

The facts about diabetes



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When you consider that nearly one-quarter of the people in the United States who have diabetes don't know they have it, it's easy to understand why November is dedicated to diabetes awareness.

The facts:

That's 7.5 million, out of a total 30.3 million, who are at risk for nerve damage, cardiovascular disease, foot and limb injuries, vision problems, and other complications that arise from having uncontrolled blood sugar.

Researchers estimate that 84 million people have prediabetes and therefore are at risk for progressing to type 2 diabetes. Ninety percent of them don't know they're at risk, according to the Centers for Disease Control and Prevention (CDC).

Up to 95 percent of cases are type 2 diabetes, in which the body does not use the insulin as it should; and about 5 percent are type 1 diabetes, an autoimmune disease in which the body produces no insulin or not enough.

The prevalence of gestational diabetes is on the rise, affecting up to 14 percent of all pregnancies in the U.S. Increasing maternal age may be a factor.

Furthermore, half of all women with gestational diabetes will go on to develop type 2 diabetes. Gestational Diabetes occurs during pregnancy, women normally develop a certain amount of insulin resistance, which ensures there's enough glucose available to provide energy for the growing fetus

One of the biggest challenges is lack of awareness. Too many people don't have the facts they should about diabetes. Patients that are newly diagnosed with diabetes are often overwhelmed, surprised, even shocked.

Learning about diabetes management is a process. Patients need to have the basics explained—including what causes diabetes and its various complications, treatment options, nutrition, and monitoring blood glucose. However there are some things you can tell your patients to help them understand that diabetes can be well managed and you can work as a team.

Let them know it's not their fault. Emphasize that diabetes can be caused by many factors, including being inherited, No type of diabetes mellitus is genetic per se, but their DNA may influence their risk of developing it. The genetic answer is complex, depending on the type of diabetes and frequently other factors such as diet, lifestyle, and environment. For most people who have diabetes, it is not due to a straight genetic group of factors or to environmental ones, but rather it is a combination of both. It's true that diabetes tends to run in families and it true that specific things can trigger diabetes, including illness, stress, lack of activity and weight gain. But it also means there are things they can do to make it better and live healthier.

Tell patients not to panic! They may recall a relative that had their leg amputated or died from a heart attack. Explain there are things they can do to decrease their risk of complications. Help correct their misperceptions.

No they don't need "special food," ease their concerns that they will never be able to consume anything sweet again. Let them know that they should eat the same way everyone should eat. That means controlling carbohydrates, portion sizes, fat and salt intake, but also enjoying the occasional sweet treat. Use diabetes as something that can motivate them (and their families) to live healthier lives.

They are not alone. It's important to remember that a diabetes diagnosis is scary and can be overwhelming, so be sure to reassure your patients that although they will have to make changes, you and their other health care providers are there to help them. Encourage them to discuss experiences, ask questions and even get involved with support groups—in person or online.

Ultimately, you want to be sure that newly diagnosed patients with diabetes leave your office knowing that they can manage the disease—and even feel empowered to do so.

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A quarterly newsletter for REACT staff and friends

REACT Newsletter



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HIV, SARS, MERS, EBOLA and now COVID-19



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How many viruses are there? A 2013 article tried to statistically estimate the number of viruses on Earth. Looking at vertebrates, plants, lichens and mushrooms the number arrived at was nearly 101,000,000 viruses. The authors of this study also concluded that this number was probably a low estimate since it did not include ocean born viruses. The good news is that there are only about 220 virus species that are known to infect humans.

Today scientists look at viruses as a gray area between living and non-living. Viruses themselves do not carry out metabolic processes and cannot reproduce through cellular division. They do not produce ATP and do not possess the mechanism to form proteins from molecular RNA contained inside their protein shell. Because of this, they are dependent on the reproductive cycle of a host cell to reproduce. Once a cell is infected with a virus the host cell is hijacked into reproducing the virus which quickly spreads to other cells causing a rapid spread of the infection through the host. The effects of this infection are what we see as the disease caused by the virus. We are familiar with diseases such as HIV, a progressive immunity destroying disease; SARS and MERS as a respiratory disease; and Ebola that causes overwhelming hemorrhage. And then there is today's COVID-19 virus that has a much wider range of effect on the body.

Six months into the COVID-19 pandemic the virus and disease process is still not fully understood. Research shows that the virus has, probably been present in animals for the last 40-60 years. In the fall 2019 it made a jump to humans from the animal source. Today we know that this virus is well tolerated by about 81% of those that become infected, with an unknown portion never showing any symptoms. The remaining 19% develop moderate to severe symptoms that may require hospital admission with about 6% requiring ICU treatment. The disease process affects a wide range of body systems including the brain, lungs, heart, liver, kidneys, GI tract and eyes. Children do not appear to suffer from the same symptoms as adults but are showing signs of what is termed as Multisystem Inflammatory Syndrome in Children (MIS-C) associated with COVID-19. This is one of the least understood conditions.



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HIV, SARS, MERS, EBOLA and now COVID-19 (continued)

While the media has reported on many experimental drug treatments, none have proven to be definitively effective. Treatment for symptoms, including for those hospitalized, is only supportive. There are several risk factors that do contribute to the severity of the disease. These include people over 65 years old, those with preexisting or chronic health conditions, and obesity.

While there is a considerable amount about this disease that is not known, there is a great deal that health care professionals can do to protect ourselves. Anyone who has been through a scenario-based testing program can recite the basics. Don PPE is the scene safe? Do I have the resources to manage the situation? This assessment and preparation becomes even more important when dealing with an unseen threat such as COVID-19. Proper use of PPE is the first line of defense to prevent transmission of the virus. Gloves, gown, mask and use of a N95 respirator should be used when indicated. Proper use also includes good hygiene after removal. Washing hands and exposed skin, including the face and neck, if exposed. Consider a mid-shift change of uniform and shower, particularly if there is high likelihood of an exposure. Management of resources in this setting includes minimizing the number of providers in a potentially infectious situation. These situations include exposure to known infected individuals or when treatments are performed that could increase transmission of the virus. These procedures include primarily airway management that includes suctioning of airways, manual ventilation, endotracheal intubation, noninvasive ventilation, and nebulizer treatments.

The potential for exposure during these commonly performed procedures cannot be understated. In one study looking at simulated intubation with the patient coughing 2 times during the procedure, "Despite personal protective equipment, fluorescent markers were found on the uncovered skin, hair, and shoes of participants after simulations of emergency department management of patients experiencing respiratory distress."⁵ This study demonstrated why minimizing the number of caregivers as well as proper PPE and hygiene play an important role in minimizing the potential for exposure.

There are several things to remember as we move forward in what is now the recovery stage and reopening of the national economy. This virus will remain present in society and daily living. We have the potential to encounter it in any of the patients we care for the foreseeable future. The treatments and care we give are going to continue to evolve as more is learned about the COVID-19 virus. It is up to each one of us as professionals to maintain our competencies, to protect our patients, and to maintain our vigilance to protect our own health until a vaccine or cure is developed.

Resources

1. <https://abc7news.com/where-did-coronavirus-come-from-originally-what-is-the-cause-of-really-covid/6175783/>
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Suicide in EMS



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We work so hard to take care of other people, why aren't we taking care of ourselves:

Mental health is a growing concern in our country that grabbed national attention. Are EMS providers among this growing concern? Yes. Years of research, data collection, and surveys from all over the country says we are.

A study by the Ruderman Family Foundation states that in 2017 more first responders, firefighters, and police officers died from suicide than in the line of duty. In 2016, NAEMT published results from a survey indicating that, compared to the general public, EMS professionals had a 10 fold higher rate of suicidal thoughts and attempts. Several other papers have been published linking an increasing suicide rate to EMS professionals. Reasons for the increase also include guilt, blame, lack of sleep, increased stress, judgement, fear of seeking help, and shame, to list a few. It has been termed our "silent pain". The pain that no one knows you have unless you are able to speak up.

Now that we are more aware of this growing problem, what are we doing to take care of ourselves and each other? Have you heard of The Code Green Campaign? Established in 2014, this organization is made up of first responders that had lost a co-worker to suicide at some point in their career. Members can share their story anonymously with their peers. This took away the fear of judgement or repercussions in the workplace. This organization posts approximately 3 stories a week from fellow first responders looking for a little help through a rough time. Their website is full of information to find help through

their stories or with a mental health professional. They also offer educational opportunities aimed at EMS professionals and their families. Learn more, visit codegreencampaign.org.

In addition to The Code Green Campaign, the National Volunteer Fire Council has developed the Share the Load Program. This program offers free 24-hour assistance for fire and EMS personnel seeking assistance for issues such as stress, depression, addiction, PTSD, and more. They also offer assistance to departments looking to implement or enhance their behavioral health program. You can find more information at nvfc.org/programs/share-the-load-program

With more agencies recognizing the need for mental health programs in EMS a few questions to mind. Does your agency have a mental health program, or an Employee Assistance Program? If so, what are your options? If not, how can this be implemented? The two programs listed earlier are a great starting point to help your agency get a program put together.

We need to ask ourselves, are we keeping a close enough eye on each other? Do we know the warning signs to look for in our co-workers? If you are worried about a co-worker, what do you do? Research shows it's important to speak up! Whether you talk to the co-worker (depending on your relationship) or reach out to a supervisor, we must always speak up for each other. We may regret the words left unsaid.

Remember, if we don't take care of ourselves, we can't take care of those in need. Self care is key. Make sure you find time to enjoy life, not just work, eat right, and get enough sleep, exercise if you are physically able to, or find a hobby that puts a smile on your face. If you find yourself in a dark place, speak up, we all deserve to be happy.