

Where's the Fire?

THE MOST DANGEROUS PART OF FIREFIGHTING
MIGHT BE THE EFFECTS ON THE HEART

BY NATALIE MILLER MOORE



In 2010, a Virginia firefighter responded to a wildfire. He stretched the fire hose out 300 feet and sprayed the fire. But after about a half hour, he reported not feeling well and collapsed at his truck. Even though his team performed CPR and used an automated external defibrillator, he was pronounced dead at the hospital.

According to the firefighter fatality investigation, his death was caused by underlying heart disease, triggered by the physical exertion involved in responding to the call.

Firefighting is perceived as a dangerous job—and it is, but not for the reasons people think. The heart health of firefighters plus the stresses of their job make them much more likely to die from a heart attack or stroke. Their chances of dying fighting a fire due to burns or falling debris is much smaller in comparison.

In Virginia's history of firefighting deaths, sudden cardiac death on the job takes many forms. In 2012, a firefighter was found dead in his bunk after a ladder training drill; In 2008, a firefighter died during maze training from sudden cardiac death; In 2006, a firefighter suffered cardiac death during an extrication demonstration; In 1997, a firefighter died of a heart attack after a fire at a log cabin.

The National Institute for Occupational Safety and Health (NIOSH) released a 2007 report called "Preventing Firefighter Fatalities Due to Heart Attacks and Other Sudden Cardiovascular Events" because they identified that 44 percent of on-duty firefighter fatalities were due to sudden cardiac death and underlying heart disease was the most common cause.

It's believed that this is as a result of responding to calls or training exercises, which raise heart rates, elevate blood pressure and add physical demands.

healthiest food. Sometimes at busy stations, it's easier to serve hamburgers on the grill. But I think that eating habits are getting better," says Reynolds.

But over a long time of unhealthy diet choices, blockages can build up. Heart disease includes atherosclerosis, which is plaque building up in the arteries of your body—and that plaque is mostly made up of fat and cholesterol.

Besides lifestyle, there's family history to consider, and the stress of being a firefighter.

"It's not just physical stress. It's also the mental/emotional stress of the job—we see a lot of death. There are fires that we see people perish in. It's important to find a way to channel that. Talking to other firefighters who understand, talking to your family or using a counseling network if things affect you," says Reynolds.

Another benefit of exercise is that it can also help reduce stress.

FROM ZERO TO HERO

Firefighting by nature includes lengthy bouts of sedentary time separated by intense periods of very strenuous activities.

The classic fire alarm bell has been mostly phased out of fire houses for middle of the night calls, replaced with a more gradual tone and changes in the lighting of the bunk room to make the call less startling.

"When you get a call in the middle of the night, and you know it's a fire, people are



“The heart health of firefighters plus the stresses of their job make them much more likely to die from a heart attack or stroke.”

FIREHOUSE CULTURE

Battalion Chief William Reynolds from the Virginia Beach Fire Department says that awareness of cardiovascular disease is improving, and the culture of fire houses is changing.

"It's a lot of stress on the heart. Most firefighters come into the academy in good shape, but maintaining that fitness throughout your whole career is very important. Over time, it might not be as much of a priority," Reynolds says.

Firehouse cooking has a reputation for being very tasty. Look at the Firehouse Subs franchise, promoting large meat and cheese sub sandwiches, with the iconography of "what firefighters want to eat."

"Most firefighters are good cooks or become very good, but that's not always cook the

trapped, your heart goes from 70 or 80 beats a minute to 150 a minute. It can affect the structure of the heart—

to go from zero to hero so fast," says Reynolds.

Even if the fast wake-up call doesn't damage their heart, firefighting is by nature a high intensity, short duration job. Putting on 80 pounds of gear and going into a hot environment is a major stress event for any body. Ideally, the body of a firefighter would be ready to bounce back from the stress of any call because their natural state is fit and strong.

A busy urban fire station might get 15 calls a day, spread throughout the shift, while a slower rural station might get only one or two. Firefighters are called for medical emergencies, gas leaks, wildfires, traffic accidents and more—so the intensity of the call varies wildly.



The perception of some firefighters that “the next call will be my work out” can prevent them from regular, structured work outs.

RAISING THE ALARM

So what are firefighters and their colleagues doing to prevent this?

First, they are raising awareness of the problem and encouraging fitness. In 2003, the National Volunteer Fire Council (NVFC) launched the Heart-Healthy Firefighter Program to reduce the number of firefighter and EMS deaths from heart attack. They produced the Heart-Healthy Firefighter Resource Guide, the Heart-Healthy Firefighter Cookbook and a number of other educational resources promoting a healthier lifestyle. The NVFC calls firefighters, both professional and volunteer, to “Minimize your risks so you can be there for those who depend on you—your family, your department and your community. By staying heart strong, you will maximize your abilities as a first responder and be ready for the next call.”

Second, they are including volunteers, as well as paid staff, in their efforts.

Most professional firefighters have annual physicals that including an electrocardiogram

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THROUGH SIMPLE
LIFESTYLE CHANGES.

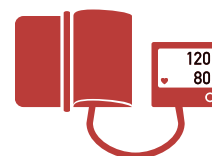
HERE ARE SOME HEART-HEALTHY TIPS:



MANAGE
BLOOD PRESSURE



CONTROL
CHOLESTEROL



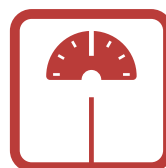
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BLOOD SUGAR



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ACTIVE



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BETTER



LOSE
WEIGHT



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SMOKING

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TO LEARN MORE ABOUT YOUR RISKS –
PLUS HELPFUL TIPS ON IMPROVING YOUR SCORE.





(EKG) to check their heart. But departments that use volunteer staff have a variety of different guidelines and not all members are regularly assessed.

Lawrence Hajek, a James City Bruton volunteer firefighter, is working on creating a gym for Fire Station 1.

“We know from the fire academy photos that many people were in shape when they started—they were running several miles a day or able to do 200 plus pushups. We need to get that motivation back and keep it going,” Hajek says.

Hajek, a former Coast Guard DSF member, says that he sees the benefits of making running and lifting part of the shift duties, but understands that some days it is not feasible because of call volume.

“If you were in New York, you’d be training to run up to the 40th floor with your high rise pack on. Here in this part of Virginia, it’s much more likely just to be the back bedroom upstairs,” he says. “We need to shift the culture to include physical fitness for our duties, and to make a conscious effort eat healthier.”

Third, they are encouraging fitness—gyms and working out. Reynolds says that in Virginia Beach, the younger firefighters motivate older firefighters to work out with them, and that the fire chief sets the tone by running half-marathons to be a good example of fitness.

“The younger generation motivates us, and we see it from the top down. We don’t go to fires by ourselves, so we should work out together,” says Reynolds.

“This profession embodies selflessness and service, and we do lots of medical calls, and we see lots of diseases caused by lifestyle choices like end stage renal disease, diabetes, and heart failure. We need to change the culture of firefighting to a healthier lifestyle so we can be there to help,” says Hajek. 🇺🇸

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