Spatial impairments in blind children and adults

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Summary

It is not clear which is the role that the visual information plays in the development of space perception. We have previously shown that in absence of vision both the ability to judge orientation in the haptic modality and bisect intervals in the auditory modality are severely compromised (Gori et al 2010; 2014). Here we reported for the first time a strong deficit in proprioceptive localization and audio depth evaluation in early blind children and adults. Interestingly, the deficit is not present in a group of adults with acquired visual disability. Our results support the idea that in absence of vision the audio and proprioceptive spatial representations may be delayed or drastically weakened due to the lack of visual calibration over the auditory and haptic modalities during the critical period of development.