
SCHEDULE B

PERMANENT IMPAIRMENT RATING FOR HEARING LOSS

This document is a general summation of established practices, and scheduled ratings used by the Workers Compensation Board of Manitoba for the evaluation of permanent impairment from hearing loss.

Version Date: July 1, 2016

(For impairments other than hearing loss see Schedule A)

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1. INTRODUCTION TO THE SCHEDULE

Three methods are provided for the rating of Impairment of Hearing. Applicability of the respective methods is based on the following accident dates:

Method 1:

- For new decisions regarding permanent impairment ratings for Impairment of Hearing with an accident date occurring January 1, 1992 to March 31, 2000 inclusive; and
- For decisions relating to reconsiderations and reassessments for Impairment of Hearing with an accident date occurring January 1, 1992 to March 31, 2000 inclusive.

Method 2:

- For decisions relating to reconsiderations and reassessments for Impairment of Hearing with an accident date occurring April 1, 2000 to January 30, 2003 inclusive.

Method 3:

- For new decisions regarding permanent impairment ratings relating to Impairment of Hearing with an accident date occurring on or after April 1, 2000; and
- For decisions relating to reconsiderations and reassessments for Impairment of Hearing with an accident date occurring on or after February 1, 2003.

2. IMPAIRMENT OF HEARING - METHOD 1

2.1 APPLICATION OF METHOD 1

Method 1 applies to:

- New decisions regarding permanent impairment ratings for Impairment of Hearing with an accident date occurring January 1, 1992 to March 31, 2000 inclusive; and
- Decisions relating to reconsiderations and reassessments for Impairment of Hearing with an accident date occurring January 1, 1992 to March 31, 2000 inclusive.

2.2 GENERAL INFORMATION

When calculating impairment due to loss of hearing, the International Organization for Standardization (ISO) audiometric calibration will be used and the hearing will be averaged at 500, 1,000, 2,000 and 3,000 hertz.

In order to merit an award, the average of the four speech frequency levels must be 35 decibels in each ear and the hearing loss in decibels is converted into percentage of impairment in accordance with the following schedule:

TABLE 2-1 - CONVERSION OF DECIBELS OF HEARING LOSS TO PERCENTAGE OF IMPAIRMENT

Decibel Hearing Loss	Percentage
35 dBs ISO	0.4
40 dBs ISO	0.7
45 dBs ISO	1.0
50 dBs ISO	1.4
55 dBs ISO	1.8
60 dBs ISO	2.3
65 dBs ISO	2.8
70 dBs ISO	3.4
75 dBs ISO	4.0
80 dBs ISO	5.0

2.2.1 ENHANCEMENT FACTOR

In bilateral deafness the poorer ear is rated according to the scale and the better ear is rated according to the scale, multiplied by five. The sum of the two give the combined rating.

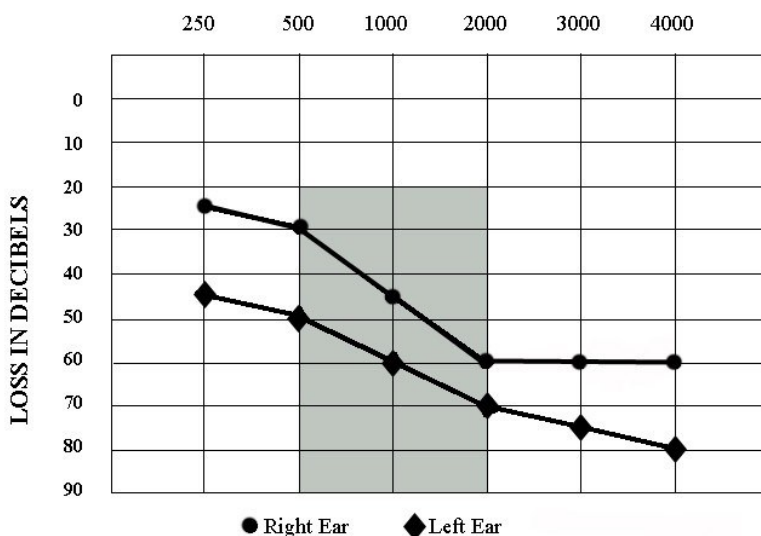
2.2.2 PRESBYCUSIS

In cases where the claimant's age exceeds 60, deduct .5 decibels for each year. This is to allow for presbycusis or loss of hearing due to age.

Example:

A sixty-six year old boiler-maker who has worked thirty-five years at his trade has marked hearing loss in both ears.

Audiogram:



Right Ear:

Hearing loss at 500 cps	30
Hearing loss at 1,000 cps	45
Hearing loss at 2,000 cps	60
Hearing loss at 3,000 cps	60
TOTAL	195

Average = 195 divided by 4 = 48.7 dBs

For age over 60 deduct 6 x .5 = 3 dBs

Compensable hearing loss = 45.7

Percentage of disability (45 dBs) = 1.0%

Left Ear:

Hearing loss at 500 cps	50
Hearing loss at 1,000 cps	60
Hearing loss at 2,000 cps	70
Hearing loss at 3,000 cps	75
TOTAL	255

Average = 255 divided by 4 = 63.7 dBs

For age over 60 deduct $6 \times .5 = 3$ dBs

Compensable hearing loss = 60.7

Percentage of disability (60 dBs) = 2.3%

Percentage of disability in two ears $2.3 + (1 \times 5) = 7.3\%$

NOTE: If average decibel loss falls between two levels in the schedule, take the nearest rating level. If at the mid-point round-up. However, if the loss is between two levels below 35 decibels do not round-up to 35 decibels. The average loss must be at least 35 decibels before any rounding-up occurs.

Deafness, complete one ear	5%
Deafness, complete both ears	30%
Deafness, complete in both ears and a sudden and complete traumatic loss of hearing	60%

2.2.3 UNILATERAL HEARING LOSS

When dealing with unilateral hearing loss, the chief cause of impairment is due to loss of stereocochlear function (stereocochlear enhances speech discrimination and localizes the source of sound). Where the loss in one ear exceeds the standard 35 decibels and the other ear is within the non-rateable range, an impairment is not awarded unless the difference is 30 decibels or more.

Over 30 dBs ISO	1%
Over 40 dBs ISO	2%
Over 50 dBs ISO	3%
Over 60 dBs ISO	4%
Over 70 dBs ISO	5%

3. IMPAIRMENT OF HEARING - METHOD 2

3.1 APPLICATION OF METHOD 2

Method 2 applies for decisions relating to reconsiderations and reassessments for Impairment of Hearing with an accident date occurring April 1, 2000 to January 30, 2003 inclusive.

3.2 GENERAL INFORMATION

Calculating impairment due to loss of hearing involves two steps:

1. Calculating the percentage of hearing loss in one or both ears.
2. Converting the loss of hearing to an impairment of the whole person.

In most respects, the establishment of permanent hearing impairment is based on the 4th edition (1993) of the *American Medical Association's Guides to the Evaluation of Permanent Impairment*. A change to the AMA guides would not result in an automatic change to this policy.

3.2.1 CALCULATING THE PERCENTAGE OF HEARING LOSS

General:

1. When calculating impairment due to loss of hearing, the International Organization for Standardization (ISO) audiometric calibration will be used.

Test each ear and record the hearing levels at 500, 1000, 2000 and 3000 Hz.

2. If the total of the hearing levels at 500, 1000, 2000 and 3000 Hz is 105 dB or more in one ear but less than 105 dB in the other, use the method for calculating monaural hearing impairment (below).
3. If the total of the hearing levels at 500, 1000, 2000 and 3000 Hz is 105 dB or more in both ears, use the method for calculating binaural hearing impairment (below).

3.2.2 MONAURAL HEARING IMPAIRMENT

4. Add the value of the hearing levels at 500, 1000, 2000 and 3000 Hz in the worse ear.

5. Consult Table 3-1 to determine the percentage of monaural hearing loss.

Example:

A worker has the following test results in one ear:

500 Hz	20 dB
1000 Hz	25 dB
2000 Hz	30 dB
3000 Hz	45 dB
TOTAL	120 dB

Table 3-1 indicates that a combined hearing loss of 120 dB is equivalent to a 7.5% hearing impairment in one ear.

3.2.3 BINAURAL HEARING IMPAIRMENT

6. Add the value of the hearing levels at 500, 1000, 2000 and 3000 Hz in each ear.
7. Consult Table 3-1 to determine the percentage of hearing loss in each ear.
8. Use the following formula to determine binaural hearing impairment:

Total % = [5 x (% hearing impairment in better ear) + (% hearing impairment in poorer ear)] / 6.

Example:

A worker had the following test results in each ear:

Right Ear:

Hearing loss at 500 hertz	30 dB
Hearing loss at 1,000 hertz	45 dB
Hearing loss at 2,000 hertz	60 dB
Hearing loss at 3,000 hertz	60 dB
TOTAL	195 dB

Left Ear:

Hearing loss at 500 hertz	50 dB
Hearing loss at 1,000 hertz	60 dB
Hearing loss at 2,000 hertz	70 dB
Hearing loss at 3,000 hertz	75 dB
TOTAL	255 dB

Table 3-1 indicates that a combined hearing loss of 195 dB is equivalent to a 35.6% hearing impairment in the right ear, and a combined hearing loss of 255 dB a 58.1% in the left ear.

The hearing impairment in the better ear (35.6%) is multiplied by 5. The product (178) is then added to the hearing impairment in the poorer ear (58.1%). The sum (236.1) is then divided by 6. The resulting hearing impairment in both ears is 39.4%.

3.2.4 PRESBYCUSIS

One's ability to hear tends to lessen with age. The loss of hearing due to age is known as presbycusis. The WCB compensates workers for hearing loss caused by occupational noise, but not age.

To compensate for hearing loss caused by occupational noise and not by age, multiply the number of the worker's years over the age of 60 by 2. Then deduct the product from the sum of the value of the hearing levels at 500, 1000, 2000 and 3000 Hz in each ear.

Example:

A sixty-six year old boiler-maker has the following test results in one ear:

500 Hz	20 dB
1000 Hz	25 dB
2000 Hz	30 dB
3000 Hz	45 dB
TOTAL	120 dB

This worker is 6 years over the age of 60. Subtract 12 (6 years x 2) from 120 dB.

Total hearing loss for this worker is 108 dB.

TABLE 3-1 - HEARING LOSS AND IMPAIRMENT

Hearing Loss in dB	%	Hearing Loss in dB	%	Hearing Loss in dB	%
100	0.0	195	35.6	290	71.2
105	1.9	200	37.5	295	73.1
110	3.8	205	39.4	300	75.0
115	5.6	210	41.2	305	76.9
120	7.5	215	43.1	310	78.8
125	9.4	220	45.0	315	80.6
130	11.2	225	46.9	320	82.5
135	13.1	230	48.9	325	84.4
140	15.0	235	50.5	330	86.2
145	16.9	240	52.4	335	88.1
150	18.8	245	54.4	340	90.0
155	20.6	250	56.2	345	90.9
160	22.5	255	58.1	350	93.8
165	24.4	260	60.0	355	95.6
170	26.2	265	61.9	360	97.5
175	28.1	270	63.8	365	99.4
180	30.0	275	65.6	368 or greater	100.00
185	31.9	280	67.5		
190	33.8	285	69.3		

3.2.5 CALCULATING WHOLE-PERSON IMPAIRMENT PERCENTAGE

9. Hearing loss is only one component of overall bodily function. Consult Table 3-2 to convert the impairment of monaural and binaural hearing to impairment of the whole person.

Deafness, complete in both ears and the result of sudden and complete traumatic loss of hearing is rated as a 60% impairment of the whole person.

TABLE 3-2 - CONVERTING HEARING IMPAIRMENT TO WHOLE PERSON IMPAIRMENT

% Hearing Impairment	% Impairment of the Whole Person	% Hearing Impairment	% Impairment of the Whole Person
0- 1.7	0	50.0 - 53.1	18
1.8 - 4.2	1	53.2 - 55.7	19
4.3 - 7.4	2	55.8 - 58.8	20
7.5 - 9.9	3	58.9 - 61.4	21
10.0 - 13.1	4	61.5 - 64.5	22
13.2 - 15.9	5	64.6 - 67.1	23
16.0 - 18.8	6	67.2 - 70.0	24
18.9 - 21.4	7	70.1 - 72.8	25
21.5 - 24.5	8	72.9 - 75.9	26
24.6 - 27.1	9	76.0 - 78.5	27
27.2 - 30.0	10	78.6 - 81.7	28
30.1 - 32.8	11	81.8 - 84.2	29
32.9 - 35.9	12	84.3 - 87.4	30
36.0 - 38.5	13	87.5 - 89.9	31
38.6 - 41.7	14	90.0 - 93.1	32
41.8 - 44.2	15	93.2 - 95.7	33
44.3 - 47.4	16	95.8 - 98.8	34
47.5 - 49.9	17	98.9 - 100.0	35

3.3 TINNITUS

Tinnitus, when secondary to noise-induced occupational hearing loss, is rated as a 2% impairment of the whole person.

4. IMPAIRMENT OF HEARING - METHOD 3

4.1 APPLICATION OF METHOD 3

Method 3 applies:

- For new decisions regarding permanent impairment ratings relating to Impairment of Hearing with an accident date occurring on or after April 1, 2000; and
- For decisions relating to reconsiderations and reassessments for Impairment of Hearing with an accident date occurring on or after February 1, 2003.

4.2 GENERAL INFORMATION

Calculating impairment due to loss of hearing involves three steps:

1. Calculating the percentage of hearing loss in each ear;
2. Calculating the combined percentage of hearing loss;
3. Converting the loss of hearing to an impairment of the whole person.

In most respects, the establishment of permanent hearing impairment is based on the 4th edition (1993) of the *American Medical Association's Guides to the Evaluation of Permanent Impairment*. A change to the AMA Guides would not result in an automatic change to this policy.

4.2.1 CALCULATING THE PERCENTAGE OF HEARING LOSS

When calculating impairment due to loss of hearing, the International Organization for Standardization (ISO) audiometric calibration will be used.

1. Test each ear and record the hearing levels at 500, 1000, 2000 and 3000 Hz. Add the value of the hearing levels at 500, 1000, 2000 and 3000 Hz in each ear.
2. If the level of hearing loss is less than 100 dB in the better ear, the percentage of hearing loss in that ear should be taken as 0%.
3. Consult Table 4-1 to determine the percentage of hearing loss in each ear.
4. If the level of hearing loss falls between values on the chart, round the level to the nearest 5 dB of hearing loss.

TABLE 4-1 - HEARING LOSS AND IMPAIRMENT

Hearing Loss in dB	%	Hearing Loss in dB	%	Hearing Loss in dB	%
100	0.0	195	35.6	290	71.2
105	1.9	200	37.5	295	73.1
110	3.8	205	39.4	300	75.0
115	5.6	210	41.2	305	76.9
120	7.5	215	43.1	310	78.8
125	9.4	220	45.0	315	80.6
130	11.2	225	46.9	320	82.5
135	13.1	230	48.9	325	84.4
140	15.0	235	50.5	330	86.2
145	16.9	240	52.4	335	88.1
150	18.8	245	54.4	340	90.0
155	20.6	250	56.2	345	90.9
160	22.5	255	58.1	350	93.8
165	24.4	260	60.0	355	95.6
170	26.2	265	61.9	360	97.5
175	28.1	270	63.8	365	99.4
180	30.0	275	65.6	368 or greater	100.00
185	31.9	280	67.5		
190	33.8	285	69.3		

Use the following formula to determine binaural hearing impairment:

$$\text{Total \%} = ([5 \times \% \text{ hearing impairment in better ear}] + \% \text{ hearing impairment in poorer ear}) / 6$$

4.2.2 EXAMPLE: SIGNIFICANT HEARING LOSS IN BOTH EARS

A worker has the following test results in each ear:

Right Ear:

Hearing loss at 500 hertz	30dB
Hearing loss at 1,000 hertz	45 dB
Hearing loss at 2,000 hertz	60 dB
Hearing loss at 3,000 hertz	60 dB
TOTAL	195 dB

Left Ear:

Hearing loss at 500 hertz	50dB
Hearing loss at 1,000 hertz	60 dB
Hearing loss at 2,000 hertz	70 dB
Hearing loss at 3,000 hertz	75 dB
TOTAL	255 dB

Table 4-1 indicates that a combined hearing loss of 195 dB is equivalent to a 35.6% hearing impairment in the right ear, and a combined hearing loss of 255 dB is equivalent to a 58.1% hearing impairment in the left ear.

The hearing impairment in the better ear (35.6%) is multiplied by 5. The product (178) is then added to the hearing impairment in the poorer ear (58.1%). The sum (236.1) is then divided by 6. The resulting hearing impairment in both ears is 39.4%.

4.2.3 EXAMPLE: SIGNIFICANT HEARING LOSS IN ONE EAR

A worker has the following test results in each ear:

Right Ear:

Hearing loss at 500 hertz	35 dB
Hearing loss at 1,000 hertz	35 dB
Hearing loss at 2,000 hertz	40 dB
Hearing loss at 3,000 hertz	55 dB
TOTAL	165 dB

Left Ear:

Hearing loss at 500 hertz	10 dB
Hearing loss at 1,000 hertz	10 dB
Hearing loss at 2,000 hertz	15 dB
Hearing loss at 3,000 hertz	20 dB
TOTAL	55 dB

Table 4-1 indicates that a combined hearing loss of 165 dB is equivalent to a 24.4% hearing impairment in the right ear, and a combined hearing loss of 55 dB is equivalent to a 0% hearing impairment in the left ear.

The hearing impairment in the better ear (0%) is multiplied by 5. The product (0) is then added to the hearing impairment in the poorer ear (24.4%). The sum (24.4) is then divided by 6. The resulting hearing impairment in both ears is 4.1%.

4.2.4 PRESBYCUSIS

One's ability to hear tends to lessen with age. The loss of hearing due to age is known as presbycusis. The WCB compensates workers for hearing loss caused by occupational noise, but not age.

To compensate for hearing loss caused by occupational noise and not by age, multiply the number of the worker's years over the age of 60 by 2. Then deduct the product from the sum of the value of the hearing levels at 500, 1000, 2000 and 3000 Hz in each ear.

Example:

A sixty-six year old boiler-maker has the following test results in each ear:

Right Ear:

Hearing loss at 500 hertz	20 dB
Hearing loss at 1,000 hertz	25 dB
Hearing loss at 2,000 hertz	30 dB
Hearing loss at 3,000 hertz	45 dB
TOTAL	120 dB

Left Ear:

Hearing loss at 500 hertz	30 dB
Hearing loss at 1,000 hertz	30 dB
Hearing loss at 2,000 hertz	40 dB
Hearing loss at 3,000 hertz	55 dB
TOTAL	155 dB

This worker is 6 years over the age of 60. Subtract 12 (6 years x 2) from 120 dB and 155 dB. This amounts to hearing loss of 108 dB and 143 dB.

Table 4-1 indicates that a combined hearing loss of 108 dB (rounded to 110 dB) is equivalent to a 3.8% hearing impairment in the right ear, and a combined hearing loss of 143 dB (rounded to 145 dB) is equivalent to a 16.9% hearing impairment in the left ear.

The hearing impairment in the better ear (3.8%) is multiplied by 5. The product (19) is then added to the hearing impairment in the poorer ear (16.9%). The sum (35.9) is then divided by 6. The resulting hearing impairment in both ears is 5.98%.

4.2.5 CALCULATING WHOLE PERSON IMPAIRMENT PERCENTAGE

Hearing loss is only one component of overall bodily function. Consult Table 4-2 to convert the impairment of hearing to impairment of the whole person.

Deafness, complete in both ears and the result of sudden and complete traumatic loss of hearing is rated as a 60% impairment of the whole person.

TABLE 4-2 - CONVERTING HEARING IMPAIRMENTS TO WHOLE PERSON IMPAIRMENT

% Hearing Impairment	% Impairment of the Whole Person
0 - 1.7	0
1.8 - 4.2	1
4.3 - 7.4	2
7.5 - 9.9	3
10.0 - 13.1	4
13.2 - 15.9	5
16.0 - 18.8	6
18.9 - 21.4	7
21.5 - 24.5	8
24.6 - 27.1	9
27.2 - 30.0	10
30.1 - 32.8	11
32.9 - 35.9	12
36.0 - 38.5	13
38.6 - 41.7	14
41.8 - 44	15
44.3 - 47.4	16
47.5 - 49.9	17
50.0 - 53.1	18
53.2 - 55.7	19
55.8 - 58.8	20
58.9 - 61.4	21
61.5 - 64.5	22
64.6 - 67.1	23
67.2 - 70.0	24
70.1 - 72.8	25
72.9 - 75.9	26
76.0 - 78.5	27
78.6 - 81.7	28
81.8 - 84.2	29
84.3 - 87.4	30
87.5 - 89.9	31
90.0 - 93.1	32
93.2 - 95.7	33
95.8 - 98.9	34
98.9 - 100	35

4.3 TINNITUS

Tinnitus, when secondary to noise-induced occupational hearing loss, is rated as a 2% impairment of the whole person

5. APPENDIX "A" - TABLE INDEX

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