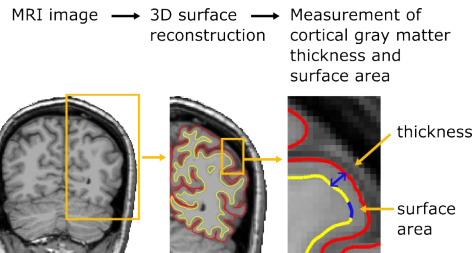


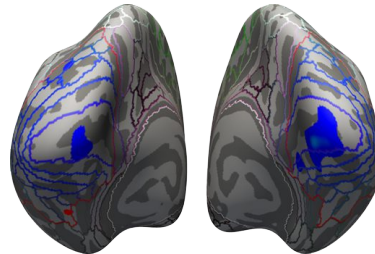
Indo-German Lab of LVPEI

Sight restoration in congenitally blind humans does not restore visual brain structure

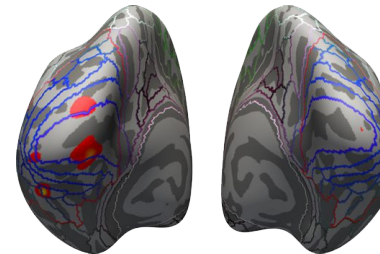
Cordula Hölig, Maria J.S. Guerreiro, Sunnitha Lingareddy, Ramesh Kekunnaya, & Brigitte Röder



smaller surface area



higher thickness



OXFORD
ACADEMIC

Cerebral CORTEX

Full text here:

<https://doi.org/10.1093/cercor/bhac197>

In typical brain development cortical surface area increases in childhood and cortical thickness decreases, indicating an expansion and refinement of neural networks.

Patients who were born with dense bilateral cataract had **even years after cataract removal surgery a lower visual cortical surface area** (blue marked areas, middle panel) and a **higher visual cortical thickness** (red marked areas, right panel) than normally sighted controls. These results were similar as in congenitally permanently blind individuals.

The degree of visual cortical surface expansion and cortical thinning after surgery predicted the finally reached visual acuity in congenital cataract reversal individuals.