

Los Angeles Times

<http://www.latimes.com/features/health/newsletter/la-he-explain7-2008jul07,0,2168668.story>

From the Los Angeles Times

EXPLAIN THIS

'Complicated grief' affects the brain differently

Researchers unravel a mystery about why this type of mourning triggers a part of the brain linked to feelings of reward.

By Elena Conis

Special to The Times

July 7, 2008

What's new: Grief activates a part of the brain associated with feelings of reward in people with so-called complicated grief, the psychiatric term for sadness that persists long after a person has experienced a loss.

The finding: A team of neurologists and psychiatrists at UCLA have shown that the pattern of brain activity in people who suffer complicated grief is markedly different from that seen in people whose sorrow lessens with time.

In people with complicated grief, reminders of a lost loved one trigger activity in the brain's nucleus accumbens, a region that's also active when a person experiences feelings of reward.

How the study was done: The researchers studied 23 women, 11 with complicated grief and 12 with noncomplicated grief, all of whom had lost a mother or sister to breast cancer in the last five years. "Grief is really difficult for these women, in part because they really identify with the lost family member," says study author Mary-Frances O'Connor, associate professor of psychiatry at UCLA's Cousins Center for Psychoneuroimmunology. The grief is often compounded by the fact that having a relative with breast cancer increases one's own risk of the disease, she adds.

Each woman in the study shared the story of her mother's or sister's death with the researchers and provided them with a picture of her lost loved one.

The researchers made a series of slides that contained the photos paired with words taken from the women's stories, such as "tumor" or "memorial" -- as well as a series of control slides that depicted images of strangers and neutral words. A functional MRI (fMRI), which detects blood flow through the brain, measured activity in the women's brains as they were shown a succession of slides.

In both groups, brain areas associated with feelings of physical and emotional pain were active when the women looked at pictures of their lost mothers or sisters. But in the women with complicated grief, the nucleus accumbens was also active when they saw their loved one.

Why it matters: The finding initially struck the researchers as "bizarre," O'Connor says, because it almost seemed to imply that the grief was somehow pleasurable. It made more sense, however, when viewed in the context of research that has shown the nucleus accumbens is activated when a person is presented with something they want -- that is, a reward -- and they begin to crave or yearn for that reward.

In fact, the women whose nucleus accumbens was active in the study were also more likely to say that they longed for the deceased. Activity in this brain region confirms that some grieving people physically yearn for a lost relative long after they're gone. Ultimately, the findings may help guide counselors and psychiatrists who treat those suffering from complicated grief, attuning them to the bereaved's sense of unfulfilled longing.

What we still don't know: The study is the first to compare the brain activity of people with complicated and noncomplicated grief. It suggests a neurological explanation for the persistent sadness that occurs in roughly 10% to 20% of people who experience a loss. But there's much about the physical aspects of grief that researchers have yet to uncover -- other brain regions, for instance, may also come into play. And the current study only begins to suggest new treatment approaches to complicated grief. More neurological, psychological and epidemiological studies undoubtedly lie ahead.

Read other Explain This columns at www.latimes.com/explain.

If you want other stories on this topic, search the Archives at latimes.com/archives.

TMSReprints

Article licensing and reprint options