



Depressed mothers and their offspring differ in terms of health risk profiles and allostatic load

By Dr. Jessica K Edwards

Allostatic load is essentially the “wear and tear” that accumulates in the body in individuals exposed to chronic stress. Because some patients with psychiatric disorders have a shorter lifespan than their healthy counterparts,¹ some researchers have suggested that there might be a link between disorders such as depression and increased allostatic load.²

Earlier this month, researchers in the USA published the results of a preregistered case-control study that aimed to see if depressed mothers and their children exhibit increased allostatic load and if so, how this might differ. Benjamin Nelson and colleagues recruited 180 mothers (50% depressed, 50% nondepressed) and their children (aged 11-14 years) and measured various indices of allostatic load, including cardiac control, inflammation, cellular aging, and behaviour. They found that while both depressed mothers and their children indeed exhibited higher allostatic load, this load differed in terms of comorbid mental and physical health risk profiles. Specifically, the depressed mothers in this cohort tended to exhibit an elevated resting heart rate and decreased heart rate variability, while their children exhibited greater mental health symptoms, elevated heart rate, and accelerated biological (cellular) aging.

These data imply that maternal depression is linked with increased allostatic load in mothers and their adolescent children, which might increase the risk of mental and physical health disorders in these children. Further work is now necessary to determine why some biological systems are more impacted than others, and how we might prevent and/or intervene in at-risk families to reduce allostatic load and promote mental and physical health.

Referring to:

Nelson, B.W., Sheeber, L., Pfeifer, J. & Allen, N.B. (2020), *Psychobiological markers of allostatic load in depressed and nondepressed mothers and their adolescent offspring*. *J. Child Psychol. Psychiatr.* doi: 10.1111/jcpp.12364.

References:

¹ Walker, E.R. et al. (2015). *Mortality in mental disorders and global disease burden implications*. *JAMA Psychiatry*. 72, 334–341. doi: 10.1001/jamapsychiatry.2014.2502.

² Ulmer-Yaniv, A. et al. (2018). *Maternal depression alters stress and immune biomarkers in mother and child*. *Depress. Anxiety*. 35, 1145–1157. doi: 10.1002/da.22818