

**GLOBAL BURDEN OF DISEASE 2004 UPDATE:
DISABILITY WEIGHTS FOR DISEASES AND CONDITIONS**



Table 1. Global Burden of Disease 2004 update: Disability weights for diseases and conditions (except cancers and injuries)

Sequela	Average disability weight (a)	Range (b)	Source
Tuberculosis - Cases	0.271	0.264 - 0.294	GBD 1990 (c), varies with age
Syphilis			
Congenital syphilis	0.315		GBD 1990
Primary	0.015	0.014 - 0.015	GBD 1990 (c), varies with age
Secondary	0.048	0.044 - 0.048	GBD 1990 (c), varies with age
Tertiary -- Neurologic	0.283		GBD 1990
Chlamydia			
Cervicitis	0.049		GBD 1990
Neonatal pneumonia	0.280		GBD 1990
Ophthalmia neonatorum	0.180		GBD 1990
Pelvic inflammatory disease	0.329	0.194 - 0.382	GBD 1990 (c): untreated 0.420, treated 0.169
Ectopic pregnancy	0.549		GBD 1990
Tubo-ovarian abscess	0.548		GBD 1990
Chronic pelvic pain	0.122		GBD 1990
Infertility	0.180		GBD 1990
Symptomatic urethritis	0.067		GBD 1990
Epididymitis	0.167		GBD 1990
Gonorrhoea			
Cervicitis	0.049		GBD 1990
Corneal scar -- Blindness	0.600		GBD 1990
Ophthalmia neonatorum	0.180		GBD 1990
Pelvic inflammatory disease	0.169		GBD 1990
Ectopic pregnancy	0.549		GBD 1990
Tubo-ovarian abscess	0.548		GBD 1990
Chronic pelvic pain	0.122		GBD 1990
Infertility	0.180		GBD 1990
Symptomatic urethritis	0.067		GBD 1990
Epididymitis	0.167		GBD 1990
Corneal scar -- Low vision	0.233	0.233 - 0.245	GBD 1990 (c), varies with age
Stricture	0.151		GBD 1990
HIV/AIDS			
HIV cases	0.135	0.123 - 0.136	GBD 1990 (c), varies with age
AIDS cases not on ART	0.505		GBD 1990
AIDS cases on ART	0.167	0.145 - 0.469	GBD 2004
Diarrheal diseases - Episodes	0.105	0.086 - 0.119	GBD 1990 (c), varies with age
Pertussis			
Episodes	0.137	0.017 - 0.160	GBD 1990
Encephalopathy	0.452	0.402 - 0.461	GBD 1990 (c), varies with age and treatment
Poliomyelitis - Cases - lameness	0.369		GBD 1990
Diphtheria			
Episodes	0.231		GBD 1990
Neurological complications	0.078		GBD 1990
Myocarditis	0.323		GBD 1990
Measles - Episodes	0.152		GBD 1990
Tetanus - Episodes	0.638	0.604 - 0.640	GBD 1990 (c), varies with age
Meningitis			
Streptococcus pneumoniae – Episodes	0.615	0.613 - 0.616	GBD 1990 (c), varies with age
Haemophilus influenzae – Episodes	0.616	0.613 - 0.616	GBD 1990 (c), varies with age
Neisseria meningitidis – Episodes	0.615	0.613 - 0.616	GBD 1990 (c), varies with age
Meningococcaemia episodes without meningitis	0.152		GBD 1990

Deafness	0.229	0.213 - 0.233	GBD 1990 (c), varies with age and treatment
Mental retardation	0.459	0.402 - 0.484	GBD 1990 (c), varies with age and treatment
Motor deficit	0.381	0.339 - 0.460	GBD 1990 (c), varies with age and treatment
Seizure disorder	0.100	0.048 - 0.142	GBD 1990 (c), varies with age and treatment
Hepatitis B - Episodes	0.075		GBD 2004
Hepatitis C - Episodes	0.075		GBD 2004
Malaria			
Episodes	0.191	0.172 - 0.211	GBD 1990 (c), varies with age and treatment
Neurological sequelae	0.471	0.443 - 0.471	GBD 1990 (c), varies with age and treatment
Anemia	0.012	0.012 - 0.013	GBD 1990 (c), varies with age
Trypanosomiasis - Episodes	0.350		GBD 1990
Chagas disease			
Infection	0.000		GBD 1990
Cardiomyopathy without congestive heart failure	0.062		GBD 1990
Cardiomyopathy with congestive heart failure	0.270		GBD 1990 (c): untreated 0.323, treated 0.171
Megaviscera	0.240		GBD 1990
Schistosomiasis			
Infection	0.005		GBD 1990 (c)
Advanced renal disease	0.104		GBD 2004
Advanced hepatic disease	0.104		GBD 2004
Leishmaniasis			
Visceral	0.243		GBD 1990
Cutaneous	0.023		GBD 1990
Lymphatic filariasis			
Hydrocele > 15cm	0.073	0.066 - 0.075	GBD 1990 (c), varies with age
Bancroftian lymphoedema	0.106	0.067 - 0.128	GBD 1990 (c), varies with age
Brugian lymphoedema	0.116	0.064 - 0.128	GBD 1990 (c), varies with age
Onchocerciasis			
Blindness	0.594		GBD 1990
Itching	0.068		GBD 1990
Low vision	0.170		GBD 2004
Leprosy			
Cases	0.000		GBD 1990
Disabling leprosy	0.152		GBD 1990
Dengue			
Dengue fever	0.197	0.172 - 0.211	GBD 1990 (c), varies with age
Dengue haemorrhagic fever	0.545	0.475 - 0.583	GBD 2004
Japanese Encephalitis			
Episodes	0.616	0.613 - 0.616	GBD 1990 (c), varies with age
Cognitive impairment	0.468	0.402 - 0.484	GBD 1990 (c), varies with age and treatment
Neurological sequelae	0.379	0.350 - 0.453	GBD 1990 (c), varies with age and treatment
Trachoma			
Blindness	0.581	0.510 - 0.595	GBD 1990
Low vision	0.170		GBD 2004
Ascariasis			
High intensity infection	0.000		GBD 1990
Contemporaneous cognitive deficit	0.006		GBD 1990
Cognitive impairment	0.463		GBD 1990
Intestinal obstruction	0.024		GBD 1990
Trichuriasis			
High intensity infection	0.000		GBD 1990
Contemporaneous cognitive deficit	0.006		GBD 1990
Massive dysentery syndrome	0.116	0.114 - 0.138	GBD 1990 (c), varies with age
Cognitive impairment	0.024		GBD 1990
Hookworm disease (ancylostomiasis and			

necatoriasis)			
High intensity infection	0.006		GBD 2004
Anemia	0.024		GBD 1990
Cognitive impairment	0.024		GBD 1990
Lower respiratory infections			
Episodes	0.279	0.275 - 0.280	GBD 1990
Chronic sequelae	0.099		GBD 1990
Upper respiratory infections			
Episodes	0.000		GBD 1990
Pharyngitis	0.070		GBD 1990
Otitis media			
Chronic infection	0.023		GBD 1990
Deafness	0.229	0.227 - 0.233	GBD 1990 (c), varies with age and treatment
Maternal haemorrhage			
Episodes	0.000		GBD 1990
Severe anemia	0.093	0.090 - 0.093	GBD 1990 (c), varies with age
Maternal sepsis			
Episodes	0.000		GBD 1990
Infertility	0.180		GBD 1990
Hypertensive disorders of pregnancy - Episodes	0.000		GBD 1990
Obstructed labour			
Episodes	0.000		GBD 1990
Caesarean section for obstructed labour	0.349		GBD 1990
Stress incontinence	0.025		GBD 1990
Rectovaginal fistula	0.430		GBD 1990
Abortion			
Episodes	0.000		GBD 1990
Infertility	0.180		GBD 1990
Reproductive tract infection	0.067		GBD 1990
Other maternal conditions			
Stress incontinence	0.025		GBD 1990
Low birth weight - All sequelae	0.106		GBD 1990
Birth asphyxia and birth trauma - All sequelae	0.372	0.343 - 0.379	GBD 1990 (c): untreated 0.381, treated 0.334
Protein-energy malnutrition			
Wasting	0.053		GBD 1990
Stunting	0.002		GBD 1990
Developmental disability	0.024		GBD 1990
Iodine deficiency			
Total goitre rate (G1 + G2)	0.000		GBD 1990
Mild developmental disability	0.006		GBD 1990
Cretinoidism	0.255		GBD 1990
Cretinism	0.804		GBD 1990
Vitamin A deficiency			
Xerophthalmia	0.000		GBD 1990
Corneal scar	0.277	0.274 - 0.282	GBD 1990 (c), varies with age
Iron-deficiency anemia			
Mild	0.000		GBD 1990
Moderate	0.011	0.011 - 0.012	GBD 1990 (c), varies with age
Severe	0.090	0.087 - 0.093	GBD 1990 (c), varies with age
Cognitive impairment	0.024		GBD 1990
Diabetes mellitus			
Cases	0.015	0.012 - 0.018	GBD 1990 (c): untreated 0.012, treated 0.033
Diabetic foot	0.133	0.130 - 0.136	GBD 1990 (c): untreated 0.137, treated 0.129
Neuropathy	0.072	0.066 - 0.076	GBD 1990 (c): untreated 0.078, treated

			0.064
Retinopathy – blindness	0.552	0.511 - 0.595	GBD 1990 (c): untreated 0.600, treated 0.493
Amputation	0.102	0.086 - 0.151	GBD 1990 (c): untreated 0.155, treated 0.068
Unipolar depressive disorders			
Mild depressive episode	0.140		Netherlands study (e)
Moderate depressive episode	0.350		Netherlands study (e)
Severe depressive episode	0.760		Netherlands study (e)
Dysthymia	0.140		Netherlands study (e)
Bipolar affective disorder - Cases	0.367	0.309 - 0.387	Untreated 0.400, treated 0.140
Schizophrenia - Cases	0.528	0.406 - 0.572	GBD 1990 (c), varies with age and treatment
Epilepsy - Cases	0.113	0.052 - 0.142	GBD 1990 (c), varies with age and treatment
Alcohol use disorders - Cases	0.134	0.122 - 0.137	GBD 2004
Alzheimer and other dementias - Cases	0.666	0.627 - 0.667	GBD 1990 (c), varies with age
Parkinson disease - Cases	0.351	0.324 - 0.395	GBD 1990 (c), varies with age and treatment
Multiple sclerosis - Cases	0.411	0.410 - 0.437	GBD 1990 (c), varies with age
Drug use disorders - Cases	0.252		GBD 1990
Post-traumatic stress disorder - Cases	0.105		GBD 1990
Obsessive-compulsive disorder - Cases	0.127	0.122 - 0.129	GBD 1990 (c): untreated 0.129, treated 0.080
Panic disorder - Cases	0.165	0.153 - 0.171	GBD 1990 (c): untreated 0.173, treated 0.091
Insomnia (primary) - Cases	0.100		(f)
Migraine - Cases	0.029	0.025 - 0.030	(f)
Mild mental retardation attributable to lead exposure - Cases	0.361		Netherlands study (e)
Glaucoma			
Low vision	0.170		GBD 2004
Blindness	0.600		GBD 1990
Cataracts			
Low vision	0.170		GBD 2004
Blindness	0.570	0.511 - 0.595	GBD 1990 (c): untreated 0.600, treated 0.488
Refractive errors			
Low vision	0.170		GBD 2004
Blindness	0.430		Netherlands study (e)
Macular degeneration			
Low vision	0.170		GBD 2004
Blindness	0.600		GBD 1990
Hearing loss, adult onset			
Mild	0.000		Assumed to have no disability for GBD
Moderate, treated	0.040		Assumed similar to mild hearing loss (f)
Moderate, untreated	0.120		Netherlands study (e)
Severe or profound, treated	0.120		Assumed similar to moderate loss (f)
Severe or profound, untreated	0.333		GBD 1990 deafness weight (c)
Rheumatic heart disease - Cases	0.253	0.186 - 0.300	GBD 1990 (c): untreated 0.323, treated 0.171
Hypertensive heart disease - Cases	0.246	0.201 - 0.300	(f): untreated 0.323, treated 0.171
Ischemic heart disease			
Acute myocardial infarction	0.439	0.405 - 0.477	GBD 1990 (c): untreated 0.491, treated 0.395
Angina pectoris	0.124	0.105 - 0.141	GBD 1990 (c): untreated 0.227, treated 0.095
Congestive heart failure	0.201	0.186 - 0.206	GBD 1990 (c): untreated 0.323, treated 0.171
Cerebrovascular disease			
First-ever stroke cases	0.920		(f)
Long-term stroke survivors	0.266	0.228 - 0.295	(d), varies with age and treatment
Inflammatory heart disease - All sequelae	0.252	0.201 - 0.300	GBD 1990 (c): untreated 0.323, treated 0.171
Chronic obstructive pulmonary disease			

Mild and moderate symptomatic cases	0.170		Netherlands study (e)
Severe symptomatic cases	0.530		Netherlands study (e)
Asthma -- cases	0.043	0.036 - 0.050	(f): untreated 0.054, treated 0.043
Peptic ulcer disease			(f)
Cases with antibiotic treatment	0.003		GBD 1990
Cases not treated with antibiotic	0.042	0.024 - 0.092	GBD 2004
Cirrhosis of the liver - Symptomatic cases	0.330		GBD 1990
Appendicitis - Episodes	0.463		GBD 1990
Nephritis and nephrosis			
Acute glomerulonephritis	0.091	0.082 - 0.104	GBD 1990 (c), varies with age and treatment
End-stage renal disease	0.098	0.087 - 0.107	GBD 1990 (c), varies with age and treatment
Benign prostatic hypertrophy - Symptomatic cases	0.038		GBD 1990
Skin diseases - Cases	0.056		(f)
Rheumatoid arthritis - Cases	0.199	0.185 - 0.221	GBD 1990 (c): untreated 0.233, treated 0.174
Osteoarthritis			
Hip	0.126	0.118 - 0.147	GBD 1990 (c): untreated 0.156, treated 0.108
Knee	0.129	0.118 - 0.147	GBD 1990 (c): untreated 0.156, treated 0.108
Gout - Cases	0.132	0.061 - 0.189	(f)
Low back pain			
Episode of limiting low back pain	0.061		(e)
Episode of intervertebral disc displacement or herniation	0.061		(f)
Chronic intervertebral disc	0.121	0.103 - 0.125	(f)
Abdominal wall defect - Cases	0.850		GBD 1990
Anencephaly - Cases	0.850		GBD 1990
Anorectal atresia - Cases	0.850		GBD 1990
Cleft lip - Cases	0.050	0.024 - 0.082	GBD 1990 (c): untreated 0.016, treated 0.098
Cleft palate - Cases	0.103	0.036 - 0.187	GBD 1990 (c): untreated 0.015, treated 0.231
Oesophageal atresia - Cases	0.850		GBD 1990
Renal agenesis - Cases	0.850		GBD 1990
Down syndrome - Cases	0.593		GBD 1990
Congenital heart anomalies - Cases	0.323		GBD 1990
Spina bifida - Cases	0.593		GBD 1990
Dental caries - Episodes	0.081		GBD 1990
Periodontal disease - Cases	0.001		GBD 1990
Edentulism - Cases	0.025	0.007 - 0.052	GBD 1990 (c): untreated 0.062, treated 0.001

(a) Global average disability weight.

(b) Minimum and maximum disability weights if there is variation across age-sex-region categories. For disability weights based on the GBD 1990 study, further details of age-sex variation, treated and untreated weights, are given in Annex Tables 3 and 4 of Murray and Lopez (1996).

(c) Disability weights from GBD 1990 (Murray and Lopez 1996)

(d) Disability weights based on GBD 1990 (Murray and Lopez 1996) with some revisions.

(e) Disability weights drawn from Netherlands disability weights study (Stouthard et al. 1997).

(f) Provisional disability weights based on GBD 1990 or Netherlands weights for comparable health states.

Table 2. Disability weights for malignant neoplasms and their long-term sequelae

Site	Stage (a)			Mortality stratum (for WHO subregions) (b)			
	Diagnosis/ therapy	Waiting	Long-term sequelae	A	B	C	D/E
Mouth and oropharynx	0.09	0.09					
Oesophagus	0.20	0.20					
Stomach	0.20	0.20					
Colon and rectum	0.20	0.20	Stoma	0.09	0.09	0.06	0.02
Liver	0.20	0.20					
Pancreas	0.20	0.20					
Trachea, bronchus and lung	0.15	0.15					
Melanoma and other skin	0.05	0.05					
Breast	0.09	0.09	Mastectomy	0.03	0.05	0.06	0.08
Cervix uteri	0.08	0.08	Infertility and incontinence	0.04	0.11	0.13	0.17
Corpus uteri	0.10	0.10	Infertility and incontinence	0.18	0.18	0.18	0.18
Ovary	0.10	0.10	Infertility and incontinence	0.18	0.18	0.18	0.18
Prostate	0.13	0.13	Impotence/ incontinence	0.06	0.06	0.06	0.06
Bladder	0.09	0.09					
Non-Hodgkin lymphoma	0.06	0.06					
Hodgkin Lymphoma	0.06	0.06					
Leukemia	0.09	0.09					
Others	0.09	0.09					

Note: For all cancer sites, the disability weight is 0.75 for the metastasis stage, and 0.81 in the terminal stage

Sources: Provisional weights based on the Netherlands study ((Stouthard et al. 1997) and on weights used in the Australian Burden of Disease Study (Mathers, Vos and Stevenson 1999).

Table 3. Disability weights for injuries

Injury category	Short-term Weight		Long-term Weight	
	Treated	Untreated	Treated	Untreated
Fractured skull	0.431	0.431		
Age 0-44			0.350	0.410
Age 45-59			0.350	0.419
Age 60+			0.404	0.471
Intracranial injuries	0.359	0.359		
Age 0-44			0.350	0.410
Age 45-59			0.350	0.419
Age 60+			0.404	0.471
Fracture				
Face bones	0.223	0.223		
Vertebral column	0.266	0.266		
Rib or sternum	0.199	0.199		
Pelvis	0.247	0.247		
Clavicle, scapula or humerus	0.153	0.153		
Ulna or radius	0.180	0.180		
Hand bones	0.100	0.100		
Femur	0.372	0.372	0.272	0.272
Patella, tibia or fibula	0.271	0.271		
Ankle	0.196	0.196		
Foot bones	0.077	0.077		
Injured spinal cord			0.725	0.725
Dislocation of shoulder, elbow or hip	0.074	0.074		
Other dislocation	0.074	0.074		
Sprains	0.064	0.064		
Amputation				
Thumb			0.165	0.165
Finger			0.102	0.102
Arm			0.257	0.308
Toe			0.102	0.102
Foot			0.300	0.300
Leg			0.300	0.300
Internal injuries	0.208	0.208		
Open wound	0.108	0.108		
Injury to eyes	0.108	0.108	0.300	0.354
Crushing	0.218	0.218		
Burns				
< 20%	0.158	0.156	0.001	0.002
> 20% and < 60%	0.441	0.469	0.255	0.255
> 60%	0.441	0.469	0.255	0.255
Injured nerves	0.064	0.078	0.064	0.078
Poisoning				
Age 0-14	0.611	0.611		
Age > 14	0.608	0.608		

Sources: Injury disability weights from GBD 1990 (Murray and Lopez 1996).

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