

CS05-05 - SEX IN THE SCANNER: NEUROIMAGING CONTRIBUTIONS TO UNDERSTANDING THE NEUROBIOLOGY OF THE HUMAN SEXUAL RESPONSE

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Reigning theories about how the brain governs sexual behavior are the product of experimental investigations and observations in rodents. However, there is a growing appreciation of the fact that these animal models can not account for the sheer complexity of human sexuality. The need for human studies coincides with the exponential growth of the use of medical scanners for the purpose of visualizing human brain activity *in vivo*. Over the last decade, some 50 of these brain imaging - or neuroimaging - studies have appeared in the field of sexuality research.

In this lecture I will give an overview of the contribution neuroimaging has made to knowledge about the sexual brain. These studies cover a large area of human sexuality, including sexual orientation and preference, sexual desire and arousal, genital stimulation and orgasm, as well as sexual dysfunction and paraphilic disorders. Significant progress, relative to animal studies, has been made in understanding the role of the cerebral cortex, the prefrontal cortex in particular. At the end of the lecture, I will touch upon possible future research directions in the field of human neurosexology.