PARASYMPATHETICS TO EYE

2 SPECIAL PARASYMPATHETICS
* Short ciliary ns for pupil constriction via inferior div of III
* Short ciliary ns for accommodation via inferior div of III
2 SPECIAL SYMPATHETICS
1. Long ciliary ns for pupil dilatation via nasociliary (Va)
2. Levator palpebrae superioris via superior div of III

PUPIL SIZE

Fine balance between Parasymathetic and Sympathetic
PUPIL SIZE

Parasympathetic +
Normal
Sympathetic -

Sympathetic +
Normal
Parasympathetic -

PUPIL CONSTRICTION
(Mediated by parasympathetic)

PUPIL DILATATION
(Mediated by sympathetic)

LOSS of sympathetic
(Horner's syndrome)

OR

STIMULATION of parasympathetic
(Light shone in eye)

LOSS of III (parasympathetic)

OR

STIMULATION of sympathetic
(Dark room, fright, etc)
PUPILLARY REACTION TO LIGHT

WHEN A LIGHT IS SHONE IN ONE EYE THERE IS BILATERAL PUPILLARY CONstriction. THIS IS THE CONSENSUAL LIGHT REFLEX
PUPILLARY REACTION TO LIGHT

BILATERAL PUPIL CONstriction

DEFECTS IN PUPILLARY REACTION TO LIGHT
PUPILLARY REACTION TO LIGHT (DEFECTS)

1. Reaction of pupils when light is shone into left eye

<table>
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<tr>
<th></th>
<th>L pupil</th>
<th>R pupil</th>
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<tr>
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<td>yes</td>
</tr>
<tr>
<td>1</td>
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<tr>
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</tr>
<tr>
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</tr>
<tr>
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2. Pretectal nucleus in brain stem

NEAR REFLEX
SUMMARY
1. Convergence
   (looking in)
2. Accommodation
   (focussing)
3. Pupil constriction
   (to increase depth of focus)