SCI-TECH

"If you will it, it is no dream"
THEODOR HERZL JEWISH JOURNALIST AND VISIONARY

Yale fights the 'Yague' even amid low local respiratory illness numbers

BY JOSEPH HWANG
CONTRIBUTING REPORTER

Even as coughs, sneezes and sniffles in classrooms and residential colleges mark the return of the "Yague" — Yale students' catch-all term for infectious viruses that spread around campus — respiratory illness levels in the New Haven area remain relatively low.

Tim Brown, the director of communications for Yale Health, said clinicians at the medical center are seeing students with a range of cold-like symptoms, which is consistent with an increase in respiratory illnesses typically seen this time of year. Dr. Scott Roberts, an assistant professor of infectious diseases at the School of Medicine, said respiratory illness in the broader New Haven community is occurring at a lower frequency than expected.

"Right now, I'm cautiously optimistic, because numbers are low," Roberts said in an interview. "But, you know, hard to predict, and I think if we have this conversation in a few weeks, the numbers would be higher for probably most viruses."

Roberts said that detected rates of rhinovirus, responsible for the common cold, are currently the highest, followed by COVID-19. He added that other respiratory viruses, including influenza, adenovirus, parainfluenza and human metapneumovirus, remain substantially less common.

According to Gordon Streeter, the chief of student health and athletic medicine at Yale Health, recent virology data from Yale New Haven Hospital shows that the most widespread respiratory virus is adenovirus. He said the virus can cause cold and flu-like symptoms similar to rhinovirus.

"We're currently seeing respiratory illness activity that is consistent with what we would typically expect for early October," Streeter said through a statement from Brown.

Some students interviewed by the News said they felt that the Yague has been consistently widespread.

Sophia Xu '30 said she noticed people coughing and sniffling almost immediately after returning to campus from her first-year orientation program at the end of August. When she later fell ill herself, she said, she experienced a sore throat and nasal congestion.

Xu said that some students may not take active steps to prevent the "Yague," despite the potential severity of its effects.

"It's a real thing, like you get the symptoms and you're dead for a week," Xu said in an interview. "But people don't try to stop it, so it's more of an 'oh well, you're out for a week' situation."

Students have reported seeing sick peers continue to attend classes, events and even exams. During both of her math and economics midterms, Xu recalled, students were coughing and sneezing right next to her.

"People do still go to events when they're sick, and they don't wear masks or anything," Xu said.

For some students, however, the "Yague" symptoms can feel debilitating.

Siyeong Kim '29, who recently came down with a respiratory illness herself, summarized the experience bluntly.

"It felt like a truck ran over my spine," Kim said in an interview.

Even while sick, however, Kim said she continued studying for her organic chemistry midterm.

"It was not very pleasant, but I believe that if I pushed it off, then I would be screwing my immediate future over," Kim said.

Kim said she believes students are particularly likely to spread illnesses while studying together in close proximity during exam seasons.

According to Roberts, the close quarters of college life and daily interactions with hundreds of people can make university environments particularly conducive to the spread of respiratory illnesses.

The symptoms students associate with the "Yague" may often be consistent with rhinovirus, Roberts said. Rhinovirus commonly causes a runny nose, congestion and a sore throat.

Distinguishing a common cold from COVID-19, influenza or allergies based solely on symptoms, however, can be difficult. According to Roberts, "nothing's hard and fast" and disease symptoms can present with degrees of variability.

To prevent getting sick, Roberts recommends students receive seasonal vaccines, wash their hands regularly, avoid close contact with sick people when possible and improve ventilation by opening windows or spending time outside.

Taking precautions can become especially important as students prepare to travel home for fall and winter holidays, Roberts added, particularly for those returning to households with infants, older adults or immunocompromised family members.



TASHA FU / CONTRIBUTING ILLUSTRATOR
Some undergraduates have employed an array of methods to fend off the "Yague," a colloquial term used to reference the assortment of illnesses that spread across campus each year. Still, New Haven has recorded fewer respiratory illness cases than usual.

Roberts suggested that students who are concerned about their immediate symptoms seek testing through Yale Health. Some students said they had decided against a visit to 55 Lock St.

"I did consider going to Yale Health, but because it was so far away, I decided that it would make me sicker than if I had just not gone," Kim said.

Students have also developed their own less-than-clinical approaches to surviving the annual wave of sickness.

Kim said that her personal "Yague" cure was to consume "cough drops and chug iced lattes." Xu said that she ate 90 vitamin gummies in a week, and that her sickness prompted her to wash her hands "so frequently that they became dry." Roberts advised choosing a "brainless" form of entertainment during a bout of illness, such as reality TV.

But when asked what she would tell sick students sitting beside her in class, Xu's advice was simpler.

"Stop coughing on me. You can cough any other way. Just don't cough on me," Xu said.

According to the CDC, the flu season is expected to peak in December and last through February.

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Yale-led trial tests anti-inflammatory drug against Parkinson's

BY KATE CASTRO
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Yale researchers have started enrolling patients in a first-of-its-kind multicenter clinical trial to test whether a common anti-inflammatory drug can curb the earliest signs of Parkinson's disease in high-risk individuals.

The trial, called PRISMS, is funded by the Marcus Foundation and the National Institute on Aging. PRISMS is the first study to test a drug's ability to prevent onset of Parkinson's through the immune system, according to Jesse Cedarbaum MED '78, a Yale neurology professor and one of the trial's lead researchers. Over the next year, researchers will enroll about 100 participants at 15 sites in the United States and Canada, and results are expected in about three years.

"If we can identify people who are likely to get Parkinson's disease here, 10, 15, 20 years before, and we start treating them, maybe we can prevent them from developing Parkinson's disease at all," Cedarbaum said.

Parkinson's disease is a progressive nervous system disorder that impairs movement and coordination, causing tremors, slowness of movement, muscle stiffness and other symptoms. The exact cause is unknown but experts believe the disease results from a mix of genetic and environmental factors.

The drug whose effect is being tested, adalimumab — sold as Humira — is commonly used for autoimmune conditions like rheumatoid arthritis and ulcerative colitis. Adalimumab reduces the activity of TNF, an immune system protein that causes inflammation.

The trial will follow qualifying individuals who do not have a Parkinson's diagnosis, but have lost their sense of smell and have REM sleep behavior disorder, or RBD. Both are early warning signs of Parkinson's disease.

During normal and healthy REM sleep, the brain paralyzes the muscles so a person does not act out their dreams. In RBD, that mechanism fails, and people physically act out vivid, often violent dreams. RBD can appear years or even decades before classic motor symptoms of Parkinson's disease like tremors and muscle rigidity.

"If you act out your dreams like this, you have a 90 percent lifetime chance of developing Parkinson's disease or the related disorder Lewy body dementia," Cedarbaum said.

Participants will either receive the drug adalimumab or a placebo, injecting themselves every two weeks. Researchers will track participants with rating scales for daily activities, movement, memory and thinking. Additionally, PET brain scans will measure changes in how the brain uses glucose, a pattern that worsens over time as people at risk move toward Parkinson's.

"If this shows improvement in the primary outcome (PET) imaging, with some early evidence of slowing progression, this would warrant definitive studies," Ronald Postuma, professor of neurology at McGill University and lead investigator in Canada, wrote in an email to the News.

A back-worn sensor will record activity and walking for one week every six months. The trial hopes to reduce declines on any one of these rating measures by 50 percent. Additionally, about half of the participants will be asked to have a spinal tap to check whether the drug is changing immune activity as intended.

According to Cedarbaum, people with inflammatory conditions like rheumatoid arthritis or inflammatory bowel disease are at greater risk of developing Parkinson's. But studies have found that those treated with anti-tumor necrosis factor drugs, such as adalimumab, developed Parkinson's less often.

David Hafler, a Yale professor of neurology and immunobiology and another lead researcher on the trial, said spinal fluid from healthy people typically contains zero to one white blood cell. In people with pre-symptomatic Parkinson's, he said the average is around five to eight cells, which is "almost exponentially increased." These findings, Hafler noted, are unpublished or under review.

Hafler hypothesizes that immune cell responses damage the brain, initiating the process of neurodegeneration in Parkinson's patients.

"Maybe if we block this early inflammatory pathway, we can prevent the onset of Parkinson's," Hafler said.

However, adalimumab also carries risks, including higher susceptibility to infections like tuberculosis and hepatitis and symptoms that resemble multiple sclerosis. Hafler said participants are walked through the risks in detail, as in any study approved by an institutional review board.

Finding participants will be a challenge. RBD is uncommon, and many people with the condition don't know it can be a warning sign for Parkinson's or haven't been referred to a neurologist. Cedarbaum said many patients are open to taking part in research but don't hear about it from their doctors.

In the United States, an estimated 90,000 people are diagnosed with Parkinson's disease each year.



YU LIN ZHEN / PHOTOGRAPHY EDITOR
A Yale-led clinical trial has begun enrolling participants in the United States and Canada to test if the drug adalimumab can prevent Parkinson's disease in people with REM sleep behavior disorder.

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