

# Poorer health for acetaminophen overdose survivors than other liver failure patients

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Spontaneous survivors of acetaminophen overdose have significantly lower overall health compared to survivors or transplant recipients following acute liver failure caused by non-drug induced liver injury according to a new study published online in *Liver Transplantation*, a journal of the American Association for the Study of Liver Diseases and the International Liver Transplantation Society. Findings show that acetaminophen overdose survivors report more days of impaired mental and physical health, and activity limitations due to poor health, pain, anxiety and depression.

Patients are diagnosed with [acute liver failure](#) (ALF) when severe [liver dysfunction](#) occurs, along with blood clotting or bleeding disorders (coagulopathy) and compromised brain function (encephalopathy). Studies report that up to 3,000 patients develop ALF in the U.S. each year and 67% of these patients will survive, but nearly 30% of these patients require emergency liver transplantation. However, long-term consequences of ALF and health-related quality of life (HRQOL) of survivors, remains unclear.

To expand understanding of the quality of life and function of adult ALF survivors, a team led by Dr. Robert Fontana from the University of Michigan Medical Center in Ann Arbor conducted a prospective observational study. Patients diagnosed with ALF between January 1998 and July 2010 were included in the study. Participants agreed to follow-up at one and two years following ALF.

Results show that of the 282 ALF patients—125 liver transplantation recipients (10.7% due to acetaminophen overdose) and 157 spontaneous survivors of which 95 were acetaminophen overdose patients and 62 were survivors of non-drug induced liver failure. Patients that survived acetaminophen overdose reported significantly lower general health scores. Acetaminophen overdose survivors had higher rates of substance abuse and [psychiatric disease](#) compared to non-acetaminophen overdose survivors and [transplant recipients](#). Participants who were survivors of non-intentional acetaminophen overdose were less likely to have psychiatric comorbidity compared to patients who intentionally overdosed at 48% and 82%, respectively.

The combined group of spontaneous survivors of ALF reported "fair/poor" health and more than 14 days of physical or mental health impairment compared to the general population in the U.S. This group also had more limitation in functional activity due to poor health. "Our findings indicate that adult survivors of ALF have reduced quality of life compared to those of similar age and gender in the general population," concludes Dr. Fontana. "Additional investigations of [brain function](#) by our team are underway to further understanding of the type and severity of cognitive impairment reported by ALF survivors."

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**More information:** "Quality of Life is Significantly Impaired in Long-Term Survivors of Acute Liver Failure and Particularly In Acetaminophen Overdose Patients." Amol S. Rangnekar, Caitlyn

Ellerbe, Valerie Durkalski, Brendan McGuire, William M. Lee and Robert J. Fontana. *Liver Transplantation*; ([DOI: 10.1002/lt.23688](https://doi.org/10.1002/lt.23688))  
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