Stress defense: Your biological clock activates protective genes as you age

Researchers at Oregon State University have discovered that a subset of genes involved in daily circadian rhythms, or the “biological clock,” only become active late in life or during periods of intense stress when they are most needed to help protect critical life functions.

…

These genes may help to combat serious stresses associated with age, disease or environmental challenges, and help explain why aging is often accelerated when the biological clock is disrupted.

…

At least 25 such genes, named “late-life cyclers” or LLCs, become rhythmic with age, and the function of some of them remains unclear.

…

“Aging is associated with neural degeneration, loss of memory and other problems, which are exacerbated if clock function is experimentally disrupted. The LLC genes are part of the natural response to that, and do what they can to help protect the nervous system,” said Jadwiga Giebultowicz, a professor in the OSU College of Science.

The increased, rhythmic expression of these genes during times of stress, scientists said, are another example of just how biologically important circadian rhythms are, as they help to regulate the activity of hundreds of genes essential to the processes of life.

[The study can be found here.]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: ‘Late-life’ genes activated by biological clock to help protect against stress, aging