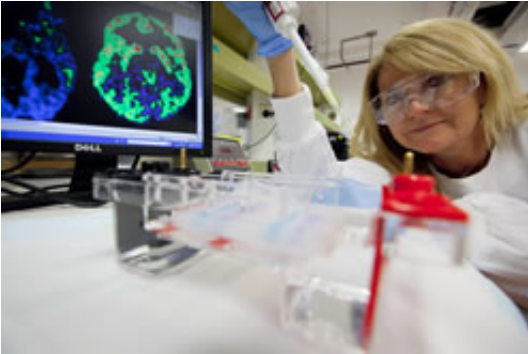


# Research shows binge drinking inhibits brain development

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Professor Selena Bartlett's research shows that adolescents who binge drink risk inhibiting their brain's development.

(Medical Xpress)—Teenagers who binge drink risk inhibiting part of their brain's development and many are laying the groundwork for alcoholism down the track a Queensland University of Technology (QUT) researcher has found.

Professor Selena Bartlett, from QUT's Institute for Health and Biomedical Innovation (IHBI), studied the effect excessive binge drinking during adolescence had on a particular receptor in the brain and discovered teen bingeing altered it irreversibly, keeping the brain in an adolescent state.

"The [human brain](#) doesn't fully develop until around age 25 and bingeing during adolescence modifies its circuits, preventing the brain from reaching maturity," she said.

"During adolescence, the brain undergoes massive changes in the [prefrontal cortex](#) and areas linked to drug reward but alcohol disrupts this.

"The research, which was carried out on rats, suggests that during ageing, the brain's [delta opioid peptide receptor](#) (DOP-R) activity turns

down, but binge drinking causes the receptors to stay on, keeping it in an adolescent stage.

"The younger a child or teenager starts binge drinking and the more they drink, the worse the possible outcome for them."

Professor Bartlett said recent trends to mix high-caffeine drinks such as Red Bull with alcohol were making the binge drinking problem worse.

"Historically, a [young person](#) who'd had too much to drink might be sick, pass out or fallen to sleep but now the high-caffeine drinks keep them awake longer enabling them to drink even more," she said.

"Other studies have shown that over 60 per cent of Gen Y drinkers are engaging in risky drinking behaviours.

"Youth binge drinking is something parents should be concerned about," she said.

"Because it inhibits part of the brain's development, binge drinking over time keeps people in an emotionally immature state and often leads to huge problems when in their 30s and 40s when people come face to face with the demands of life.

"We're making this information available, not to be wowers, but because our research shows that binge drinking does inhibit the brain's development and can causes drinking problems in adulthood.

"It's about providing information so people can make informed choices about the quantity and strength of the alcohol they consume."

She said alcoholism had a huge impact on families and society and it was important that people knew that [binge drinking](#) played a role here.

Professor Bartlett's research was recently published in high-profile *The Journal of*

Neuroscience.

**More information:**

[www.jneurosci.org/content/32/13/4540.full](http://www.jneurosci.org/content/32/13/4540.full)

Provided by Queensland University of Technology

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