become Vitamin C deficient. Other people at risk are those who have an illness that reduces the body's ability to absorb Vitamin C.

Vitamin C supplements are an important topic because they are one of the most popular supplements, especially to fight the common cold. Supplements are meant to augment the food we eat, not serve as a replacement. Most of our Vitamin C should come from food. Adult males need 90 milligrams of Vitamin C a day and adult females need 75 milligrams. Smokers or people constantly exposed to second-hand smoke need an additional 35 milligrams per day due to the added stress on the body. These are the minimum requirements.



Anything more than 500 milligrams per day has no added benefit. A few examples of food sources include the yellow bell pepper with almost 350 milligrams of Vitamin C, a cup of strawberries with 98 milligrams, a small orange with 96 milligrams and a cup of broccoli with 81 milligrams of Vitamin C. Other sources of Vitamin C are multivitamins and sports drinks.

The potential problem with supplementation is getting too much. It is difficult to eat enough food to get to toxic levels of Vitamin C, but supplementing packs a bigger punch. Because Vitamin C is water soluble, surplus can be excreted in the urine. However, Vitamin C has an upper limit of 2,000 milligrams and anything over this amount can cause some uncomfortable symptoms. These symptoms include diarrhea, nausea or abdominal cramps. People who supplement Vitamin C need to be aware of the amount they are ingesting.

What about service members? Service members are athletes and there are some important points that need to be made about Vitamin C specific to them. A 2013 study suggests that Vitamin C may be beneficial for athletes in hard training by reducing their chances of catching the common cold. For athletes training at a moderate level Vitamin C may reduce the length of the cold by about a day. It is important to note for both these situations Vitamin C was only beneficial for athletes who were already taking it. Once someone feels a cold coming on, it is too late for Vitamin C to help.

Another consideration is the potential impact of Vitamin C on training. Brooke Army Medical Center is one of the pilot sites for the new Army Combat Fitness Test. This means Soldiers will be training for events which include both power and endurance. A 2014 study published in the Journal of Physiology found that taking antioxidant supplements, like Vitamin C may hinder the body's ability to adapt to training. Study participants taking antioxidant supplements that included Vitamin C did not improve on their shuttle run, and did not build new mitochondria, the powerhouse of the cell.

Therefore, while Vitamin C is necessary, too much of a good thing may not be beneficial. People should make it a goal to try to get enough Vitamin C from food sources and only supplement if needed. Food sources provide energy, protein, fat and other vitamins and minerals that supplements do not.



## UPCOMING BAMC GATE CONSTRUCTION

The BAMC Beach Gate, off of Binz Engleman Rd, will undergo construction beginning April 1st to add additional security measures including speed bumps & new signage.

The gate will remain open during construction but will be reduced to one inbound & one outbound lane during its hours of operation.

Gate hours are 6am to 6pm Monday through Friday  
& closed on weekends & holidays.

The project is estimated to be completed in June. Please allow extra time if you plan to use this entrance to the BAMC campus.

We are sorry for any inconvenience during this construction. The safety of our staff, patients and visitors is paramount.

**Thank you for your patience during this time!**

# Diet Comparison

## Benefits, Downfalls for Optimized Performance or Weight Management

BY ARMY 2ND LT. PAUL M. HOLTHAUS  
BAMC Dietetic Intern

With every new year, it seems there is a new diet trend. With so many diets, it can be challenging to know what is “good for you.”

It is important to consider personal goals when choosing a diet. Some people follow a diet for optimized performance, while others may be interested in weight management. Knowing the benefits and downfalls of a diet is key for health.

The ketogenic diet and intermittent fasting have recently gained popularity in the fitness and health industry. The U.S. Department of Agriculture’s MyPlate is promoted by health professionals and provides overall guidance for a healthful diet. Let’s compare how these three diets may affect performance and weight goals.

### My Plate

The USDA’s MyPlate is based on the 2015 Dietary Guidelines for Americans. MyPlate focuses on eating a balanced diet with a variety of foods. MyPlate shows what your plate should look like with a simple visual and encourages whole grains, fruits, vegetables, protein variety, and low-fat dairy choices. It also recommends limiting the amount of saturated fat, sodium, and added sugars. MyPlate has easy-to-follow advice and is meant to be simple and repeatable.

### Performance Optimization

The focus of MyPlate is to promote healthy patterns of eating throughout life. Performance can be optimized by eating a balanced diet. MyPlate supports the intake of adequate macro and micro nutrients. This can support optimized performance with personal tailoring to specific exercise programs. If done properly it will ensure enough carbs to maintain stored energy and protein to build muscle.

### Weight Management

Following a healthy eating style such as MyPlate has been shown to be effective in weight loss and management. In many cases, it may be better than fad diets for long-term maintenance. This dietary pattern will help people take in adequate amounts of nutrients and allows for a variety of foods to be eaten.

### Intermittent Fasting

The term “intermittent fasting” refers to a wide variety of eating patterns and programs. This weight loss strategy has gained popularity after many celebrity endorsements. Intermittent fasting strategies involve restricting eating with little or no intake for 16-48 hours. This is followed by a period of unrestricted eating. With longer fasting periods of 24-48 hours, it is often referred to as “alternate-day fasting.” This diet strategy may result in metabolic changes during fasting periods. Research has shown increased fat breakdown, decreased blood sugar, and increased metabolic rate during fasting.

### Performance Optimization

Research has shown no decrease in performance during short fasting periods. Although, some studies have shown eating carbohydrates prior to exercise may improve performance, whereas other studies show no difference. It often depends on the duration of the exercise. With longer exercise time, carbs seem to be more helpful. If adequate calories are eaten during non-fasting periods, the body can store enough energy and performance is often not affected. This means optimized performance is possible despite fasting if there is proper nutrient intake.

### Weight Management

Intermittent fasting has been reported as an effective strategy for weight loss in overweight and obese individuals. This weight loss is often increased due to overall calorie restriction and the possible benefits of fasting. Eating in a small time window can limit extra snacking and calories. Fasting periods help with burning fat and calories. It can increase fat breakdown and metabolic rate. Although this strategy has proven effective in short-term studies, there are not many long-term studies about fasting and weight maintenance. Overall, this strategy may help with weight maintenance. It can reduce calorie intake and possibly increase metabolic rate and fat breakdown.

### The “Keto Diet” AKA Modified Atkins Diet

Although it seems like a recent fad, the KD has long been used for the treatment of seizures. Today, it is often promoted for its fat-burning potential. The KD is a high-fat diet which puts the body into a state that resembles starvation. It is a way to force the body to breakdown fat as its primary energy

source. This is different from a balanced diet, where carbs are the main energy source.

There are many variations of the KD. A strict KD requires about 85-90 percent of calories from fat. This is challenging to achieve as carbs are found in almost all food and drinks. A strict KD is usually limited to patients with seizures. The popular term “keto diet” often refers to a modified Atkins diet. This diet consists of 60-70 percent of calories from fat and 20-35 percent of calories from protein.

### Performance Optimization (MAD)

There is evidence that a MAD can benefit athletes in a few ways. For weight-class and power-sport athletes, the MAD has been shown to decrease overall body mass while maintaining strength. It has also been shown that a MAD may be helpful for endurance athletes. During these events, fat becomes a necessary fuel source. Having a better ability to use fat for energy can improve performance over long periods of exercise.

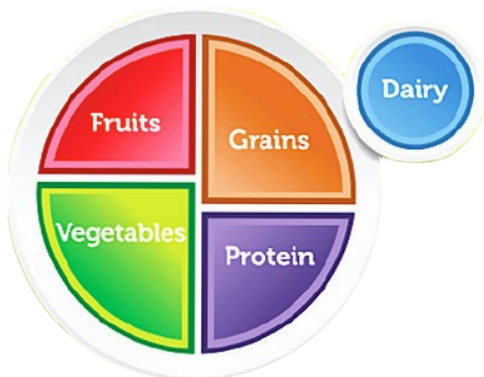
Despite possible benefits, there are also some performance downfalls. At the beginning of a MAD people may feel tired and weak. This is due to low blood sugar levels. In the beginning, the body has not adapted to use fat as a primary fuel source and performance may suffer. This short-term downfall is sometimes referred to as the “keto flu.” It may take weeks to months to adapt to the new diet before seeing any performance benefits.

### Weight Management (MAD)

There are many promising aspects of the MAD for weight management. The first is that eating fat decreases hunger. This can improve portion control and prevent extra snacking. Another possible benefit of the MAD is its fat-burning potential while preserving muscle. It has been shown that individuals on a calorie-restricted MAD keep more muscle mass than those on a higher-carb diet during the weight loss process. Additionally, increased protein intake with the MAD can increase the number of calories burned in a day. More energy is required to break down protein than fat or carbs. This can help in weight management.

Despite these benefits, certain vitamins and minerals may be lacking in this diet. Limiting the amount of carbohydrates restricts the number of fruits and vegetables people can eat. If attempting this diet, it is important to pay close attention to vitamin and mineral intake. It should also be noted that the long-term effects of this diet have not been widely studied.

Today, the KD, IF, and MyPlate are all popular diet patterns. They all pose possible benefits and downfalls for performance optimization and weight management. It is important to know the facts prior to committing to a diet. Eating plans are highly personal, and there is no one diet that will work for everyone.





# Guide to Fueling for Army Combat Fitness Test

BY ARMY 2ND LT. JOSHUA ROE  
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*The new Army Combat Fitness Test is slated to go Army wide in October 2020. The creation of many different fitness test rituals are sure to come with it. There has already been a tremendous amount of discussion on how to best train for it. Proper nutrition may be the most important preparatory component in doing well in this new test.*

## Training

Proper nutrition during ACFT training will be dependent upon the workouts being done. One nutrition priority for training is to ensure Soldiers are eating enough carbohydrates and protein to properly fuel and recover from workouts. Carbs are essential to building up energy stores. Protein helps to rebuild the muscle after a hard workout.

Eating a light snack with carbs before a workout will assist in providing energy for long workouts -- anything from 15-20 grams of carbs. This can be anything from a small banana to a small bag of cereal. After a long workout, make sure to have a well-balanced meal with protein and carbohydrates within at least four hours of that workout in order to recover properly.

The U.S. Department of Agriculture MyPlate model is a good visual of what a well-balanced meal should look like after a long workout. Protein shakes can be used afterwards as well to supplement those carb and protein needs, but it's not recommended to use protein shakes to replace a meal after a long workout.

## Before the Test

Soldiers typically develop a pre-test nutrition ritual that brings them PT glory come time for the test. Having regular meals and hydrating properly the day before this test is important. This will help to keep energy levels steady throughout the test. This is going to be a long fitness test. Being properly hydrated and energized is key to perform well. Try to drink at least one 12-16 ounce bottle of water from the time you wake up until the time you begin the test. The morning of the test it will be important to have a quick-digesting carb snack, such as bananas, carb-full protein shakes or applesauce.

## During the ACFT

Rough estimates from ACFT train-ups say the test can take as long as 90 minutes to complete. This adds another variable into the nutrition equation for test success. Research suggests people may benefit from consuming carbs if participating in continuous physical activity for 90 minutes or greater. However, practicing when and what to consume during the physical



Pfc. Alex Colliver, foreground, pulls a 90-pound sled 50 meters that simulates the strength needed in pulling a battle buddy out of harm's way during a pilot for the Army Combat Fitness Test, a six-event assessment designed to reduce injuries and replace the current Army Physical Fitness Test. U.S. Army photo by Sean Kimmons

activity is also recommended because of the potential for getting sick during the test. Timing is important as well. Eating a snack as the grader says "GO!" for the two-mile may hurt more than help. To allow for a good amount of time for the carbs to be digested it would most likely be best to eat a snack somewhere in the middle of the test. Assuming the ACFT does take 90 minutes to conduct, 45 minutes into the test may be the best time to eat a small snack. Either before the push-ups or the knee-tuck would be the best suggestion. People should test what works best for them during training.

## Recovery

Properly fueling after the test is important to give muscles the best environment to rebuild. During the test, Soldiers will be using energy stored in both their muscles and liver to power through to the finish line. An important priority after the test is to eat some carbs to restock those stores they just broke down. Consuming protein after a workout will also be crucial to rebuild muscle and gain strength. Most notably, make sure to rehydrate! Try to drink at least a bottle of water more than what was released in sweat.

## Supplements: Go or No-Go?

It is common knowledge supplement use is widespread throughout the Army. Justifiably, Soldiers use supplements that keep them awake and alert enough to complete their mission. Two of the most researched supplements in the

area of performance are caffeine and creatine. Caffeine has been shown to assist improvement in fitness events by lessening fatigue and increasing alertness. Creatine supplementation has been deemed safe by the International Society of Sports Nutrition. It has also been shown to assist in improving power in weight lifting and lessen muscle loss during inactivity. This evidence points to using certain supplements to achieving a successful ACFT score. However, proper usage and understanding of supplements have always been a common hiccup for Soldiers. This has created the need for educational briefs that teach Soldiers about the risks of taking supplements. The supplement industry is not regulated by the Food and Drug Administration. This means that bottles of supplements are not required to have accurate food labels like most food products. The Human Performance Resource Center website and Operation Supplement Safety app are good resources that are no cost and can be used to look at safety statistics for particular supplements. This new fitness test will bring the importance of nutrition to new heights for all Soldiers. Soldiers who have not taken their nutrition seriously may receive a rude awakening the first time they go through this test. Be proactive about nutrition. Army dietitians are the subject matter experts of nutrition for Soldiers. If Soldiers have questions on how to improve their nutrition, they can set up a nutrition consult at the Jennifer Moreno Clinic on Fort Sam Houston. It is free of charge and will show dividends during preparation and performance of the ACFT.



# Other Happenings at Bro

## BRAG Awards



A Brooke Army Medical Center Retiree Activities Group volunteer appreciation luncheon was held March 6, 2019 at the Fort Sam Houston Golf Course Clubhouse. In 2018 there were 143 BRAG volunteers who gave 38,259 hours of their time to BAMC. These hours are estimated to have saved BAMC more than \$960,000 over a one year period.



## Decon Team 1st Place at Decontamination Rodeo



Brooke Army Medical Center's Decontamination Team took first place during the annual Decontamination Rodeo held at the Southwest Texas Regional Advisory Council Feb. 28, 2019. Teams from Methodist Healthcare System, University Hospital, Uvalde Memorial Hospital and BAMC competed to show they knew their stuff when it comes to keeping South Texans safe during a mass decontamination event. Each hospital was judged on a total of four events and a written test. Pictured are Army Lt. Andrea Hurst, Army Staff Sgt. Francisco Medina, Army Sgt. Kyle Ross, Army Sgt. Samuel McCarthy, Army Spc. Justin Vasquez and Army Spc. Andrew Campbell. *Courtesy Photo*



# Brooke Army Medical Center

## Enlisted Medical Corps Run

Brooke Army Medical Center and Joint Base San Antonio joined forces March 8, 2019 to celebrate the Month of the Enlisted Medical Corps with a cohesion run. Hundreds of service members participated in the run which began on BG Johnson track on JBSA-Fort Sam Houston and concluded with a cake cutting at the post flagpole.



## CIRT Event

Spencer Wells, world-renowned geneticist, author and professor at University of Texas Austin, speaks during the Brooke Army Medical Center Department of Clinical Investigation Training Research Day March 7, 2019 in the auditorium. The annual educational event featured 18 speakers. The focus of this year's event was to provide an overview to how to embark on research within the Regional Health Command-Central system, including Army, Air Force, and Navy, from protocol concept to publishing.





# **BROOKE ARMY MEDICAL CENTER**

OUR FAMILY TAKING CARE OF YOURS

## **MISSION**

We protect the Nation by ensuring Total Force Readiness through innovative, high quality care and the development of elite healthcare professionals.

## **VISION**

To be the pinnacle of military healthcare  
— Anytime, Anywhere!