Medical Xpress

New insight into addictive behavior offers treatment hope

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Addictive behaviour is determined by conscious, rapid thought processes, not necessarily by the content of visual stimuli as previously thought according to research funded by the Biotechnology and Biological Sciences Research Council (BBSRC).

Researchers from the Universities of Sussex, Cambridge and Nottingham have found that although attention to visual cues related to addictions, known as attentional bias, may be linked with bad habits as previously thought, it does not control the decision to consume unhealthy items directly. The finding, that the visual cues offer only information about availability of the bad habit but do not determine the behaviour to get it could help to develop new more effective treatments. The research is featured in the latest edition of *Business*, the BBSRC research highlights magazine.

Professor Theodora Duka from the University of Sussex who led the research, said: "We have shown that individuals only need to look at a cue representing the substance they are addicted to for a fleeting moment to want to act on it. This suggests that their actions are instead determined by conscious, rapid decision processes following the detection of a Pavlovian-type visual stimulus.

For example instead of the sight of a pub triggering the addictive behaviour in an alcoholic our research shows that the momentary sight of a pub leads the brain to make rapid, conscious decisions about going in for a drink, which is what the alcoholic values."

Many previous explanations for addiction make reference to Pavlov's classical dog experiments where conditional stimuli become capable of producing the same responses that are produced by the reward themselves. Some evidence shows that drug addicts who show a greater attentional bias for drug-related cues are more likely to relapse following treatment, suggesting it may be possible to treat addictions by abolishing attentional bias.

Not so, explained Dr Lee Hogarth, from the University of Nottingham: "You can draw analogies with a person looking at a restaurant menu: they may scan all the items to see what is there, but their choice is determined by the mental image or value that they place on each dish. They choose the one that is most delicious to them at the time, even though their eyes may dwell on other items for longer."

He added: "Our results suggest that while attentional bias can be used to indicate drug motivation, it does not provide a credible target for the treatment of addiction. Instead, treatments designed to modify the expected value of the drug or food type may prove more effective."

The researchers plan to look at the benefits of training mental attitudes to modify expectations about the value of things such as drugs and some foods as a possible intervention for correcting bad habits or preventing obesity.

Source: Biotechnology and Biological Sciences Research Council (news : web)