

**VISION, HEARING,
NOSE, THROAT, GASTROINTESTINAL,
URINARY, ENDOCRINE AND
HEMATOPOIETIC IMPAIRMENTS**

OBJECTIVES FOR SECTION ON VISION, HEARING, NOSE, THROAT, GASTROINTESTINAL, URINARY, ENDOCRINE AND HEMATOPOIETIC IMPAIRMENTS

1. Name the tests required to determine a visual impairment rating.
2. Explain how central visual acuity, visual fields, abnormal ocular motility and binocular diplopia are determined.
3. Demonstrate the ability to combine values from the above impairments to determine a whole body rating.
4. Name the two functions that are considered in rating the impairment of the ear.
5. Explain how the ratings for visual and ear disorders are determined.
6. Correctly apply Table 5-Classes of Air Passage Defects-to clinical cases.
7. Correctly rate a case which has mastication, deglutition and speech difficulties.
8. Identify the elements used to evaluate impairment of the esophagus, stomach and duodenum, small intestine, colon, rectum, anus, enterocutaneous fistulas, liver and biliary tract disease, pancreas disease, and hernias of the abdominal wall.
9. Identify criteria used to rate upper urinary tract impairment, and bladder and urethra impairment.
10. List the hematopoietic system disorders that are discussed in Chapter 7.

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THE VISUAL SYSTEM

Evaluation of this system is based on three functions

- Corrected visual acuity for objects near and far.
- Visual fields and
- Ocular motility

Acuity

Determine near and far central visual acuity in each eye -- the chart should be illuminated at a level of at least 5 foot-candles. Far vision may be tested with the Snelling chart, illiterate E chart or Landolt's broken-ring chart. Near vision must be tested at 14 inches, following the Revised Jaeger Standard.

1. Measure both corrected and uncorrected vision, but use corrected for ratings.
2. Use Table Two (Page 163) to determine the percentage impairment for each eye -- use alternative value for monocular aphakia or pseudophakia if present.

Visual Fields

When a field defect is suspected, binocular visual fields should be tested using the Goldman kinetic outer isopter of the III/4e stimulus or the arc perimeter exam using a 3mm white test target at a radius of 330mm.

Use Esterman grid for determination of binocular field.

1. Transfer readings from validated visual field instrument to Grid.
2. Count dots outside of or on the visual field line (figure 2A, page 165).
3. Multiply # of dots x 5/6 to determine percentage field loss.

Use Monocular field measurements only if heterotropia, diplopia, or absence of one eye.

1. Measure total degrees of visual field retained.
2. Use Table 4 (page 167) to determine percentage of loss.

Ocular Motility and Diplopia

Plot the presence of diplopia along the meridians of the visual field. Then use figure 3 (page 168) to determine percentage of loss.

If only one eye, profound amblyopia, or profound loss of visual acuity, clinical evaluation of motility should be used to determine impairment.

Impairment of Visual System and Whole Person

If monocular visual field testing was performed:

1. Using Combined Value Chart (page 254) combine percentage loss of visual acuity and loss of visual field for each eye.
2. Combine loss of ocular motility using combined value chart for the worst eye only. Disregard loss of ocular motility for better eye.
3. Determine impairment of visual system by using Table 5 (page 169). Read impairment of worse eye down the left side of chart and the better eye impairment on the horizontal axis.
4. If bilateral aphakia present and corrected central visual acuity is used in calculations correct impairment by additional 25% factor of remaining impairment. See page 169.

If binocular visual field testing was performed:

1. Calculate the central vision impairment for both eyes using Table 5, page 169.
2. This impairment value of binocular visual acuity can then be combined with the binocular visual field loss using the Combined Value Chart to determine the visual impairment.

NOTE: Binocular visual field testing should not be performed when an ocular motility impairment is present.

3. If bilateral aphakia is present follow step #4 under monocular testing above.

Convert to whole person impairment using Table 6 (page 172).

An additional 10% impairment is possible for specific other conditions per section 8.6 (page 172); e.g., deformity of orbit.

On the following two pages are suggested Visual Impairment Forms. You may reproduce as necessary.

**VISUAL IMPAIRMENT FORM
MONOCULAR VISUAL FIELDS**

**OD
Right**

**OS
Left**

Central Acuity: Near uncorrected _____ _____
 Near corrected _____ _____
 Far uncorrected..... _____ _____
 Far corrected. _____ _____

(1). Total impairment for corrected acuity from Table 2, pg. 163..... _____ _____

Visual Fields:

Field Sector and Degrees Lost

Temporal _____ _____
 Down Temporal _____ _____
 Direct Down. _____ _____
 Down Nasal. _____ _____
 Nasal _____ _____
 Up Nasal..... _____ _____
 Direct Up _____ _____
 Up Temporal _____ _____
 Total Degrees Lost. _____ _____

(2). Total Impairment from Table 4, pg. 167 _____ _____

Motility:

(3). Percentage loss assigned to worst eye (Fig. 3, pg. 168) _____ _____

(4). If appropriate 5-10% of involved eye for other ocular impairments (e.g. vitreous opacities, non-reactive pupil, light scattering disturbances) _____ _____

Total Eye Loss (1, 2, 3 and 4 combined) _____ _____
 (combined values chart p.254)

Total Visual System (Table 5, pg. 169) _____
 _____

Total Whole Person (Table 6, pg. 172)..... _____

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**VISUAL IMPAIRMENT FORM
BINOCULAR VISUAL FIELDS WITHOUT MOTILITY LOSS**

	OD Right	OS Left
Central Acuity: Near uncorrected	_____	_____
Near corrected	_____	_____
Far uncorrected..... ..	_____	_____
Far corrected	_____	_____
Total impairment for corrected acuity from Table 2, pg. 163	_____	_____

Binocular Visual Field:..... .. _____

*If appropriate 5-10% of involved eye for other ocular impairments (e.g., vitreous opacities, non-reactive pupil, light scattering disturbances). _____

Total Visual Impairment:

Combine OD & OS central acuity using Table 5, pg. 169 _____

Combine visual field with above acuity impairment _____

Total Whole Person - Table 6, pg. 172 _____

AUDITORY IMPAIRMENT

Auditory impairment is based entirely on hearing and equilibrium. The five classes of impairment from disturbances of vestibular function are found on pages 178-179. These classes are based on changes in activities in daily living and objective test findings.

Use audiometers calibrated to ANSI specifications S3.6 - 1969 to determine decibels of hearing at 500, 1000, 2000 and 3000 Hertz.

If the hearing loss is less than 25 dB at these frequencies, there is no impairment. If it is greater than 91.7 dB, then the impairment is 100%.

Add the decibels determined at the four frequencies for each ear separately.

Using the decibel sum of the hearing threshold levels, determine the impairment loss on Table 2 (page 175).

Determine the binaural impairment by plotting the worst ear loss against the better ear on Table 3 (page 176).

Use Table 4 (page 178) to convert this loss to a whole person rating.

HEARING IMPAIRMENT REPORT

	<u>Right Ear</u>		<u>Left Ear</u>	
500 Hz		db		db
1000 Hz		db		db
2000 Hz		db		db
3000 Hz	_____	db	_____	db
Total	_____		_____	

Binaural Impairment

Table 3, p. 176-177

Total of Worse ear on vertical axis
Total of Better ear on horizontal axis

_____ %

Whole Person Impairment

Converted using Table 4, p. 178

_____ %

Monaural Impairment

Using Table 2, p. 175

Right Ear _____ % Left Ear _____ %

FACIAL DISFIGUREMENT

Determine the facial disfigurement class 1 through 4 (page 178) based on loss of support tissue, absence of anatomical areas or preclusion of social acceptance.

A facial disfigurement table is found on page 179. It consists of unilateral total facial paralysis (5%), bilateral total facial paralysis (8%), loss or deformity of outer ear (2%), loss of entire nose (25%), and nasal distortions in physical appearance (5%).

NOSE, THROAT, AND RELATED STRUCTURES

Nasopharyngeal obstruction causing dyspnea should be rated under Table 5, page 181. The four classifications under the table depend on shortness of breath on exertion and various listed anatomical defects of the oropharynx, laryngopharynx, trachea, nose or bronchi.

Mastication and Deglutition impairment (page 180) is based upon dietary limitations, e.g., soft food, liquids, or tube feedings. This is the only section of AMA Guides that relate to temporomandibular joint.

With respect to olfaction and taste, a 3% whole person impairment is given if there is a complete bilateral loss of either sense.

SPEECH

Have the patient read the specified paragraph, pages 181-82.

- Examiner must have normal hearing.
- Patient should be 8 feet from examiner with back towards the examiner.
- Also note the speech function during history.

Rate audibility (ability to speak at a level to be heard), intelligibility, and functional efficiency (ability to maintain reasonable rate of speech), per Table 6 (page 182).

Use Table 7 (page 183) to convert the worst rating of the three impairments to a whole person impairment.

Associated behavioral changes may also be rated per Chapter 14 and the guidelines noted on the behavioral section.

GASTRO INTESTINAL SYSTEM

Desirable Weight

This may be determined from previous medical records and by asking the patient what they consider to be their "usual weight." If neither of these methods are possible, use Table 1 on page 186.

Classification for Upper Digestive Tract

Impairments of the upper digestive tract may be rated under four classes found in Table 2, page 189. These classifications are determined by considering loss of weight, dietary restrictions and drug use required, and signs and symptoms of organic disease or anatomical loss. Objective tests to be considered when determining impairment are listed under each subsection; esophagus, stomach and duodenum, and small intestine.

Colon and Rectal Impairment

The four classifications in this section consider objective tests and anatomical loss, persistent bowel disturbance, restriction of daily activity, requirement for special diet and medication, and constitutional symptoms such as weight loss, fever, anemia. See Table 3, page 191.

Anal Impairment

The three classifications for this impairment are found in Table 4, page 193, and depend on the degree of anal incontinence.

Liver and Biliary Impairment

Table 5, page 194, covers the four classes of impairment for these rated diagnoses. Consideration is given to objective evidence of disease, nutrition and strength, and biochemical studies.

Pancreas

Rating for the digestive effects of the pancreas can be done only in this section, using Table 2, page 189. The Endocrine system, Chapter 12 must be consulted to rate the endocrine effects.

Hernias

The three classifications for hernia impairment, Table 6, page 196, are based on persistence and reducibility of the hernia, and limitation of activities. Incisional hernias are rarely painful or complicated. Generally they will not exceed class 1. Inguinal and femoral hernias entail a greater risk. Impairment rating is done only after appropriate surgical repair unless surgical intervention is not recommended for the patient.

Urinary and Reproductive Systems

Upper Urinary Tract

Table 1, page 201, describes the four classes of impairment for the upper urinary tract. Ratings are based on creatinine clearance, the 15 minute IV phenolsulfonphthalein (psp) test, and need for medical treatment.

Urinary Diversion

Ratings for these surgical procedures are found on page 201.

Other Subsections

Consult other specific subsections to determine ratings for the bladder, urethra, male reproductive organs, and female reproductive organs. Specific objective testing should be done when applicable. See Chapter 12, the Endocrine section, to rate hormonal effects.

Endocrine

The following subsections are included in this chapter for impairment ratings; hypothalamic pituitary axis, thyroid, parathyroid, adrenal cortex, adrenal medulla, pancreas (insulin and glycogen production only), gonads (for effects of hormonal changes only), mammary glands and metabolic bone disease.

Hematopoietic Disorders

Chapter 7 describes impairment of these disorders. Anemia can be rated using Table 1, page 154, which relates to the hemoglobin level and need for transfusions. Polycythemia, white blood cell disorders, and hemorrhagic and platelet disorders may also be rated.