

Subcallosal cingulate gyrus

The subcallosal [cingulate gyrus](#) CG25 which consists of BA25 as well as parts of BA24 and BA32 has been implicated as playing an important role in [major depression](#) and has been the target of [deep brain stimulation](#) to treat the disorder.

One study found that BA25 is metabolically overactive in treatment-resistant depression.

A different study found that metabolic hyperactivity in this area is associated with poor therapeutic response of persons with Major Depressive Disorder to cognitive-behavioral therapy and venlafaxine.

In 2005 Helen S. Mayberg and collaborators described how they successfully treated a number of depressed people — individuals virtually catatonic with depression despite years of talk therapy, drugs, and electroconvulsive therapy — with pacemaker-like electrodes (deep brain stimulation) in area 25.

A recent study found that Transcranial magnetic stimulation is more clinically effective treating depression when targeted specifically to Brodmann area 46, because this area has intrinsic functional connectivity (negative correlation) with area 25.

Another recent study has found that the responses of area 25 to viewing sad stimuli are affected by cortisol.

This suggests that depression related changes in the activity in area 25 could be due to Hypothalamic–pituitary–adrenal axis dysregulation ¹⁾.

¹⁾

https://en.wikipedia.org/wiki/Brodmann_area_25

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