

Optic nerve goes to relay area of brain

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1

1

2

3

4

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4

Siamese phenotype: "a form of Himalayan albinism"

The squint is a result of the cat compensating for the crossed optic nerves (the brain adapts). The Siamese cat can see normally with binocular vision.

Albinism also affects the optic nerves. In embryonic development, melanin tells growing nerves exactly where to go in the eye...with albinism, there is a shortage (or complete lack) of melanin production, and the directions go astray...As a result, almost all of the optic nerves cross.

The cross-eyed Siamese gaze is called "strabismus". It is not uncommon. The exact cause it poorly explained. I speculate that it is caused by albinism. Siamese kittens are born all-white.