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Introduction

In order to help communicate with the citizens of Moore County, county Health Director Robert Wittmann, MPH has partnered with Paul Kuzma, MD to prepare a series of articles meant to inform the public about Covid-19 and public health. Dr. Kuzma has practiced medicine in Moore County for over 20 years and is currently completing his Masters of Public Health degree at Johns Hopkins University.

This is the first in a series of article that will distill the overload of information on Covid to provide unbiased and relevant information for the people of Moore County.

How to reduce your risk of Covid -19 Infection

There has been a lot of news and information about Covid-19 and the efforts to contain it at a national, state and local level. Less has been written about how to help protect yourself and your family at a more individual level. While there is no way to completely eliminate your risk of contracting Covid, and no way to ensure that you don't get a severe case of the disease, there are some simple, straightforward steps you can take to reduce your risk and improve your odds of staying safe and healthy during these frightening times.

While there is still a lot that is not known about the virus and the disease that it causes, a lot has been learned over these last 8 months. We have learned that there are simple ways to reduce your risk while improving your health.

1. Improve your Nutrition with Diet and Vitamins

There has been some interesting findings on the role of vitamin and nutritional deficiencies and their role in the risk of contracting Covid and developing severe disease. Our immune system is incredibly complex and still not fully understood, but scientists and doctors have learned that certain vitamin and nutrient deficiencies can impair the normal functioning of our immune system. Several observational studies in patients with severe Covid-19 disease have supported the findings that people with certain vitamin deficiencies have been more susceptible to the disease.

Most vitamin and mineral deficiencies are best managed by eating a healthy diet that includes a variety of fresh fruits and vegetables. Since it is not always possible to meet all of our nutritional needs this way, you may want to consider vitamin supplementation.

"To Protect and Promote Health through Prevention and Control of Disease and Injury."
<http://www.moorecountync.gov/health/>

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Vitamin D

Vitamin D is an important modulator of immune function and a number of recently published papers support optimizing Vitamin D status to reduce the risk of severe Covid disease. Some researchers also see a decreased risk of influenza in people with optimal Vitamin D levels. While the evidence is not overwhelming, there are a number of benefits of optimal Vitamin D levels including improved bone health.

Our body naturally produces Vitamin D when we are exposed to sunlight. Vitamin D is present in some foods and is added to most milk that is sold in stores. Vitamin D is available as a nutritional supplement. The recommended upper limit of daily Vitamin D supplementation is 600-800 international units (15-20 micrograms). Vitamin D levels can be checked by your doctor and anyone with low levels or requiring more aggressive supplementation should seek medical advice. High doses of Vitamin D can cause side effects and should be taken only under medical advice.

Selenium

Selenium is an element that is necessary for cellular function. Research performed in the 1990s demonstrated an increase in certain viral infections in people with selenium deficiencies. In an analysis of the severity of Covid disease in China, people who lived in areas of the country where many people have a selenium deficiency had worse outcomes than those with normal selenium levels. Selenium is present in some foods and is included in many multivitamins. Excess selenium can be toxic so high doses are not recommended.

Vitamin C

Vitamin C is readily available through diet and supplements. While there is no direct evidence of reduced infection with Covid in people who take Vitamin C supplementation, Vitamin C has been shown to play an important role in immune modification and the body's inflammatory response and it has proven antiviral activity. Vitamin C is water soluble and is listed by the World Health Organization as an essential medication.

Zinc

Zinc is available as a supplement tablet and in lozenge form. Zinc lozenges have been available for many years as a treatment for the common cold. It is a coronavirus that causes the common cold, which is in the same family of viruses that cause Covid. A large review in 2013 found that zinc supplementation reduces the duration and severity of the common cold, so there has been significant interest in the role of Zinc in reducing the severity of Covid disease. Zinc has direct antiviral activity and modulates immune reactivity. Therefore, correction of zinc deficiency may reduce the severity of Covid disease. Since zinc has direct antiviral activity, it may be prudent to suck on a zinc lozenge immediately if you feel the beginnings of a sore or scratchy throat. This may reduce coronavirus replication by direct inhibition of the virus before it can get a foothold in your body. High levels of zinc can cause side effects and affect taste and smell, so high dose zinc supplementation is not recommended.

2. Optimize Your Preexisting Health Conditions

It has been widely recognized that people with significant medical conditions who develop Covid disease have worse outcomes and higher death rates than those without these conditions. The following conditions have been associated with an increased risk of severe illness.

- Obesity
- Chronic Kidney disease
- Type 2 diabetes
- Serious heart disease
- COPD (Chronic Obstructive Pulmonary Disease)

- Cancer
- Immune suppression
- Sickle cell disease

While it is not possible to reverse or eliminate these diseases in most people, it is possible to optimize them. It is more important than ever to work with your health care providers to get yourself in the best condition possible. Think of it like preparing to play a big game or run a marathon. The better condition you are in at the start, the better you will fare during the event, and the quicker you will recover afterward. So make sure you see your providers, take your medicines and get your health as optimized as possible. It is safe to go to your doctor's office, and if necessary, most offices can do a telehealth visit.

3. The Three Most Important Things You Can Do for Your Health

While it may not be possible to eliminate some underlying health conditions, others are can be improved or reversed with some straightforward actions.

The most important things you can do for your health are:

- Exercise
- Lose excess weight
- Stop smoking

Exercise is probably the single most important thing that anyone can do for his or her health. Our bodies are machines that are meant to be used. Walking is the single easiest and best exercise for most people. If you are able to walk, 30 to 60 minutes of walking at as brisk a pace as you are able can work wonders. For those that can't walk, there are a number of exercises that can be done while seated or standing in your home.

Exercise has been shown to help with weight loss, diabetes, lung disease, cardiovascular disease, hypertension, immune function and mental health.

We are fortunate in Moore County to have excellent resources for exercise. If you need professional guidance, there are excellent physical therapists and personal trainers in our community. In addition, FirstHealth has a program called "Exercise is Medicine" that can help you get started.

Start today!

Do these simple things today to reduce your risk of developing severe Covid disease

- Eat a healthy diet and include some fresh fruit and vegetables
- Consider taking a multivitamin and address any vitamin deficiencies
- Suck on a zinc lozenge at the first sign of a sore throat
- Exercise
- Get out in the sunshine
- Quit smoking
- Work with your doctor on your overall health
- Take you medicines as prescribed

As you can see, it isn't complicated or difficult to take some concrete steps today to reduce your risk of severe Covid disease. In fact, almost anyone would recognize these things as the foundations of good health.