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NEWS HEALTH & MEDICINE

COVID-19 is hitting some patients with obesity particularly hard

Emerging data show BMI plays a role in who needs intensive care and who survives

Doctors say people with obesity, who often have lower blood oxygen levels, may need early treatment with supplemental oxygen for coronavirus.

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By Dawn Fallik

21 HOURS AGO

As part of the COVID-19 response team at O'Connor Hospital in San Jose, Calif., Nivedita Lakhera wasn't prepared to see her intensive care unit filled with so many young patients. Many of those patients had no medical condition other than obesity.

"They are young and coming to the ER and just dropping dead," she says.

Age, particularly those over 65, as well as having a compromised immune system are still major risk factors for being hospitalized with, and dying from, COVID-19. But some doctors say that some of their sickest patients are those under 60 who are obese.

The Centers for Disease Control and Prevention's list of high-risk individuals includes the severely obese, defined as people with a body mass index, or BMI, over 40. While studies on coronavirus often focus on demographic breakdowns such as age, sex and race (*SN: 4/10/20*), some now are starting to track COVID-19 patient BMIs.

For instance, of 180 patients hospitalized from March 1 to March 30, the most prevalent underlying condition for adults ages 18 to 49 was obesity. Of 39 patients in that age range, 23, or 59 percent, were obese, researchers report in the April 17 *Morbidity and Mortality Weekly Report*.

"BMI is the Achilles' heel for American patients," says Jennifer Lighter, an epidemiologist at New York University's Langone School of Medicine. That could be a crucial factor in the death toll, particularly for those under 60, she says. "In China it was smoking and pollution, and Italy had a larger older population, and many grandparents lived with extended families. Here, it's BMI that's the issue."

In the United States, 42 percent of adults have a BMI over 30, the threshold for obesity, and more than 9 percent are classified as severely obese with a BMI over 40, according to the CDC. People with obesity can have other high-risk health conditions, such as hypertension or diabetes (*SN: 3/20/20*). But some doctors suggest a high BMI should be a risk factor in itself.

Lighter and her colleagues found that patients under 60 with a BMI over 35 were at least twice as likely to be admitted to the ICU for coronavirus than patients with healthy BMIs, the researchers report April 9 in *Clinical Infectious Diseases*. Those same patients were three times more likely to die from the infection than those with a lower BMI, she says.

The team tracked 3,615 people who tested positive for SARS-CoV-2, the virus that causes COVID-19, at a New York City hospital from March 4 to April 4. Of those, 1,370, or 38 percent, were obese. In patients over 60, weight did not appear to be a factor in hospital admission or the need for intensive care, she says.

A hospital in Lille, France, also found that the higher the BMI, the more likely a patient needed to be ventilated. Of 124 patients admitted to intensive care for COVID-19, almost half were obese or severely obese, researchers report April 10 in *Obesity*. Of the 85 patients who were intubated, nearly 90 percent had a BMI over 35, the data show.

"The need for invasive mechanical ventilation was associated with severe obesity and [was] independent of age, sex, diabetes and hypertension," the study says.

Sanjum Sethi, a cardiologist at Columbia University Medical Center, says his hospital is seeing a surprising number of younger patients with obesity, but no other conditions such as diabetes or high blood pressure. On April 12, he tweeted that, for obese patients, "the prognosis is extremely grim. They are NOT dying from comorbidities. They are dying from COVID-19."

People with a high BMI already tend to have problems breathing; they carry more weight on their chest, which compresses the lungs. Because COVID-19 is mainly a respiratory disease, that may put heavier patients at a disadvantage, doctors say.

Obese people "already have lower oxygen levels, they are predisposed to pulmonary dysfunction, and they have decreased chest function because of the weight on their chest. And many have sleep apnea. So they're at pulmonary risk already," says Samuel Klein, a gastroenterologist and the director of the Center for Human Nutrition at Washington University School of Medicine in St. Louis.

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Public health officials say people with obesity shouldn't feel stigmatized or avoid seeking medical care; it's important to be aware of threat COVID-19 poses. People with high BMIs might want to practice extra caution, wear a mask outside and have groceries delivered instead of going out into public, Sethi says.

"I worry this is going to have even more impact where obesity is more endemic, like in the South," he says.

The data should be a wake-up call for people with obesity, agrees Donna Ryan, president of the London-based World Obesity Federation. "If they do develop fever or shortness of breath, they should not hesitate, call their doctor and get tested."

Doctors might take specific measures when treating obese patients for COVID-19, says Rekha Kumar, an obesity specialist at Weill Cornell Medical College in New York City. That might include giving them oxygen early or keeping them in the hospital longer.

CITATIONS

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