Amblyopia, known as a lazy eye, is a relatively common developmental disorder of vision. The current neurological account of amblyopia is insufficient, and improved understanding of the neural substrates of amblyopia in humans could impact treatment. We have applied anatomical MRI and DTI to observe subtle but consistent abnormalities in both gray and white matter, and fMRI to show retinotopically specific losses for the amblyopic eye. Our current efforts are focused on studies of binocular integration. In a recent study, interocular suppression effects were observed with fMRI in normal and amblyopic subjects.

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