Researchers at the University of South Florida have developed a novel method to improve resuscitation efforts in alcohol-intoxicated trauma patients.

Traumatic injuries associated with alcohol intoxication may cause drastic physiological changes in the cardiovascular system such as low blood pressure, also known as hypotension. Alcohol-induced hypotension is a significant clinical problem, particularly when patients have lost large amounts of blood or are in shock. These intoxicated patients who present hypotension typically report significantly worse outcomes than those who have not consumed alcohol. Research shows that alcohol worsens tissue blood flow and significantly elevates blood vessel leakage. This can then produce edema (extreme swelling due to a collection of excess fluid in the tissues or cavities of the body), which can lead to a plethora of complications such as decreased blood circulation, pain and difficulty walking. This highlights the need for an effective method to improve blood pressure and flow in alcohol-intoxicated patients.

USF researchers have determined that administration of the bioactive lipid sphingosine-1-phosphate (S1P) can help stabilize arterial blood flow and blood pressure in alcohol-intoxicated trauma patients. Their findings also proposed that using agents that increase S1P or other S1P receptor agonists decrease alcohol-induced microvascular hyper-permeability. This discovery not only facilitates recovery efforts in alcohol-intoxicated trauma patients, but may assist with resuscitation efforts in hemorrhage trauma patients as well.

Advantages:
- Improved blood flow & pressure in gut
- Reduction in alcohol-induced leakage of plasma proteins
- Improved resuscitation results
- Potential treatment for trauma patients

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Blood Vessel Leakage Reduced by S1P
Treatment in Alcohol-Intoxicated Rats