The hijacked brain

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Addiction is a devastating disease that alters the brain’s circuitry, notably in young adults. But the changes need not be permanent: improved understanding of them will help in developing ways to lessen the burden. By Margaret Munro. See a Nature Video at go.nature.com/e1gqkk.

DANGEROUS AGE
Many people have their first experience of drugs at a young age, placing them at high risk of addiction. The developing brain may not form properly under the influence of drugs or alcohol7.
HIGH COST OF A HABIT
The estimated annual cost of health care associated with substance misuse in the United States.

- 27 MILLION people had problematic drug use\(^3\) in 2012.
- 183,000 drug-related deaths were reported in 2012.
- 1 BILLION or more people smoke, with the majority living in low- to middle-income countries\(^4\).
- 6 MILLION smokers die every year; more than 5 million of the deaths are directly related to tobacco use\(^4\).
- 38.3% of the global population drinks alcohol, with an annual average of 17 litres per person\(^4\).
- 3.3 MILLION deaths in 2012 were attributed to alcohol consumption\(^4\).

References


4. World Health Organization;


Download references

**Comments**

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**David Van Geert said**: Something seems odd to me. In the standard literature I read alcohol has an excitatory effect on GABA, it binds to the postsynaptic neuron so more GABA can enter the cell, which in turn gives the sedative effect. Here I read alcohol suppresses the GABA neuron so less GABA is being produced which keeps the gates open for dopamine... Can I conclude alcohol has different effects on the same neurotransmitter depending on the region in the brain? If someone can help me with this, I would much appreciate it.

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