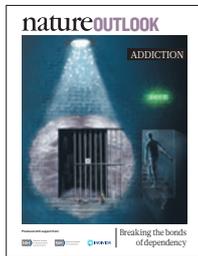


# natureOUTLOOK

## ADDICTION

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Addiction can devastate the lives of people and their families. Researchers are disentangling its myriad causes and developing new treatments.

Addiction tends to run in families, but scientists are finding that there is no simple 'addictive personality'. Instead, factors that include genes, character traits and early life experiences combine to make the inheritance of addiction a complicated problem (see page S48).

As an addiction develops it changes the brain: neural circuits related to pleasure and reward are hijacked and rewired (S46). Researchers are studying people from birth to try to tease out how these changes affect, and are affected by, brain development — and how they might be reversed (S50).

Treatments for addiction are becoming more sophisticated, but still face major challenges to acceptance. Medication can help to wean people from their addiction (S53). One controversial but effective technique is to reward people for staying clean (S57). Just as important as repairing the addicted brain is fixing the social environment in which people susceptible to addiction live (S56). Another approach is to make the drugs themselves harder to misuse (S60).

It is not only substances that can be addictive. Gambling is, so far, the only behaviour that has been recognized as an addiction, but researchers are considering adding Internet use, sex and shopping to that list (S62). But despite all the progress, the questions still to be answered are daunting (S63).

We are pleased to acknowledge the financial support of the US National Institute on Alcohol Abuse and Alcoholism, National Institute on Drug Abuse, and Reckitt Benckiser Pharmaceuticals Inc., a subsidiary of Indivior PLC, in producing this Outlook. As always, *Nature* retains sole responsibility for all editorial content.

**Brian Owens**

*Contributing editor*

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*A. M. Morales et al.*

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