Subject: Uniform Definitions of the Physically Handicapped.

At present, different definitions for various categories of handicapped are adopted in various schemes/programmes of the Central and State Governments. In order to have a standard set of definitions, authorised certification authorities and standard tests for purpose of objective certification, Government of India in Ministry of Welfare set up three committees under the Chairmanship of Director General of Health Services - one each in the area of visual handicaps, speech & hearing disorders and locomotor disabilities and a separate Committee for mental handicaps.

2. After having considered the reports of these committees and with the concurrence of the State Governments/UTs and the concerned Ministries/Departments, the undersigned is directed to convey the approval of the President to notify the definitions of the following categories of physically handicapped:

1. Visually handicaps
2. Locomotor handicaps
3. Speech & hearing handicaps
4. Mental handicaps.

Report of the Committee as indicated in the Annexure I each category of handicapped persons has been divided into four groups viz. mild, moderate, severe and profound/total. It has been decided that various concessions/benefits would in future be available only to the moderate, severe and profound/total groups; and not to the mild groups. The minimum
degree of disability should be 40% in order to be eligible for any concession/benefits.

4. It has been decided that the authorised certifying authority will be a medical board at the district level. The board will consist of the Chief Medical Officer/Sub Divisional Medical Officer in the District and another expert in the specified field viz. orthopaedic surgeon in case of visual handicaps, either an ENT surgeon or an audiologist in case of speech and hearing handicaps; an orthopaedic surgeon or a specialist in physical medicine & rehabilitation in case of locomotor handicaps, a psychiatrist or a clinical psychologist or a teacher in special education in case of mental handicaps.

5. Specified tests as indicated in Annexure should be conducted by the medical board and recorded before a certificate is given.

6. The certificate would be valid for a period of three years.

7. The State Govts./UT Adm. may constitute the medical boards indicated in para 4 above immediately.

(M.C. NARSIMHAN)
Joint Secretary to the Government of India.

ORDER

Ordered that the above notification be published in the Gazette of India for general information. Copies of the Gazette notification may be sent to all Ministries/Deptt. of the Central Govt., all State Govts./UT Adm., President Sectt., P.M.'s Office, Lok Sabha; Rajya Sabha Sectt. for information and necessary action.

(M.C. Narsimhan)
Joint Secretary to the Government of India.

To,

The Manager,
Government of India Press,
Mayapuri, New Delhi.

List of the Members of the Committees is at Annexure I.

INTRODUCTION

India is a vast country with variable social, cultural, geographical and economic background. Despite breakthrough in health services, a number of disabilities continue to appear due to polio, communicable and congenital diseases, increased industrialisation and mechanisation, vehicular traffic leading to locomotor disabilities; vitamin-A deficiency, cataract and infections, injuries, nutritional deficiency leading to visual loss; ear infection, external injuries, noise pollution contributing to hearing loss. These are three major disabilities which manifest themselves as a result of one or more of such factors.

2. Government of India are providing a large number of facilities and concessions to disabled persons. In order to provide these facilities and concessions it is imperative that a standard definition of these disabilities is decided upon. Consequent to recommendation of the National Council for Handicapped Welfare the Committees under the chairmanship of Director General of Health Services met for the adoption of standard set of definitions which should be uniformly applicable throughout the country.
The exercise of evolving a uniform set of definitions should not be, however, to construed to mean that no definitions have been set forth at present. Definitions of these three major disabilities which are prevalent at present for extending various concessions and facilities to handicapped are given in Annexure II.

**Recommended Definitions**

Physical impairment leads to functional limitation and functional limitation leads to disability. Physical impairment, functional limitation and disability have been defined by W.H.O. and this Committee would recommend adopting this classification, which is as follows:

1. **Impairment:** An impairment is a permanent or transitory psychological, or anatomical loss and/or abnormality. For example a missing or effective part, tissue organ or "Mechanism" of the body, such as an amputated limb, paralysis after polio, myocardial infarction, cerebrovascular thrombosis, restricted pulmonary capacity, diabetes, myopia, disfigurement, mental retardation, hypertension, perceptual disturbance.

2. **Functional limitation:** Impairment may cause functional limitations which are the partial or total inability to perform those activities necessary for motor, sensory, or mental functions within the range and manner of which a human being is normally capable such as walking, lifting loads, seeing, speaking, hearing, reading, writing, counting, taking interest in and making contact with
surroundings. A functional limitation may last for a short time a long time be permanent or reversible. It should be quantifiable whenever possible. Limitations may be described as "Progressive or "Regressive."

(iii) **Disability**: Disability is defined as an existing difficulty in performing one or more activities which, in accordance with the subject's age, sex and normative social role, are generally accepted as essential, basic components of daily living, such as self-care, social relations and economic activity. Depending in part on the duration of the functional limitation disability may be short-term, long-term or permanent.

Medically, disability is physical impairment and inability to perform physical functions normally. Legally, disability is a permanent injury to body for which the person should or should not be compensated.

The disability can be divided into 3 periods:

(i) **Temporary total disability** is that period in which the affected person is totally unable to work. During this time he may receive orthopaedic, ophthalmological auditory or speech or any other medical treatment.

(ii) **Temporary partial disability** is that period when recovery has reached the stage of improvement so that person may begin some kind of gainful occupation.

(iii) **Permanent disability**, applies to permanent damage or loss of use of some part/parts of the body after the stage of maximum improvement from any medical treatment has been reached and the condition is stationary.
The classifications & various concessions being recommended are for the permanent disability only.

EVALUATION AND ASSESSMENT OF VISUAL DISABILITIES

The group recommended the classification of visual impairment/disability may be categorised in four groups for considering various concessions to visually handicapped.

The question regarding one-eyed person was considered at length. The Committee is of the view that the guidelines recommended for evaluation of visual loss of persons who have lost one eye but have the other eye normal should be totally unambiguous. The Committee feels that such persons may not be clubbed with other visually handicapped so that facilities/concessions available to severely/profoundly visually handicapped and totally blind are not eroded. If one-eyed persons are clubbed with severely/profoundly visually handicapped and totally blind persons, the Committee feels that most of the concessions especially jobs reserved for the blind persons shall go to one-eyed persons as their visual loss is minimal compared to other 2 categories and in this manner most of the government offices/public sector undertakings will be fulfilling the quota but in actual practice will not be giving jobs to totally blind and persons with severe visual loss. The Committee, however, feels that it should be made clear that loss of one eye will not be considered as a disqualification on medical grounds unless a particular post is of such a technical nature that it requires of a person the use of both the eyes or 3 dimensional vision. The Committee also recommends...
that if a person has been declared unfit due to some temporary visual loss/defect, it should not be construed to mean as disabled if such a temporary impairment in the opinion of a Medical Board can be overcome with treatment or visual aids.

Guidelines for evaluation & categorisation of visual disabilities are given in Appendix III.

2. EVALUATION & ASSESSMENT OF HEARING & SPEECH DISABILITY

The Committee recommended that the definitions which are internationally accepted and have been adopted by WHO may be adopted in this country also for evaluation and categorisation of hearing & speech loss.

The recommended classification and guidelines for evaluation of hearing loss are given in Appendix II.

The Committee also considered various facilities/concessions which may be given to hearing handicapped persons and suggestions on the facilities which may be offered to the hearing handicapped for rehabilitation are also given in Appendix II.

3. EVALUATION & ASSESSMENT OF ORTHOPAEDIC DISABILITIES

The Committee recommends that Kessler's method may be taken as a general guideline for evaluating orthopaedic disability. Since issues have been raised regarding the quantification of degree of disability, the authorised Medical Board may also consult any other suitable method and use Kessler's method as a basic guideline.

The Committee is aware that there are other methods of quantification which are at variance with the Kessler's
guidelines. However, Kessler's guidelines for evaluation of various degrees of disability, it is expected, would hold good for most of the time. The Individual Medical Board could take into consideration other methods which may help the board in evaluating disability in an individual case.

THE AUTHORITIES TO GIVE CERTIFICATION

A permanent disability certificate will be issued by a board duly constituted by the Central and the State Governments. It is recommended that a Medical Board for evaluation of disability should be available minimum at the district level. It is also recommended to have at least 3 members in the board, out of which at least one should be a specialist in the particular field for assessing locomotor/visual/hearing & speech disability as the case may be.

It is also recommended that the competent authority may also appoint an appellate medical board to resolve any disputes.

CONCESSIONS/FACILITIES WHICH MAY BE OFFERED TO DISABLED PERSONS.

Keeping in view the set of definitions and the categorisation being recommended, various Ministries/Departments and the State Governments shall have to also specify the facilities and concessions which would be available to different categories of the handicapped. The Committee recommends that if a person has the degree of disability below 40% in a particular category, no such benefits/concessions may be given to such a person.
All other categories may be extended concessions/facilities like scholarships, job reservation, aids and appliances either free of cost or at concessional rates, converance allowance etc. For hearing handicapped, the Committee recommends that 3 language formula may be revised so that the hearing handicapped have to study one language only.

Ministry of Social & Women's Welfare may make out proposals based on these recommendations with the appropriate Ministry for necessary notifications in the policy of 3 language formula.

The Committee also recommended that Ministry of Health and Family Welfare may also take up amending medical standards for necessary relaxations in respect of mild handicapped in all the categories so that on account of their mild disability, they are not put in a position that neither they are able to get the facility of job reservations nor are eligible otherwise for entering into services in the general category. The medical rules may also indicate in clear terms that loss of one eye will not be considered a disqualification unless the particular post is of such a technical nature that it requires of a person the use of both the eyes or three-dimentional vision. The same medical board at the district level may examine suitability or otherwise of a one eyed person for a particular post.

The degree and extent of disability of the 3 types, namely visual, hearing and orthopaedic will be indicated as follows:

(a) mild less than 40%
(b) moderate 40% & above
(c) severe: 75% & above
(d) profound/Total 100%

For persons suffering from cardio pulmonary diseases, there may be no reservations in jobs. These persons may, however, be considered for extending other concessions such as exemption in typing etc.

The Director General of Health Services, Ministry of Health and Family Welfare will be the final authority, should there arise any controversy/doubt regarding the interpretation of the definitions/classifications/evaluation tests etc.

Only those persons who have disability more than 40% and above shall be eligible for registration in Employment Exchanges in the category of handicapped and considered against jobs in public sector reserved for the physically handicapped.
Composition of Committees to recommend standard definitions of Disabilities.

Chairman
Dr. D.P. Bisht,
Director General of Health Services
Ministry of Health & Family Welfare,
Nirman Bhavan, New Delhi.

ON VISUALLY HANDICAPED

1. Dr. Madan Mohan
   Head, Deptt. of Orthopaedics,
   All India Institute of Medical Sciences,
   New Delhi.

2. Dr. G.H. Gidwani,
   Assistant Director General of Health
   Services, Ministry of Health & Family
   Welfare, Nirman Bhavan, New Delhi.

3. Shri R.S. Srivastava,
   Joint Director,
   Director General of Employment & Training,
   Ministry of Labour,
   Sharan Shakti Bhawan, New Delhi.

4. Director,
   National Institute for the Visually
   Handicapped, Rajpur Road, Dehradun.
   (Represented by Shri S.R. Shukla,
   Asstt. Director.)

5. Dr. C. Venkataswami,
   Arvind Eye Hospital,
   Madurai, Tamilnadu.

6. Dr. J.M. Pahwa,
   Chief Medical Officer,
   Gandhi Eye Hospital,
   Aligarh.

7. Shri Harsharanjit Singh,
   Under Secretary,
   Ministry of Social & Women’s Welfare

ON HEARING HANDICAPPED

1. Dr. G.H. Gidwani,
   Assistant Director General of Health Services,
   Ministry of Health and Family Welfare,
   Nirman Bhavan, New Delhi.

2. Shri R.S. Srivastava,
   Joint Director,
   Director General of Employment & Training,
   Ministry of Labour,
   Sharan Shakti Bhawan, New Delhi.
3. Dr. S.K. Kaicker,  
All India Institute of Medical Sciences; New Delhi.

4. Dr. L. Nithya Serian,  
Director; All India Institute of Speech & Hearing; Mysore.

5. Dr. H. Rathna,  
Director; All Yaver Jung Institute of Hearing Handicapped; Baji Ali Park; Mahalaxmi; Bombay-400034. (Represented by Dr. M.V. Nataraja, Dy. Director in the meeting on 25.6.84).

6. Shri Harcheranjit Singh;  
Under Secretary, Ministry of Social & Women’s Welfare; New Delhi.

ON ORTHOPAEDICALLY HANDICAPPED

1. Dr. G.H. Gidwani,  
Assistant Director General of Health Services, Ministry of Health & Family Welfare; Nirman Bhavan, New Delhi.

2. Shri R.S. Srivastava,  
Joint Director; Director General of Employment & Training; Ministry of Labour; Sharan Shakti Bhavan; New Delhi.

3. Dr. Narendra Kumar,  
Indian Council of Medical Research; Ansari Nagar; New Delhi.

4. Director; National Institute of Orthopaedically Handicapped; B.T. Road; Bon Hooghly; Calcutta.

5. Dr. A.K. Mukherjee,  
Director; All India Institute of Physical Medicine and Rehabilitation; Jaji Ali Park; Bombay.

6. Dr. S.K. Varma,  
Head of Deptt. of Physical Medicine and Rehabilitation; All India Institute of Medical Sciences; New Delhi.
7. Dr. J.P. Yadav,
   Head, Rehabilitation Department,
   Safdarjung Hospital,
   New Delhi.  
   [Special Invitee]

8. Dr. J.S. Gularia,
   Prof. & Head of Deptt. of Medicine,
   Dean, All India Institute of Medical
   Sciences, New Delhi.  
   [Special Invitee]

9. Shri Karcharanjit Singh,
   Under Secretary,
   Ministry of Social & Women's Welfare.  
   [Member-Secretary]
(1) **Visually Handicapped**

The definition adopted for visual handicapped for extending the concession, scholarships, admission to Integrated education system, reservation in jobs, assistance for purchase/fitting of aids and appliances:—

The 'blind' are those who suffer from either of the following conditions:—

(a) Total absence of sight.

(b) Visual acuity not exceeding 6/50 or 20/200 (snellen) in the better eye with correcting lenses.

(c) Limitation of the field of vision substantially and angle of 20 degree or worse.

**Definition of Hearing handicapped under various schemes**

SCHOLARSHIPS

The deaf are those in whom the sense of hearing is non-functional for ordinary purposes of life. They do not hear/understand sound at all even with amplified speech. The cases included in this category will be those having hearing loss more than 70 decibels in the better ear (profound impairment) or total loss of hearing in both ears.

**ASSISTANCE TO DISABLED PERSONS FOR PURCHASE/FITTING OF AIDS/APPLIANCES**

The partially hearing are those falling under any one of the categories indicated below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Hearing acuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild impairment</td>
<td>More than 30 but not more than 45 decibles in better ear.</td>
</tr>
<tr>
<td>Serious impairment</td>
<td>More than 45 but not more than 30 decibles in better ear.</td>
</tr>
<tr>
<td>Severe impairment</td>
<td>More than 60 but not more than 90 decibles in better ear.</td>
</tr>
</tbody>
</table>
The deaf are those in whom the sense of hearing in non-functional for ordinary purposes of life. They do not hear understand sounds at all events with amplified speech. The cases included in this category will be those having hearing loss more than 90 decibels in the better ear (profound impairment) or total loss of hearing in both ears.

**Locomotor Handicapped**

Similarly the definition adopted for orthopaedically handicapped is not uniform as all orthopaedically handicapped are eligible for getting a scholarship but only those orthopaedically handicapped person can get the facility of reservation in jobs as have a minimum of 40% disability.

**Situation in State Governments**

Various state Governments have also adopted different sets of definition. For example Govt. of Tamil Nadu declared one eyed persons in the same category as blind persons and have extended various concessions including the reservation in jobs under the State Government to one eyed person also. The Central Government on the other hand has declared that a one eyed person with one eye good vision is not medically unfit and can be considered for jobs which do not require a three dimensional vision to the specific requirement of the jobs.
APPENDIX III.

Visual impairment disability categories bases on its severity and proposed disability percentages.

All with corrections.

<table>
<thead>
<tr>
<th>Category</th>
<th>Better eye</th>
<th>Worse eye</th>
<th>Percentage impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 0</td>
<td>3/9 - 6/18</td>
<td>3/24 to 6/36</td>
<td>20%</td>
</tr>
<tr>
<td>Category I</td>
<td>6/18 - 3/36</td>
<td>6/30 to Nil</td>
<td>40%</td>
</tr>
<tr>
<td>Category II</td>
<td>6/60 - 4/60</td>
<td>3/60 to Nil</td>
<td>75%</td>
</tr>
</tbody>
</table>

or

Field of vision

110 - 20

- do - III

3/60 to 1/60

Field of vision

100

- do - IV

F.C. at 1 ft. to nil

Field of vision

100

One eyed persons

3/6

F.C. at 1 ft. to nil

30%

The method of evaluation shall be the same as recommended in the Office of Medical Examination.

Impairment of 20% - 40% or less may only be entitled to aids and appliances.
### A. RECOMMENDATIONS ABOUT THE CATEGORIES AND THE TESTS REQUIRED

#### I. Recommended Classification

<table>
<thead>
<tr>
<th>No.</th>
<th>Category</th>
<th>Type of Hearing Impairment</th>
<th>Speech Discrimination</th>
<th>Percentage Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I.</td>
<td>Mild Hearing Impairment</td>
<td>80 to 100% Less than</td>
<td>40% in better ear</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40 dB in better ear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>II.</td>
<td>Moderate Hearing Impairment</td>
<td>50 to 80%</td>
<td>40%-50% in better ear</td>
</tr>
<tr>
<td></td>
<td></td>
<td>41 to 55 dB in better ear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>III.</td>
<td>Severe Hearing Impairment</td>
<td>40 to 50%</td>
<td>50 to 75%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60 to 70 dB in better ear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>IV.</td>
<td>(a) Total deafness</td>
<td>No hearing</td>
<td>No discrimination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No discrimination</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(b) Near total deafness</td>
<td>81 dB and above in</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>deafness above in better ear</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(c) Profound deafness</td>
<td>Less than 75%</td>
<td>75% -100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>71 to 90 dB in better ear</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Pure tone average of hearing in 500, 1000 and 2000 Hz by air conduction should be taken as basis for consideration as per the test recommendations.*

*Further it should be noted that:*

(a) When there is only an island of hearing present in one or two frequencies in better ear, it should be considered as total loss of hearing.

(b) Wherever there is no response (NR) at any of the 3 frequencies (500, 1000, 2000 Hz), it should be considered as equivalent to 120 dB loss for the purposes of classification of disability and in arriving at the average. This is based on the fact that maximum intensity limits in most of the Audiometers is 110 db's and some audiometers has additional facilities for +20 db for testing.*
II. Recommendations about the categories of disability (Hearing Impairment - Physical aspect only) - Tests recommended.

(a) Pure tone audiometry (ISO R 389-1970 at present is being used as Audiometric Standard in most of the audiometers. Hence the audiometers used in testing should be accordingly calibrated). Three frequency average at 500, 1000 and 2000 Hz by Air Conduction (A.C.) will be used for categorization.

(b) Wherever possible the pure tone audiometric results should be supplemented by the speech discrimination score - Tested at Sensation level (S.L.) i.e. the speech discriminations test is conducted at dB above the patient's hearing threshold. The stimuli used should be either phonetically balanced words (PB) of the particular language or its equivalent material. At present only a few Indian languages have standard speech material for testing. Hence wherever the standardised test material is not available, either standardised Indian English Test could be made use of, with English knowing population or equivalent material to PB, be used.

(c) Wherever children are tested and pure tone audiometry becomes not possible free field testing should be employed.

B. SUGGESTIONS OF THE FACILITIES TO BE OFFERED TO THE DISABLED FOR REHABILITATION
Category I. No special benefits.

Category II. Considered for hearing aids at free or concessional costs only.

Category III. Hearing aids free of cost or at concessional rates.
   Job reservation - benefit of special employment exchange.
   Scholarships at school: single language formula.

Category IV. Hearing aids - facilities of reservation - special employment exchange. Special facilities in schools like scholarship, hearing aids - exemption from 3 language formula (to study in recommended single language).

It is felt that for consideration of admission under special category for courses conducted by institutions like Indian Institute of Technology (IIT), Industrial Training Institute (III) and others, categories 1 & 2 only should be considered for reservation of seats, provided they fulfill the other educational stipulations for the course.

We have considered the different type of hearing affection i.e. conductive VS sensory neural, and agree that the disability will be judged by the conditions prevalent in the patient at the time of referral and examination. In case of failure of surgery or other therapeutic interventions, the patient will be considered and categorized on the basis of the recommended tests.
APPENDIX V

1. GUIDELINES FOR EVALUATION OF VARIOUS DISABILITIES

(I) LOCOMOTOR DISABILITY

1.1. UPPER LIMB

1. The estimation of permanent impairment depends upon the measurement of functional impairment, and is not an expression of a personal opinion.

2. The estimation and measurement must be made when the clinical condition is fixed and unchangeable.

3. The upper extremity is divided into two component parts: the arm component and the hand component.

4. Measurement of the loss of function of arm component consists in measuring the loss of motion, muscle strength and co-ordinated activities.

5. Measurement of the loss of function of hand component consists in determining the Prehension, Sensation & Strength. For estimation of Prehension: Opposition, lateral pinch, cylindrical grasp, spherical grasps and hook grasp have to be assessed as shown in the column of "prehension component" in the proforma.

6. The impairment of the entire extremity depends on the combination of the functional impairment of both components.

ARM COMPONENT

Total value of arm component is 90%.

Principles of Evaluation of range of motion of joints

1. The value of maximum R.C.M. in the arm component is 90%.

2. Each of the three joints of the arm is weighted equally (30%)

Example

A fracture of the right shoulder joint may affect range of motion so that active abduction is 90%. The left shoulder exhibits a range of active abduction of 180%. Hence there is loss of 50% of abduction movement of the right shoulder.
The percentage loss of arm component in the shoulder is 50 x 0.30 or 15% loss of motion for the arm component.

If more than one joint is involved, same method is applied, and the losses in each of the affected joints are added. Say:

Loss of abduction of the shoulder = 60%
Loss of extension of the wrist = 40%
Then, Loss of range of motion for the arm = (50 x 0.30) + (40 x 0.30) = 30%

Principles of Evaluation of strength of muscles:

1. Strength of muscles can be tested by manual testing like 0-5 grading.

2. Manual muscle gradings can be given percentages like
   
   0. - 100%
   1. - 80%
   2. - 50%
   3. - 20%
   4. - 0%

3. The mean percentage of muscle strength loss is multiplied by 0.30.

4. If there has been a loss of muscle strength of more than one joint, the values are added as has been described for loss of range of motion.

Principles of Evaluation of co-ordinated activities

1. The total value for co-ordinated activities is 90%.

2. Ten different co-ordinated activities are to be tested as given in the Proforma.

3. Each activity has a value of 9%.
Combining values for the Arm Component

1. The value of loss of function of arm component is obtained by combining the values of range of movement, muscle strength & co-ordinated activities, using the combining formula

\[ a = \frac{b(90-a)}{90} \]

Where:  
\[ a = \text{higher value} \]

&  
\[ b = \text{lower value} \]

Example

Let us assume that an individual with a fracture of the right shoulder joint has in addition to 16.5% of loss in his arm, 3.3% loss of strength of muscles, and 5% loss of co-ordination. We combine these values as:

Range of motion: 16.5%  
\[ \frac{16.5}{90} = 18.3\% \]

Strength of muscles: 3.3%  
\[ \frac{3.3}{90} = 3.7\% \]

Co-ordination: 5%  
\[ \frac{5}{90} = 5.5\% \]

So total value of arm component = 27.0%

HAND COMPONENT

Total value of hand component is 90%.

The functional impairment of hand is expressed as loss of prehension, loss of sensation, loss of strength.

Principles of evaluation of Prehension

Total value of Prehension is 30%. It includes:

(A) Direction (3%). Tested against
Index finger (2%), Middle finger (2%),
Ring finger (2%) & Little finger (2%)
(D) Lateral Pinch (5%). Tested by asking the patient to hold a key.

(C) Cylindrical Grasping (6%). Tested for
   (a) Large object of 4 inch size (3%)
   (b) Small object of 1 inch size (3%)

(D) Spherical Grasping (6%). Tested for
   (a) Large object 4 inch size (3%)
   (b) Small object 1 inch size (3%)

(E) Hook Grasping (5%). Tested by asking the patient to lift a bag.

Principles of Evaluation of Sensations
Total value of sensation is 30%. It includes:
1. Radial side of thumb (4.0%)
2. Ulnar side of thumb (1.2%)
3. Radial side of each finger (4.8%)
4. Ulnar side of each finger (1.2%)

Principles of Evaluation of Strength
Total value of strength is 30%. It includes:
1. Grip Strength (20%)
2. Pinch Strength (10%)

   Strength will be tested with hand dynamometer or by clinical method (Grip Method).

10% additional weightage to be given to the following factors:

1. Infection
2. Deformity
3. Malalignment
4. Contractures
5. Abnormal Mobility
6. Dominant Extremity (4%)

Combining values of the hand component

The final value of loss of function of hand component

...5/-
is obtained by summing up values of loss of prehension, sensation and strength.

Combining Values for the Extremity.

Values of impairment of arm component and impairment of hand component are combined by using the combining formula.

Example

Impairment of the arm = 27.0%  \[
\begin{array}{c}
\text{Impairment of the arm} = 27.0% \\
\text{Impairment of the hand} = 64\% \\
\text{Impairment of the hand} = 64\%
\end{array}
\]

\[
\frac{27(60-34)}{64} = 71.8\%
\]

\[
\frac{90}{90} = 71.8\%
\]
GUIDELINES FOR EVALUATION OF PERMANENT PHYSICAL IMPAIRMENT IN LOWER LIMBS

The lower extremity is divided into two components and Stability component.

MOBILITY COMPONENT

Total value of mobility component is 60%.
It includes range of movement and muscle strength.

Principles of Evaluation of Range of Movement

1. The value of maximum range of movement in the mobility component is 90%.
2. Each of the three joints i.e. hip, knee, foot-ankle component, is weighted equally-0.30.

Example

A fracture of the right hip joint may affect range of motion so that active abduction is 27°.
The left hip exhibits a range of active abduction of 54°. Hence, there is loss of 50% of abduction movement of the right hip. The percentage loss of mobility component in the hip is 50 x 0.30 or 15% loss of motion for the mobility component.

If more than one joint is involved, same method is applied and the losses in each of the affected joints are added.

Example:

Loss of abduction of the hip = 50%
Loss of extension of the knee = 43%
Loss of range of motion for mobility component = (50 x 0.30) + (43 x 0.30) = 30%
Principles of Evaluation of Muscle Strength

1. The value for maximum muscle strength in the leg is 90%.
2. Strength of muscles can be tested by manual testing like -5 grading.
3. Manual muscle gradings can be given percentages like

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>2</td>
<td>60%</td>
</tr>
<tr>
<td>3</td>
<td>40%</td>
</tr>
<tr>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>5</td>
<td>0%</td>
</tr>
</tbody>
</table>

4. Mean percentage of muscle strength loss is multiplied by .30.
5. If there has been a loss of muscle strength of more than one joint, the values are added as has been described for loss of range of motion.

Combining Values for the Mobility Component

Let us assume that the individual with a fracture of the right hip joint has in addition to 15% loss of motion, 2% loss of strength of muscles.

Combining Values

\[ \text{Motion 15\%} \times \frac{8(60-15)}{90} = 22.0\% \]

where \( a \) = higher value, \( b \) = lower value

Stability Component

1. Total value of stability component is 90%.
2. It is tested by 2 methods.
   (i) Based on scale method.
   (ii) Based on clinical method.

Three different readings (in kilograms) are taken measuring the total body weight (W), Scale 'A' reading and scale 'B' read.
Guidelines for Evaluation of Permanent Physical Impairment of Trunk (Spine)

The local effects of lesions of spine can be divided into traumatic and non-traumatic lesions.

TRAUMATIC LESIONS

Cervical Spine Fracture

<table>
<thead>
<tr>
<th>Percent Whole Body Percentage Permanent Physical Impairment and Loss of Physical Function to Whole Body.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Vertebral compression 25%, one or two vertebral adjacent bodies, no fragmentation, no involvement of posterior elements, no nerve root involvement, moderate neck rigidity and persistent soreness.</td>
</tr>
<tr>
<td>B. Posterior elements with X-ray evidence of moderate partial dislocation.</td>
</tr>
<tr>
<td>(a) No nerve root involvement, healed</td>
</tr>
<tr>
<td>(b) With persistent pain, with mild motor and sensory manifestations</td>
</tr>
<tr>
<td>(c) With fusion, healed, no permanent motor or sensory changes.</td>
</tr>
<tr>
<td>C. Severe dislocation, fair to good reduction with surgical fusion.</td>
</tr>
<tr>
<td>(a) No residual motor or sensory changes</td>
</tr>
</tbody>
</table>
(b) Poor reduction with fusion, persistent radicular pain, motor involvement only slight weakness and numbness

(c) Same as (b) with partial paralysis, determine additional rating for loss of use of extremities and sphincters.

**Cervical Intervertebral Disc**

1. Operative, successful removal of disc, with relief of acute pain, no fusion, no neurologic residual
2. Same as (1) with neurological manifestations, persistent pain, numbness, weakness in fingers.

**Thoracic and Dorsolumbar Spine Fracture**

<table>
<thead>
<tr>
<th>Percent Whole Body Permanent Physical Impairment and Loss of Physical Function to Whole Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Compression 25%, involving one or two vertebral bodies, mild, no fragmentation, healed, no neurological manifestations.</td>
</tr>
<tr>
<td>B. Compression 50%, with involvement posterior elements, healed, no neurologic manifestations, persistent pain, fusion, indicated.</td>
</tr>
<tr>
<td>C. Same as (B) with fusion, pain only on heavy use of back</td>
</tr>
<tr>
<td>D. Total paraplegia</td>
</tr>
<tr>
<td>E. Posterior elements, partial paralysis with or without fusion, should be rated for loss of use of extremities and sphincters</td>
</tr>
</tbody>
</table>

**Low Lumbar**

1. Fracture

<table>
<thead>
<tr>
<th>Percent Whole Body Permanent Physical Impairment and Loss of Physical Function to Whole Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Vertebral compression 25%, one or two adjacent vertebral bodies, little or fragmentation, no definite pattern or neurologic changes</td>
</tr>
</tbody>
</table>
D. Compression with fragmentation posterior elements, persistent pain, weakness and stiffness, healed, no fusion, no lifting over 25 pounds

C. Same as (B), healed with fusion, mild pain

D. Same as (D), nerve root involvement to lower extremities, determine additional rating for loss of industrial function to extremities

E. Same as (C), with fragmentation of posterior elements, with persistent pain after fusion, no neurologic findings

F. Same as (C), with nerve root involvement to lower extremities, rate with functional loss to extremities

G. Total paraplegia

H. Posterior elements, partial paralysis with or without fusion, should be rated for loss of use of extremities and sphincters.

2. Neurogenic Low Back Pain - Disc Injury

A. Periodic acute episodes with acute pain and persistent body list, test, tests for sciatic pain positive, temporary recovery 5 to 8 weeks

B. Surgical excision of disc, no fusion, good results, no persistent sciatic pain

C. Surgical excision of disc, no fusion, moderate persistent pain and stiffness aggravated by heavy lifting with necessary modification of activities

D. Surgical excision of disc with fusion, activities of lifting moderately modified

E. Surgical excision of disc with fusion, persistent pain and stiffness aggravated by heavy lifting, necessitating modification of all activities requiring heavy lifting

NON-TRAUMATIC LESIONS

Scoliosis

The whole spine has been given rating of 100% and region-wise the following percentages are given:

Dorsal Spine - 50%
Lumbar Spine - 33%
Cervical Spine - 20%
Kobb's method for measurement of angle of curve in standing position is to be used. The curves have been divided into three sub groups:

<table>
<thead>
<tr>
<th></th>
<th>Cervical Spine</th>
<th>Thoracic Spine</th>
<th>Lumbar Spine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $30^\circ$ (Mild)</td>
<td>2%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>$31^\circ$ - $60^\circ$ (Moderate)</td>
<td>3%</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td>Above $60^\circ$ (Severe)</td>
<td>5%</td>
<td>25%</td>
<td>33%</td>
</tr>
</tbody>
</table>

In the curves ranging above $30^\circ$, cardio-pulmonary complications are to be graded separately. The junctional curves are to be given that rating depending upon level of apex of curve. For example, if apex of dorsal-lumbar curve falls in the dorsal spine the curve can be taken as a dorsal curve. When the scoliosis is adequately compensated, 5% reduction is to be given from final rating (for all assessment primary curves are considered for rating).

**Kyphosis**

The same total rating (100%) as that suggested for scoliosis is to be given for kyphosis. Region-wise percentages of physical impairment are:

- Dorsal Spine: 50%
- Cervical Spine: 30%
- Lumbar Spine: 20%

For dorsal spine the following further grading are:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $20^\circ$</td>
<td>10%</td>
</tr>
<tr>
<td>$21^\circ$ - $45^\circ$</td>
<td>15%</td>
</tr>
<tr>
<td>$46^\circ$ - $60^\circ$</td>
<td>20%</td>
</tr>
<tr>
<td>Above $60^\circ$</td>
<td>25%</td>
</tr>
</tbody>
</table>

For kyphosis of lumbar and cervical spine 5% and 7% respectively have been allocated.

**Paralysis of Flexors & Extensors of Dorsal and Lumbar Spine**

The motor power of these muscles to be grouped as follows:-

- Normal
- Weak 5%
- Paralysed 10%
Paralysis of Muscles of Cervical Spine

For cervical spine the rating of motor power is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Weak</th>
<th>Paralysed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexors</td>
<td>0</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Extensors</td>
<td>0</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Rotators</td>
<td>0</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Side bending</td>
<td>0</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Miscellaneous

Those conditions of the spine which cause stiffness and pain etc., are rated as follows:

A. Subjective symptoms of pain, no involuntary muscle spasm, not substantiated by demonstrable structural pathology.

B. Pain, persistent muscle spasm and stiffness of spine, substantiated by demonstrable mild radiological changes.

C. Same as B, with moderate radiological changes

D. Same as B, with severe radiological changes involving one of the regions of spine (cervical, dorsal or lumbar)

E. Same as D, involving whole spine

In kypho-scoliosis, both curves to be assessed separately and then percentage of disability to be summed.
Guidelines for evaluation of Permanent Physical Impairment in Amputees

Basic Guidelines

1. In case of multiple amputees, if the total sum of percentage permanent physical impairment is above 100%, it should be taken as 100%.

2. Amputation at any level with uncorrectable inability to wear and use prosthesis, should be given 100% permanent physical impairment.

3. In case of amputation in more than one limb percentage of each limb is counted and another 10% will be added, but when only toes or fingers are involved only another 5% will be added.

4. Any complication in form of stiffness, neurona, infection etc. has to be given a total of 10% additional weightage.

5. Dominant upper limb has been given 3% extra percentage.

### Upper Limb Amputations

<table>
<thead>
<tr>
<th>Amputation Type</th>
<th>Percent Permanent Physical Impairment and loss of physical function of each limb</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fore-quarter amputation</td>
<td>100%</td>
</tr>
<tr>
<td>2. Shoulder Disarticulation</td>
<td>90%</td>
</tr>
<tr>
<td>3. Above Elbow up to upper 1/3 of arm</td>
<td>85%</td>
</tr>
<tr>
<td>4. Above Elbow up to lower 1/3 of arm</td>
<td>80%</td>
</tr>
<tr>
<td>5. Elbow disarticulation</td>
<td>75%</td>
</tr>
<tr>
<td>6. Below Elbow up to upper 1/3 of forearm</td>
<td>70%</td>
</tr>
<tr>
<td>7. Below Elbow up to lower 1/3 of forearm</td>
<td>65%</td>
</tr>
<tr>
<td>8. Wrist disarticulation</td>
<td>60%</td>
</tr>
<tr>
<td>9. Hand through carpal bones</td>
<td>55%</td>
</tr>
<tr>
<td>10. Thumb through C.M. or through 1st MC Joint</td>
<td>35%</td>
</tr>
<tr>
<td>11. Thumb disarticulation through metacarpophalangeal joint or through proximal phalanx</td>
<td>25%</td>
</tr>
<tr>
<td>12. Thumb disarticulation through inter phalangeal joint or through distal phalanx</td>
<td>15%</td>
</tr>
</tbody>
</table>
### Anomaly through proximal phalanx or disarticulation through DIP joint

<table>
<thead>
<tr>
<th>Finger</th>
<th>Index</th>
<th>Middle</th>
<th>Ring</th>
<th>Little</th>
</tr>
</thead>
<tbody>
<tr>
<td>(15%)</td>
<td>5%</td>
<td>3%</td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>

### Amputation through middle phalanx or disarticulation through PIP joint

<table>
<thead>
<tr>
<th>Finger</th>
<th>Index</th>
<th>Middle</th>
<th>Ring</th>
<th>Little</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

### Amputation through distal phalanx or disarticulation through DIP joint

<table>
<thead>
<tr>
<th>Finger</th>
<th>Index</th>
<th>Middle</th>
<th>Ring</th>
<th>Little</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

#### Lower Limb Amputations

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hind quarter</td>
<td>100%</td>
</tr>
<tr>
<td>2. Hip disarticulation</td>
<td>90%</td>
</tr>
<tr>
<td>3. Above knee upto upper 1/3 of thigh</td>
<td>88%</td>
</tr>
<tr>
<td>4. Above knee upto lower 1/3 of thigh</td>
<td>88%</td>
</tr>
<tr>
<td>5. Thigh above knee</td>
<td>88%</td>
</tr>
<tr>
<td>6. J.K. upto 8 cm</td>
<td>70%</td>
</tr>
<tr>
<td>7. J.K. upto lower 1/3 of leg</td>
<td>60%</td>
</tr>
<tr>
<td>8. Thigh through ankle</td>
<td>55%</td>
</tr>
<tr>
<td>9. Syne's</td>
<td>5%</td>
</tr>
<tr>
<td>10. Upto mid-foot</td>
<td>4%</td>
</tr>
<tr>
<td>11. Upto fore-foot</td>
<td>3%</td>
</tr>
<tr>
<td>12. All toes</td>
<td>2%</td>
</tr>
<tr>
<td>13. Loss of first toe</td>
<td>1%</td>
</tr>
<tr>
<td>14. Loss of second toe</td>
<td>1%</td>
</tr>
<tr>
<td>15. Loss of third toe</td>
<td>1%</td>
</tr>
<tr>
<td>16. Loss of fourth toe</td>
<td>1%</td>
</tr>
<tr>
<td>17. Loss of fifth toe</td>
<td>1%</td>
</tr>
</tbody>
</table>
GUIDELINES FOR ASSESSMENT OF PHYSICAL IMPAIRMENT IN NEUROLOGICAL CONDITIONS

1. Assessment in neurological conditions is not just the assessment of disease but it is the assessment of the effects, i.e., clinical manifestations.

2. Any neurological assessment has to be done after six months of onset.

3. These guidelines will only be used for Central and Lower Motor Neurone lesions.

4. Proforma A & B will be utilized for assessment of lower motor neurone lesions, muscular disorders, and other locomotor conditions.

5. Total percentage of physical impairment in neurological conditions will not exceed 100%.

6. In the mixed cases, the highest score will be taken into consideration. The lower score will be added to it and calculations will be done by the formula

\[ \frac{a + b \times (100-a)}{100} \]

7. Additional rating of 25% will be given for dominant upper extremity.

8. Additional 10% has been given for sensation in each extremity, but the maximum total physical impairment will not exceed 100%.

Motor System Disability

<table>
<thead>
<tr>
<th>Disability</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homoparesis</td>
<td>25%</td>
</tr>
<tr>
<td>Homoplegia</td>
<td>50%</td>
</tr>
<tr>
<td>Leporaresis</td>
<td></td>
</tr>
<tr>
<td>Paraparesis</td>
<td></td>
</tr>
<tr>
<td>Paraplegia</td>
<td>75%</td>
</tr>
<tr>
<td>Lepilegia</td>
<td>100%</td>
</tr>
<tr>
<td>Quadripararesis</td>
<td></td>
</tr>
<tr>
<td>Quadriplegia</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sensory System Disability

<table>
<thead>
<tr>
<th>Disability</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesia</td>
<td></td>
</tr>
<tr>
<td>Hypoesthesia</td>
<td></td>
</tr>
<tr>
<td>Paraesthesia</td>
<td></td>
</tr>
<tr>
<td>Porch Limb 10%</td>
<td></td>
</tr>
</tbody>
</table>

for involvement of hand/hands foot/feet 25%
GUIDELINES FOR ASSESSMENT OF PHYSICAL IMPAIRMENT IN NEUROLOGICAL CONDITIONS.

1. Assessment in neurological conditions is not the assessment of disease but it is the assessment of the effects, i.e. clinical manifestation.

2. Any neurological assessment has to be done after six months of onset.

3. These guidelines will only be used for Central and upper motor neurone lesions.

4. Proform A&B will be utilised for assessment of lower motor neurone lesions, muscular disorders and other locomotor conditions.

5. Total percentage of physical impairment in neurological conditions will not exceed 100%.

6. In the mixed cases the highest score will be taken into consideration. The lower score will be added to it and calculations will be done by the formula \( \frac{A \times b}{100-a} \).

7. Additional rating of 4% will be given for dominant upper extremity.

8. Additional 10% has been given for sensation in each extremity, but the maximum total physical impairment will not exceed 100%.

**Speech disability**

<table>
<thead>
<tr>
<th>Disability</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>25%</td>
</tr>
<tr>
<td>Moderate</td>
<td>50%</td>
</tr>
<tr>
<td>Severe</td>
<td>75%</td>
</tr>
<tr>
<td>Very severe</td>
<td>100%</td>
</tr>
</tbody>
</table>

Tested by a 100 word text. Ability to read (in educated), comprehend when read out, answer question on text clearly and ability to write a synopsis (in educated)
GUIDELINES FOR EVALUATION OF PHYSICAL IMPAIRMENT DUE TO CARDIO PULMONARY DISEASES

Basic Guidelines:

1. Modified New York Heart Association subjective classification should be utilised to assess the functional disability.

2. The physician should be alert to the fact that patients who come for disability claims are likely to exaggerate their symptoms. In case of any doubt patients should be referred for detailed physiological evaluation.

3. Disability evaluation of cardiopulmonary patients should be done after full medical, surgical and rehabilitative treatment available, because most of these diseases are potentially treatable.

4. Assessment of non-cardiopulmonary impairment should also be done in diseases which might have associated cardiopulmonary problems, e.g. amputees, myopathies etc.

The proposed modified classification is as follows:

Group 0: A patient with cardiopulmonary disease who is asymptomatic (i.e., has no symptoms of breathlessness, palpitation, fatigue or chest pain).

Group 1: A patient with cardiopulmonary disease who becomes symptomatic during his ordinary physical activity but has mild restriction (25%) of his ordinary physical activities.

Group 2: A patient with cardiopulmonary disease who becomes symptomatic during his ordinary physical activity and has 25-50% restriction of his ordinary physical activity.
MENTAL DISORDERS

Glossary
MENTAL RETARDATION: A condition of arrested or incomplete development of mind which is especially characterized by subnormality of intelligence. The coding should be made on the individual’s current level of functioning without regard to its nature of causation - such as psychosis, cultural deprivation, Down’s syndrome etc., where there is a specific cognitive handicap - such as in speech - the four-digit coding should be based on assessments of cognition outside the area of specific handicap. The assessment of intellectual level should be based on whatever information is available, including clinical evidence, adaptive behaviour and psychometric findings. The IQ levels given are based on a test with a mean of 100 and a standard deviation of 15 - such as the Wechsler scales. They are provided only as a guide and should not be applied rigidly. Mental retardation often involves psychiatric disturbances and may often develop as a result of some physical disease or injury. In these cases, an additional code or codes should be used to identify any associated condition, psychiatric or physical. The impairment and Handicap codes should also be consulted.

(b) MILD MENTAL RETARDATION

Feeble-minded
High Grade defect
Mild mental subnormality

(c) OTHER SPECIFIED MENTAL RETARDATION

i. Moderate mental retardation

Imbecile
IQ 35-49
Moderate mental subnormality

ii. Severe mental retardation

IQ 20-34
Severe mental subnormality

iii. Profound mental retardation

Idiocy
IQ under 20
Profound mental subnormality

(a) UNSPECIFIED MENTAL RETARDATION

Mental deficiency NOS Mental subnormality NOS