Depression associated with faster cellular aging

DOI: 10.1038/M.P.2013.151

People with major depressive disorder (MDD) may show signs of accelerated biological aging, according to a study published in Molecular Psychiatry. Patients with MDD have an increased onset risk of aging related diseases such as cancer, diabetes, obesity and heart disease, and it has been suggested that accelerated biological aging may be one of the causes. This study provides evidence that emotional stressful conditions, such as MDD, may impact on the physical 'wear and tear' of a person's body.

Cellular aging can be estimated by analyzing the length of telomeres, which are specialized DNA complexes that cap the ends of DNA and shorten slightly during each cell division. Josine Verhoeven and colleagues assess telomere length in 1,095 patients with MDD, 802 people who have recovered from MDD, and 510 healthy individuals. The results, adjusted for health and lifestyle variables, suggest that telomere length is shorter in people who have experienced MDD at some point in their lives. Both a
higher severity of depression and longer duration of symptoms were associated with shorter telomere length. The research indicates that the cellular aging in those who currently have MDD is accelerated by several years.

The authors speculate that shortened telomeres may be a consequence of dysregulated biological systems associated with MDD, but note that the biological mechanisms that mediate the relation between depression and telomere shortening, as well as the direction of causation, remain unclear.

Author contact:
Josine Verhoeven (VU University Medical Center, Amsterdam, The Netherlands)
Tel: +31 20 788 5632; Email: J.Verhoeven@ggzingeest.nl

Editorial contact at Molecular Psychiatry:
Julio Licinio (South Australian Health and Medical Research Institute, Adelaide, Australia)
Tel: +61 8 8116 4400; E-mail: julio.licinio@sahmri.com

Press contacts:
For media inquiries relating to embargo policy for the journal Molecular Psychiatry:

Rachel Twinn (Nature London)
Tel: +44 20 7843 4502; E-mail: r.twinn@nature.com

Neda Afsarmanesh (Nature New York)
Tel: +1 212 726 9231; E-mail: n.afsarmanesh@us.nature.com

About Nature Publishing Group (NPG)

Nature Publishing Group (NPG) is a publisher of high impact scientific and medical information in print and online. NPG publishes journals, online databases and services across the life, physical, chemical and applied sciences and clinical medicine.

Focusing on the needs of scientists, Nature (founded in 1869) is the leading weekly, international scientific journal. In addition, for this audience, NPG publishes a range of Nature research journals and Nature Reviews journals, plus a range of prestigious academic journals including society-owned publications. Online, nature.com provides over 5 million visitors per month with access to NPG publications and online databases and services, including Nature News and NatureJobs plus access to Nature Network and Nature Education’s Scitable.com.

Scientific American is at the heart of NPG’s newly-formed consumer media division, meeting the needs of the general public. Founded in 1845, Scientific American is the oldest continuously published magazine in the US and the leading authoritative publication for science in the general media. Together with scientificamerican.com and 15 local language editions around the world it reaches over 3 million consumers and scientists. Other titles include Scientific American Mind and Spektrum der Wissenschaft in Germany.

Throughout all its businesses NPG is dedicated to serving the scientific and medical communities and the wider scientifically interested general public. Part of Macmillan Publishers Limited, NPG is a global company with principal offices in London, New York and Tokyo, and offices in cities worldwide including Boston, Buenos Aires, Delhi, Hong Kong, Madrid, Barcelona, Munich, Heidelberg, Basingstoke, Melbourne, Paris, San Francisco, Seoul and Washington DC. For more information, please go to www.nature.com.