

THE PUPILLARY LIGHT REFLEX AND SACCADIC SUPPRESSION A COMPARISON OF NORMALS AND SCHIZOPHRENIC PATIENTS.

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PURPOSE.

We had two purposes:

- 1) to determine the parameters under which the pupillary light reflex (PLR) was reduced during saccadic suppression in normals and
- 2) to determine if saccadic suppression of the PLR was different in normals and schizophrenic patients.

METHOD.

Pupillary diameter was measured using an infrared pupillometer manufactured by Metrovision. The PLR was elicited by diffuse flashes against a 30x30 deg uniform background. Flashes occurred during 12 deg saccades and when the eyes were at rest. Six normal subjects and 6 patients were tested.

RESULTS.

- 1) The magnitude of saccadic suppression measured by PLR varies with stimulus conditions, being maximal when elicited by dim flashes on mesopic backgrounds.
- 2) Under these optimal conditions, the PLR was suppressed during saccades in normals, on average by 78% ($p = 0.0007$).
- 3) The resting pupil size of schizophrenic patients was not different from normal ($p > 0.10$).
- 4) The baseline PLR of schizophrenic patients was 30% of normal ($p = 0.008$). 5) The average suppression of the PLR during saccades was not different from normals ($p > 0.10$).

CONCLUSION.

These results

- 1) extend the previous report of saccadic suppression of the PLR by indicating the range of conditions under which it may be observed using a larger sample and
- 2) suggest that the mechanism which suppresses the PLR under normal viewing conditions in schizophrenic patients is different from the mechanism which causes saccadic suppression.

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