Successful aging may be partly in the genes - Yahoo! News

By Megan Rauscher
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NEW YORK (Reuters Health) - If you make it to a ripe old age with all your marbles, credit might go to the gene you inherited.

Researchers have identified genes related to reaching age 90 with preserved brain function. Their study, funded by the National Institutes of Health and reported at a medical conference in Hawaii, is among the first to identify genetic links to long-lived mental powers.

"We defined successful aging as reaching age 90 without a significant decline in mental capacity because we could apply it objectively and consistently but also because it has a fair amount of face validity," Dr. George S. Zubenko from the University of Pittsburgh School of Medicine explained in a telephone interview with Reuters Health.

"I think you would find that most people would endorse the goal of living to a ripe old age of 90 with intact mental processes as a reasonable definition of successful aging."

Zubenko and colleagues compared the genetic makeup of 100 men and women aged 90 and older with preserved cognition with that of 100 young adults between the ages of 18 and 25. They also looked at lifestyle factors, such as smoking and alcohol consumption.

According to the team, the APOE E2 allele, which is known to protect against Alzheimer's disease, was present far more often in the elders than in the younger folks. And the APOE E4 allele, which is associated with an increased risk of Alzheimer's disease, showed up less often in the 90-year-olds compared with the younger set. Alzheimer's disease is the most common cause of mental degeneration in older adults.

The researchers also identified novel "genetic regions" associated with successful aging, including the so-called DYS389 and DYS390 regions, some of which affected men or women, but not both.

Men and women differ in their average lifespan (women live longer on than men) and the prevalence of numerous serious diseases differs between the sexes. Therefore, "it would not be surprising if the collection of genes that influences the capacity to reach old age with normal mental capacity differs somewhat for men and women," Zubenko said.

Zubenko also noted that "only a very small percentage of Americans currently reach age 90 or above. Genetics probably plays a less profound role in intermediate lifespan or the typical
Successful aging may be partly in the genes. "Lifestyle changes are also important -- whether people can live a reasonably healthful lifestyle in the interim I think are very important to longevity," he said.

In support of the benefits of healthy living, the current study also confirms the harmful effects of cigarette smoking and excessive alcohol intake on successful aging. Further research is needed to better understand how genetic and behavioral factors influence the aging process, with an eye perhaps to enriching or extending the lives of individuals, the study team concludes.