

Injury Impairment Scale (IIS) and Injury Disability Scale (IDS)

Overview: The Injury Impairment Scale (IIS) and Injury Disability Scale (IDS) was developed to evaluate the impact of traumatic injury on a patient. The Injury Disability Scale can be estimated from the IIS based on the person's available resources and underlying conditions. The authors are from Rochester General Hospital (New York) and the General Motors Research Laboratories.

IIS parameters:

- (1) mobility and dexterity
- (2) cognitive and psychological
- (3) cosmetic disfigurement
- (4) sensory
- (5) pain
- (6) sexual and reproduction

Parameters	Level of Impairment	Grade
mobility and dexterity	normal	0
	minor	1
	moderate	2
	serious	3
	severe	4
	very severe	5
	totally immobile and dependent	6
cognitive and psychological	normal	0
	minor	1
	moderate	2
	serious	3
	severe	4
	very severe	5
	comatose	6
cosmetic or disfigurement	normal	0
	minor	1

	moderate	2
	serious	3
	severe	4
vision	normal	0
	minor	1
	moderate	2
	serious	3
	severe	4
hearing	normal	0
	minor	1
	moderate	2
	serious	3
sensation	normal	0
	minor	1
	moderate	2
	serious	3
taste and smell	normal	0
	minor	1
	moderate	2
	serious	3
pain	normal	0
	minor	1
	moderate	2
	serious	3
	severe	4
	very severe	5
	total impairment	6
sexuality reproduction	normal	0

	minor (decreased frequency of intercourse)	1
	moderate (partial loss)	2
	serious (complete loss)	3

Disability Level	IDS Scale
no disability (able to be fully employed and pursue full recreational activities)	0
minor (self support with reduced recreational activities)	1
moderate (self support with no recreational activity)	2
serious (independent living; may or may not require some assistance with activities of daily living; may be able to work part-time)	3
severe (living at home with assistance of an aid less than 4 hours per day or requires some assistance with shopping meal preparation or medications)	4
very severe (full care at home with assistance more than 4 hours a day or institutional care providing some assistance with activities of daily living)	5
extreme (requires institutional care with an external life support system)	6

Parameters used to derive the IDS from maximum IIS:

- (1) age
- (2) education
- (3) employment before the injury
- (4) availability of rehabilitation services
- (5) marital status
- (6) adult children
- (7) past medical history
- (8) personal assets

Parameter	Finding	Adjustment Points
age in years		+0.01 * (age)
education	less than high school	+1
	high school diploma	0

	associate degree	-0.2
	BA degree	-0.5
	MA degree	-0.6
	PhD MD LLD etc	-0.8
employment	worked full time (including housewife)	-0.5
	did not work full time	0
rehabilitation services	available through community or employer	-0.2
	not readily available	0
marital status	married and living with spouse	-0.5
	not married or living with a spouse	0
adult children	live within 50 miles	-0.2
	live more than 50 miles away	0
	no adult children	0
past medical history	permanent impaired before accident	+0.5
	no impaired	0
personal assets	affluent	-1.0
	not affluent	0

where:

- Affluence was a net worth > \$100 0 in 1990.

total adjustment points =

= SUM(points for all 8 parameters)

estimated IDS from IIS =

= (maximum grade for IIS) + (total adjustment points)

References: States JD Viano DC. Injury impairment and disability scales to assess the permanent consequences of trauma. *Accid Anal & Prev.* 1990; 22: 151-160.