

Health impact of Gulf Coast oil spill hazardous but improving

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The oil spill along the United States Gulf Coast poses health risks to volunteers, fishermen, clean-up workers and members of coastal communities, according to a new commentary by UCSF researchers who spent time in the region and are among the first to look into health problems caused by the oil spill. The good news, the authors say, is that one of the risk factors, coastal air quality, is improving now that the oil leak has been stopped.

The commentary will be published online August 16th and in the September 8, 2010 issue of the Journal of the American Medical Association.

The goal of the article is to inform physicians and coastal communities about the immediate and long-term health risks posed by toxic vapors, oil slicks, tar balls and contaminated seafood. The authors hope to encourage community members to protect themselves and seek treatment if symptoms from oil contamination occur.

"The oil spill in the Gulf of Mexico is well known as an [ecological disaster](#), but what is less known is the risk to human health caused by oil contamination. We want to reach the volunteers, clean-up workers, fishermen, medical specialists and community members with practical information about the impact to their health from these chemicals. With correct information, we hope they can protect themselves and seek treatment if they don't feel well," said Gina Solomon, MD, MPH, senior author, director of UCSF's Occupational and Environmental Medicine

Residency and Fellowship Program and senior scientist with the Natural Resources Defense Council (NRDC) in San Francisco.

Air quality, skin irritation, mental health and seafood safety are the primary areas of short and long term health concerns, according to the authors. The article cites health information collected from previous [oil spills](#) in Alaska, Spain, Korea and Wales, which report an increase in health effects such as respiratory problems, DNA alterations, anxiety, depression, post-traumatic stress disorder, psychological stress and self-reported neurological impairment in workers and local residents.

In the early months of the Gulf oil spill, more than 300 individuals, most of whom were cleanup workers, sought medical attention for headaches, dizziness, nausea, chest pain, vomiting, cough and respiratory distress that might be consistent with chemical exposure, according to data collected by the Louisiana Department of Health and Hospitals.

"Louisiana is making an effort to track health complaints," said Solomon. "But it is important to remember that these 300 reported cases are only from one state and only within a few months. The Gulf Coast is a large region with many coastal communities, and it is imperative that we do whatever we can to help everyone impacted by this disaster."

The risk to air quality comes partly from volatile organic compounds that evaporate within hours after oil makes contact with water. These chemical compounds can cause respiratory irritation, headaches, and nausea. Other compounds released by the oil or by the chemicals used to disperse the oil include chemicals that can cause skin irritation, respiratory problems and damage to the central nervous system.

"Clinicians should be aware of and look for evidence of toxicity from exposures to oil and related chemicals," study co-author Sarah Janssen, MD, PhD, MPH, assistant clinical professor at UCSF and senior scientist

with the NRDC. "Symptomatic patients should be asked about occupation and location of residence, and the physical examination should focus on the skin, respiratory tract, and neurological system."

To protect coastal community members from exposure to chemicals caused by the oil spill or its dispersants, the researchers advise the following measures:

1. Workers may need protective equipment such as hats, gloves, boots, coveralls, safety goggles, and even respirators in some areas;
2. Workers need to take breaks and drink ample fluids to prevent heat-related illness;
3. Avoid skin contact with tar or oil on beaches, marshland or in the water;
4. Do not fish in areas of known oil contamination or where there is visible oil;
5. Do not eat seafood that smells oily or strange;
6. If there is a strong smell of oil outside and it makes you feel ill, go inside and adjust the air conditioner to recirculate air;
7. If you are feeling persistently ill, seek medical attention so your symptoms can be assessed and reported.

Provided by University of California - San Francisco

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