Stem Cell Activation May Reverse Male Pattern Baldness

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Inactive stem cells may be the reason many men fall victim to receding hairlines and thinning strands on the crown of their heads, according to a study published in the *Journal of Clinical Investigation* and reported by ScienceDaily.

For the study, researchers used cell samples from men getting hair transplants and compared follicles from bald and non-bald scalp areas.

Scientists found that bald areas had the same amount of stem cells as normal scalp in the same person but lacked another more mature cell type, called a progenitor cell, in the follicles rooted there.

Researchers believe this discovery means that balding is caused by a stem cell activation problem not a lack of stem cells in bald spots.

Men experience this activation problem when stem cells don't convert to progenitor cells in their bald spots. But the fact that there are more normal numbers of stem cells in the scalp means there's hope for reactivating these cells, said George Cotsarelis, MD, chair of the Department of Dermatology at the University of Pennsylvania School of Medicine, the research team leader.

The next step for researchers is to study stem and progenitor cells linked to other types of hair loss such as female pattern baldness. The information from this study and further research could help develop cell-based hair-loss treatments including topical solutions.

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