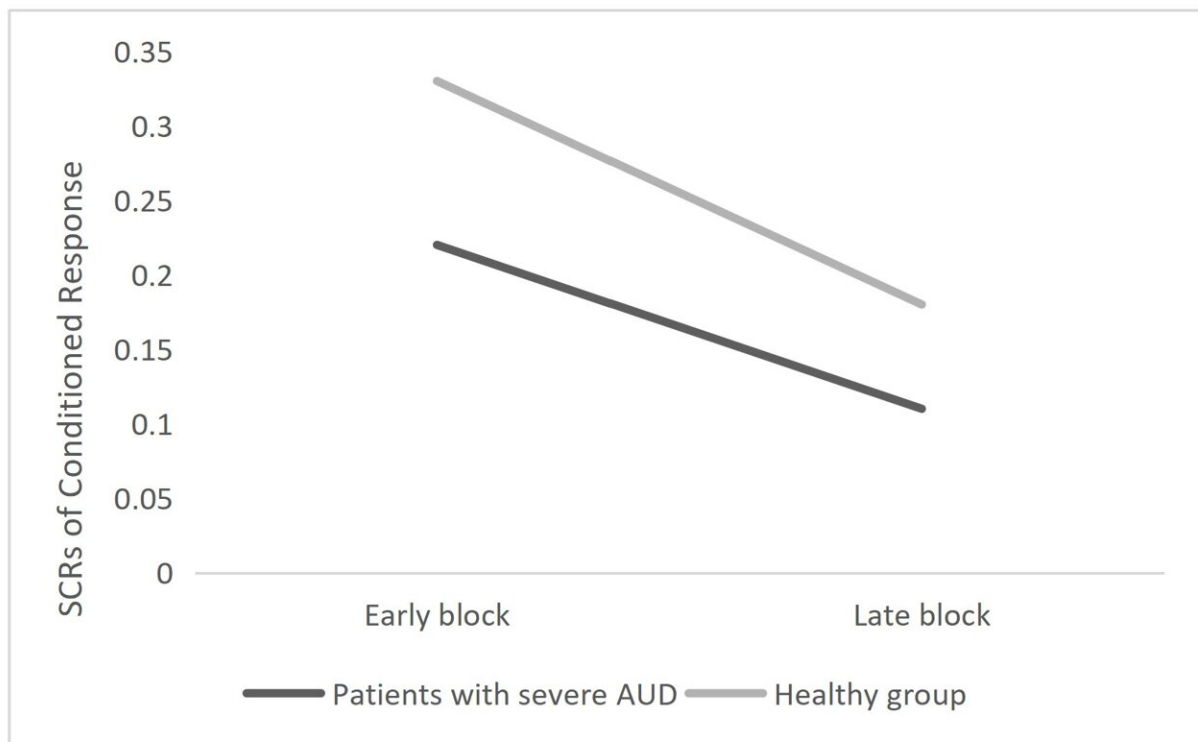


# Study: People with severe alcohol use disorder have impaired ability to learn from others' painful experiences

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Effects of blocks on SCRs during the test phase, Note. Early block corresponds to the first three stimuli associated with a painful expression and the last three stimuli associated with a painful expression represent the later block. Credit: *Alcoholism: Clinical and Experimental Research* (2023). DOI: 10.1111/acer.15129

People with alcohol use disorder (AUD) are less able to learn from others' negative experiences, potentially rendering them more vulnerable to maintaining their dangerous drinking or relapsing, according to the first study of its type. The study explored social cognition, processes that enable us to understand and interact with others, and specifically social learning, our ability to learn by observing others' experiences.

This might include, for example, seeing others suffering from the negative consequences of [heavy drinking](#) and comprehending that heavy drinking could harm us too. Previous research has shown that people with severe AUD have an impaired ability to interpret facial expressions and possibly identifying others' pain, pointing to struggles with [social learning](#).

For the new study in *Alcohol: Clinical & Experimental Research*, researchers in France used a social fear learning task to compare responses to other people's expressed pain among participants with severe AUD and healthy controls. A better understanding of the psychological and social influences involved in dangerous [alcohol](#) consumption can potentially inform more effective prevention and treatment efforts.

Investigators worked with 30 people with severe AUD and 30 healthy participants, evaluating them for cognitive function, alcohol use, concern for others and perspective taking, and anxiety and depression symptoms. All participants performed an established social fear learning task, assessing how well certain stimuli are associated with a negative consequence.

Specifically, study participants observed a demonstrator exposed to an initially neutral stimulus—a blue circle—receiving an uncomfortable electric shock and reacting as if in pain versus being exposed to an alternative stimulus—a green circle—that was not followed by an

electric shock or "pain."

While watching, the participants expected to experience the same electric shock afterwards (they did not). Researchers asked participants to rate their distress and compassion for the demonstrator and how unpleasant they judged the shock to be, as well as their distress and compassion for demonstrators on video receiving painful auditory stimulations. Physiological responses were measured using skin conductance tests. The researchers used [statistical analysis](#) to explore associations between the two groups' reactions.

All study participants reacted to demonstrators expressing pain after receiving electrical stimulation, but those with AUD responded relatively weakly, suggesting that their threat perception was less robust than in healthy controls. This may be a consequence of people with AUD struggling to process negative [facial expressions](#).

Those with AUD also evaluated the demonstrator's emotional experience as less unpleasant compared to healthy participants, suggesting that they are less responsive to others' painful experiences. While the healthy control group reacted more strongly to the blue circle than the green circle when these circles were presented alone, showing social learning, the participants with severe AUD did not appear to link the blue circle with the [electric shock](#).

Empathy-related measurements were mostly not correlated with participants' responses, and depression and anxiety (higher among people with AUD) were not correlated at all.

The study is the first to reveal that people with severe AUD have social difficulties, including impaired social fear learning—a reduced ability to learn from another's negative experience and difficulty linking a causal event with its social consequence. The findings underline the importance

of understanding the role of social mechanisms in AUD.

Clinically, social learning interventions may help with treatment and relapse prevention. Additional research is needed, for example, on negative experiences associated with alcohol itself and whether social learning deficits are a cause or consequence of heavy alcohol use.

**More information:** Nahid Bakkali et al, Learning from others' experience: Social fear conditioning deficits in patients with severe alcohol use disorder, *Alcoholism: Clinical and Experimental Research* (2023). [DOI: 10.1111/acer.15129](https://doi.org/10.1111/acer.15129)

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