

Loneliness can be a culprit in a slew of illnesses

Researchers determine isolation can damage body and brain function

BY JANE E. BRODY

I now know why I gained more than 30 pounds in my early 20s: I was lonely. I had left my beloved alma mater upstate for graduate school and a job in the Upper Midwest. I knew no one and felt like a fish out of water.

I filled my lonely nights and days with food. Anything I could get my hands on, especially candy, cookies and ice cream. Food filled the hole in my soul, at least temporarily. No matter how hard I tried, I could not rein in my out-of-control eating until I returned to New York and my family, and began dating my future husband.

Loneliness, says John T. Cacioppo, a psychologist at the University of Chicago, undermines people's ability to self-regulate. In one experiment he cites, participants made to feel socially disconnected ate many more cookies than those made to feel socially accepted.

In a study of middle-aged and older adults in the Chicago area, Mr. Cacioppo and colleagues found that those who scored high on the U.C.L.A. Loneliness Scale, a widely used psychological assessment, ate substantially more fatty foods than those who scored low. "Is it any wonder that we turn to ice cream or other fatty foods when we're sitting at home feeling all alone in the world?" he asked in his book, "Loneliness," written with William Patrick. "We want to soothe the pain we feel by mainlining sugar and fat content to the pleasure centers of the brain, and absent of self-control, we go right at it."

He explained that lonely individuals tend to do whatever they can to make themselves feel better, if only for the moment. They may overeat, drink too much, smoke, speed or engage in indiscriminate sex.

A review of research published in 1988 found that "social isolation is on a par with high blood pressure, obesity, lack of exercise or smoking as a risk factor for illness and early death," Mr. Cacioppo wrote.

Even without indulging in unwholesome behaviors, Mr. Cacioppo and others have shown that loneliness can impair health by raising levels of stress hormones and increasing inflammation. The damage can be widespread, affecting every bodily system and brain function.

Lisa Jaremka, a postdoctoral fellow at Ohio State University, reported in January at the annual meeting of the Society for Personality and Social Psychology that people who are lonely have higher levels of antibodies to certain herpes viruses, indicating more activated viruses in their systems. In another study,

she found higher levels of inflammation-inducing substances in the blood of lonely people.

Chronic inflammation has been linked to heart disease, arthritis, Type 2 diabetes and even suicide attempts, Ms. Jaremka noted.

People who are lonely also react more strongly to negative events and perceive daily life as being more stressful, which can depress the immune system.

Loneliness can even influence how genes are expressed, Mr. Cacioppo has found. Loneliness predicted changes in DNA transcription that in turn dampened the body's ability to shut off the inflammatory response, he reported. A study by Carla M. Perissinotto and colleagues at the University of California in San Francisco, assessed loneliness among 1,604 older adults and followed them for six years. Those who were lonely were more likely to develop difficulties performing activities of daily living like bathing and dressing, using their arms and shoulders, climbing stairs and walking. Loneliness was also associated with an increased risk of death during the study period.

It's not surprising that loneliness has also been linked to cognitive decline. A Dutch study published last year in *The Journal of Neurology, Neurosurgery & Psychiatry* found that participants who reported feeling lonely — regardless of how many friends and family surrounded them — were more likely to develop dementia than those who lived on their own but were not lonely.

The nearly 2,200 participants, ages 65 to 86, were followed for three years and had shown no signs of dementia at the study's start. About half lived alone, and 20 percent reported feeling lonely. After adjusting for other factors that are linked to cognitive decline, like age, feeling lonely was linked to a 64 percent increase in the risk of developing dementia, according to Tjalling Jan Holwerda of the VU University Medical Center in Amsterdam.

This is not proof that loneliness causes dementia; the reverse could be true. People whose cognitive abilities begin declining may withdraw from others, the authors suggested. On the other hand, loneliness may result in "a lack of sensory and cognitive stimulation," which in turn reduces levels of nerve growth factors in the brain and may contribute to dementia.

The Dutch study, among others, suggests that how people perceive their situation may have a stronger impact on health than whether they live alone and lack social connections. Divorced people have reported feeling lonelier in a bad marriage than they do being single. And people who live alone may still have a large network of friends and family that

helps to keep loneliness at bay.

But according to Mr. Cacioppo, having many friends and family members around does not guarantee immunity from loneliness if the relationships are missing a strong emotional connection. The quality of these relationships — how meaningful they are to the individual — counts more than numbers in predicting loneliness, his studies and others have shown.

People are fundamentally social beings who require meaningful connections with others to maximize health and well-being. Mr. Cacioppo suggests reaching out to others with "random acts of kindness": Doing something that helps them physically or emotionally, maybe something as simple as complimenting a stranger's outfit, leaving behind the change in a coffee machine, or helping an old person carry groceries or cross the street.

Next, try seeking out social activities that help others while fostering social contacts, like volunteering in a soup kitchen, reading to the blind or assisting in a classroom. Such actions can result in what Mr. Cacioppo calls the "helper's high," establish new friendships and counter a feeling of aloneness.

"What's required," he wrote, "is to step outside the pain of our own situation long enough to 'feed' others. Real change begins with doing." You won't know whether what you do will result in a genuine connection to another person unless you try.

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