As many as one-third of people displaced by Hurricane Katrina could develop a stress-related disorder that needs professional help, according to projections by the federal agency coordinating the nation's mental health response.

The federal government, along with state and local mental health associations, is preparing for an onslaught of traumatized victims in need of counseling. At least 4,000 to 5,000 mental health professionals are now out in force assisting victims, but the numbers of those receiving treatment won't be officially tallied for a couple of weeks, says Charles Curie, head of the U.S. Substance Abuse and Mental Health Services Administration.

"We're talking about a higher percentage than the overall population in the country of individuals who are at risk of substance abuse and mental health concerns," he says. "A larger percentage of individuals with chronic disorders are already in treatment."

The psychological consequences of major hurricanes and floods have been studied, and a dozen risk factors for psychological problems were listed in a 2002 review of research for the National Center for Post-Traumatic Stress Disorder at the Department of Veterans Affairs.

"Any of us would be at risk if we'd gone through what so many people have gone through," says Fran Norris, a psychologist and professor at Dartmouth University who conducted the review.

### Distress can pile on

A review of studies on psychological problems in the wake of disasters found that an adult's risk will increase linearly along with the number of these factors:

- Severe exposure to the disaster, especially injury, threat to life and extreme loss.
- Living in a highly disrupted or traumatized community.
- Being a woman or girl.
- Being 40 to 60 years old.
- Having little previous experience or training that is relevant to coping with a disaster.
- Being an ethnic minority.
- Living in poverty or low socioeconomic status.
- Having children in the home.
- Having a significantly distressed spouse.
- Having a history of psychiatric illness.
- Having other sources of stress.
- Not having a network for emotional support.

*Source: The National Center for Post-Traumatic Stress Disorder*
Hurricane evacuees — particularly those who left amid the flooding — meet almost all risk factors.

"It's just an incredibly serious situation — the combination of severe exposure and the loss of resources," Norris says.

Carol North, a trauma expert at Washington University School of Medicine in St. Louis, says the prolonged and extensive aftermath will present even greater mental health challenges.

"Disasters that are over with quickly have less psychopathology than disasters that have repeated or chronic exposures," she says.

Officials also know that the numbers who have psychological problems will climb. Symptoms can include memory problems, sleep difficulties or flashbacks. Acute stress is short-term, but diagnosing post-traumatic stress disorder takes anywhere from a month to a year or more after a traumatic or life-threatening event. Other problems are also expected, such as a predisposition to depression or turning to alcohol or drugs to cope.

Stress also can make people more susceptible to illness. "We're going to see whole-body effects," says Salt Lake City psychologist Sam Goldstein.

He says changes are likely in appetite, mood, ability to deal with others and how these evacuees view themselves. And, because about one in five people in the general population already have some type of mental health problem, Goldstein says, he's worried that the hurricane stress will provoke more severe episodes.

"For many people, this will not only lead to acute short-term changes but lead to long-term changes in their lives."

Most of those who develop symptoms will improve, says Patricia Resick, a professor of psychiatry and psychology at Boston University and a director of the National Center for Post-Traumatic Stress Disorder. "Not everybody, not even a majority of people, may have symptoms. It's going to depend on what's happened to them. It does not mean all will be having equal levels of traumatic exposures."

Experts say the mental health needs are broad because so many people were directly and severely affected. Estimates suggest that as many as 1 million Gulf Coast residents have been displaced.

On Tuesday, the federal government set aside $600,000 in emergency grants for mental health assessment and crisis counseling in Louisiana, Alabama, Texas and Mississippi to support areas overwhelmed by evacuees.

"The magnitude of this event is greater than any we've experienced in the United States, from the standpoint of devastation and numbers," says Ned Kalin, a psychiatrist who directs the Health Emotions Research Institute at the University of Wisconsin-Madison.

Reuniting families is crucial, as is moving from shelters to a temporary home life with predictability and structure.

"America has taken a hit to the heart of its self-esteem," says Los Angeles psychologist Robert Butterworth. "Few disasters in this country have left cities empty."