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VITAL SIGNS

Behavior: As People Age, the Thrill Is (Almost) Gone

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If opening presents seems less exciting at age 60 than it did at age 10, the explanation may lie in the brain.

A study has found that as people age, their brains respond less strongly to rewards. The main difference is in the response of the brain to dopamine, a naturally occurring chemical messenger that plays a central role in the reward system.

Dr. Karen Faith Berman of the National Institutes of Health, an author of the study, said the shifts in brain response might be reflected in the shifts in attitude that accompanied aging.

“It may explain anecdotal evidence that people are mellower,” she said, “that they may not get the same highs from certain experiences, but they may not get the same lows, either.”

The study appears online in The Proceedings of the National Academy of Sciences. The researchers performed brain scans on two groups of volunteers, one in their 60s and the other in their 20s, as they played a computer game resembling a slot machine.

The researchers found differences between the groups both when they anticipated winning money in the game and when they actually did so. It was not just a matter of how much dopamine was produced, but also which parts of the brain responded to it and how much, the study said.

When a reward was anticipated, the researchers said, three parts of a reward center in the brain lighted up in the younger group, but only one in the older group.
