

Serum cortisol

✓ 8 A.M. cortisol & 24-hour urine free cortisol ([Cortisol urine test](#))

Serum [cortisol](#) measurements are primarily used to diagnose states of cortisol excess ([hypercortisolism](#)) or deficiency ([hypocortisolism](#)).

Remission from [Cushing disease](#) (CD) after [pituitary neuroendocrine tumor](#) resection may be predicted by a postoperative reduction in serum cortisol level.

Liu et al. retrospectively enrolled 92 consecutive patients with a confirmed diagnosis of [Cushing's disease](#). Voxel-based analysis was performed to investigate the association between cerebral [18F positron emission tomography](#) uptake and serum [cortisol](#) level. Relatively impaired metabolism of specific brain regions correlated with serum cortisol level was found. Specifically, notable correlations were found in the [hippocampus](#), [amygdala](#), and [cerebellum](#), regions considered to be involved in the regulation and central action of [glucocorticoids](#). Moreover, some hormone-associated regions were found in the [frontal lobe cortex](#) and occipital cortex, possibly mediating the [cognitive decline](#) seen in Cushing's disease. The findings link patterns of perturbed [brain metabolism](#) relates to individual hormone level, thus presenting a substrate for cognitive disturbances seen in Cushing's disease patients, as well as in other conditions with abnormal cortisol levels ¹⁾.

¹⁾

Liu S, Wang Y, Xu K, Ping F, Wang R, Li F, Cheng X. Brain glucose metabolism is associated with hormone level in Cushing's disease: A voxel-based study using FDG-PET. Neuroimage Clin. 2016 Aug 24;12:415-9. doi: 10.1016/j.nicl.2016.08.018. eCollection 2016. PubMed PMID: 27622138; PubMed Central PMCID: PMC5008049.

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