

Gradual Recovery from Cerebral Blindness during Visual Training

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Abstract: Abstract: Several studies on recovery of hemianopsia after CVA report visual field enlargements after stimulation of the visual field border area. However, it is not known how the visual field enlargement develops as a function of time. We trained 11 subjects by stimulating their affected visual field. We assessed the border location with Goldmann perimetry before, during and after training. To exclude eye-movements as a cause of field enlargement, an eye-tracker was used during each complete perimetry session. We found that the visual field is enlarging gradually during training in the direction of the blind area, despite the fact that we did not only stimulated the shifting border area, but used a wide-ranged stimulus-set. Concluding, detection thresholds in stimulated areas in the affected field only start to decrease when the shifting field-border reaches those areas, resulting in a gradual visual field enlargement. Training effects can be generalized to important daily-life activities like reading.