

ROSENBAUM POCKET VISION SCREENER

95	distance equivalent	
	$\frac{20}{800}$	
874	Point Jaeger	$\frac{20}{400}$
2843	26 16	$\frac{20}{200}$
638 E W M X O O	14 10	$\frac{20}{100}$
8 7 4 5 E M W O X O	10 7	$\frac{20}{70}$
6 3 9 2 5 M E E X O X	8 5	$\frac{20}{60}$
4 2 8 3 6 5 W E M O X O	6 3	$\frac{20}{40}$
3 7 4 2 5 8 E W M X X O	5 2	$\frac{20}{30}$
9 3 7 8 2 6 W M E X O O	4 1	$\frac{20}{25}$
4 2 8 7 3 5 E W M O O X	3 1+	$\frac{20}{20}$

14" TESTING DISTANCE

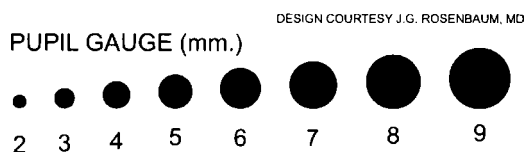


FIGURE 39-1 The Rosenbaum card is a miniature, scale version of the Snellen chart for testing visual acuity at near. When the visual acuity is recorded, the Snellen distance equivalent should bear a notation indicating that vision was tested at near, not at 6 m (20 ft), or else the Jaeger number system should be used to report the acuity.

An eye with no light perception has no pupillary response to direct light stimulation. If the retina or optic nerve is only partially injured, the direct pupillary response will be weaker than the consensual pupillary response evoked by shining a light into the healthy fellow eye. A *relative afferent pupillary defect* (Marcus Gunn pupil) can be elicited with the swinging flashlight test (Fig. 39-2). It is an extremely useful sign in retrobulbar optic neuritis and other optic nerve diseases, in which it may be the sole objective evidence for disease. In bilateral optic neuropathy, no afferent pupil defect is present if the optic nerves are affected equally.

Subtle inequality in pupil size, up to 0.5 mm, is a fairly common finding in normal persons. The diagnosis of essential or physiologic anisocoria is secure as long as the relative pupil asymmetry remains constant as ambient lighting varies. Anisocoria that increases in dim light indicates a sympathetic paresis of the iris dilator muscle. The triad of miosis with ipsilateral ptosis and anhidrosis constitutes *Horner's syndrome*, although anhidrosis is an inconstant feature. Brainstem stroke, carotid dissection, and neoplasm impinging on the sympathetic chain occasionally are identified as the cause of Horner's syndrome, but most cases are idiopathic.

Anisocoria that increases in bright light suggests a parasympathetic palsy. The first concern is an oculomotor nerve paresis. This possibility is excluded if the eye movements are full and the patient has no ptosis or diplopia. Acute pupillary dilation (mydriasis) can result from

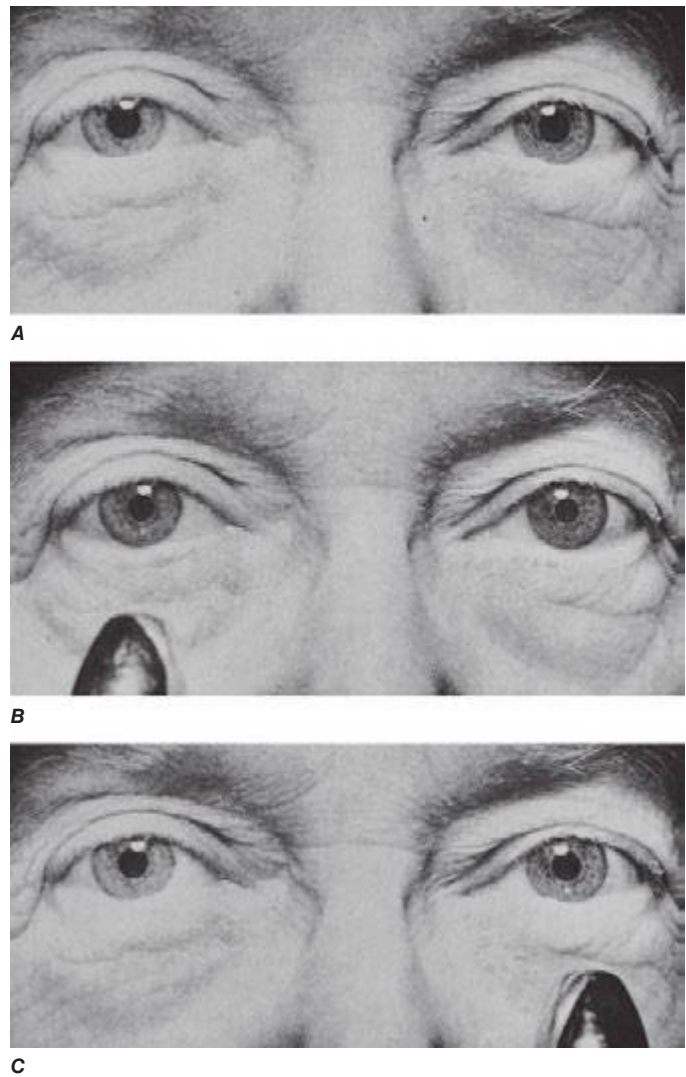


FIGURE 39-2 Demonstration of a relative afferent pupil defect (Marcus Gunn pupil) in the left eye, done with the patient fixating on a distant target. **A.** With dim background lighting, the pupils are equal and relatively large. **B.** Shining a flashlight into the right eye evokes equal, strong constriction of both pupils. **C.** Swinging the flashlight over to the damaged left eye causes dilation of both pupils, although they remain smaller than in **A.** Swinging the flashlight back over to the healthy right eye would result in symmetric constriction back to the appearance shown in **B.** Note that the pupils always remain equal; the damage to the left retina/optic nerve is revealed by weaker bilateral pupil constriction to a flashlight in the left eye compared with the right eye. (From P Levatin: *Arch Ophthalmol* 62:768, 1959. Copyright © 1959 American Medical Association. All rights reserved.)

damage to the ciliary ganglion in the orbit. Common mechanisms are infection (herpes zoster, influenza), trauma (blunt, penetrating, surgical), and ischemia (diabetes, temporal arteritis). After denervation of the iris sphincter the pupil does not respond well to light, but the response to near is often relatively intact. When the near stimulus is removed, the pupil redilates very slowly compared with the normal pupil, hence the term *tonic pupil*. In *Adie's syndrome* a tonic pupil is present, sometimes in conjunction with weak or absent tendon reflexes in the lower extremities. This benign disorder, which occurs predominantly in healthy young women, is assumed to represent a mild dysautonomia. Tonic pupils are also associated with Shy-Drager syndrome, segmental hypohidrosis, diabetes, and amyloidosis. Occasionally, a tonic pupil is discovered incidentally in an otherwise completely