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3D dilemma of this century

In the United States, it is estimated that approximately 50% of the population aged 50 years and older have a diagnosis of major depression. 5.3 million Americans of all ages carry a diagnosis of dementia and 29.1 million have diabetes. It is not a coincidence then that these three Ds (diabetes, depression, and dementia) are so prevalent in our society. The reciprocal links between the nervous system and endocrine systems underlie changes in the brain and body in both depressive illness and diabetes. Depressive disorder is associated with blunted central serotonin release, which, in turn, has been associated with metabolic dysfunction. In addition, inflammatory responses are widely implicated in the pathophysiology of diabetes and cardiovascular disease, as well as in cognitive impairment. Several other mediators of the reciprocal interaction between the CNS and insulin resistance include glucocorticoids (cortisol), insulin, serotonin, and glutamate among others. While insulin affects hippocampal structures involved in body weight regulation, it also influences memory processing. It is important to understand that diabetes, depression, and dementia represent complex psychoneuroendocrine conditions requiring complex multisystem approach to their prevention and treatment.

Biography

Natalie L Rasgon is a Professor in the departments of Psychiatry and Behavioral Sciences and Obstetrics and Gynecology. She began her distinguished career at UCLA School of Medicine, and in 2002, she established the Center for Neuroscience in Women's Health at Stanford. She is the author of more than 130 peer-reviewed publications, 25 book chapters, and is a reviewer for 30 professional journals. Her predominant research focus has been on the treatment of bipolar disorder in women, the use of hormonal interventions during menopause and the effects on mood and cognitive function, and the interplay between endocrine function and aging.

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