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# HEALTH

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## Not Just Another Pretty Face The Brain Is Stimulated by Beauty, Study Finds

By Jeff Carpenter



**B O S T O N, Nov. 7** — Money, drugs and beautiful women appear to have something in common when it comes to young men: The sight of a beautiful woman triggers virtually the same brain response in men as cocaine and cash do.

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Researchers at Massachusetts General Hospital showed photos of "beautiful" women to 10 heterosexual men between the ages of 21 and 28. They found that "beauty" turns on the same reward centers of the brain that are activated in response to cocaine and money, the scientists report in the Nov. 8 issue of the journal *Neuron*.

The reward centers, which include the areas of the brain known as the nucleus accumbens, amygdala, hypothalamus, orbitofrontal cortex and ventral tegmentum, are considered to be evolutionary holdovers from reptiles and have been linked to a range of psychological disorders from addiction to depression.



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Sample of faces used in the study. From left to right: average male, beautiful male, average female, beautiful female. (*Neuron*)

### What Is Beauty?

Behaviorists hope that by studying the brain's response to beauty, they may help resolve the ongoing debate about whether beauty is an innate concept or if it is created by society.

Previous experiments showing that 1-week-old babies prefer beautiful faces over average ones suggest that beauty is hard-wired into our brains.

But others argue, perhaps most notably Naomi Wolf in her book *The Beauty Myth*, that beauty is a purely social construction that is learned from our environments.

"There are lots of myths that people have around issues of beauty and attraction, and part of the issue is to stop thinking about things in terms of myth, but to use the tools of neuroscience, and start dissecting and understanding how things actually function," said Dr. Hans Breiter, a psychiatrist and co-author of the study.

### Liking vs. Wanting

In the study, researchers first determined how aesthetically pleasing the subjects found certain faces to see what the subjects liked. They were shown 80 pictures that were previously grouped into four categories: average male, beautiful male, average female, and beautiful female. The subjects measured how much they *liked* the pictures by rating them from one to seven.

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Next, they determined what the young men desired to look at, or *wanted*. The subjects were allowed to control which pictures they viewed by pressing a key, allowing them to view the pictures they wanted to see the most.

The results showed that the subjects rated the beautiful male and female faces equally high, indicating that they *liked* both equally. However, the keypress experiment demonstrated that the subjects expended significant effort to view only the beautiful female faces, so they only *wanted* to see the pretty women.

"These young guys [were] keypressing 6,000 times over 40 minutes, that's as much as a rat barpresses for cocaine,"said Breiter. "These pictures had as much reward value as cocaine, as food, as money, and that was remarkable." ■

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