OCCUPATIONAL HEARING IMPAIRMENT TREATMENT PROTOCOL

This Protocol addresses the treatment of hearing impairment that has been established as "work-related" by a Board Certified Otorhinolaryngologist. Hearing impairment may be related to a single event, such as trauma or a basal skull fracture, or it may be related to exposure to excessive noise in the workplace.

DEGREES OF HEARING LOSS

0 to 25 dB	-	Normal
25 to 45 dB	-	Mild
45 to 60 dB	-	Moderate
60 to 75 dB	-	Moderately Severe
75 to 90 dB	-	Severe
Over 90 dB	-	Profound

Reference should be made to the OSHA table for age-related hearing loss, data from which is attached hereto and made a part of this Protocol.

I. TREATMENT OPTIONS

A. A trial of aural rehabilitation, if indicated, usually in cases of mild loss if recommended by the otorhinolaryngologist.

B. A hearing aid may be prescribed for occupational hearing impairment related to exposure to excessive noise in the workplace as determined by an otorhinolaryngologist. The need for such will be determined by an otorhinolaryngologist, who has provided the testing and indicated that the loss is work-related and sufficient to require the use of a hearing aid. This hearing aid may be provided by an otolaryngologist.

C. A hearing aid may be prescribed for a monaural hearing loss, if recommended by an otorhinolaryngologist.

II. TYPES OF HEARING AIDS TO BE CONSIDERED

A. BTE (Behind the ear)

B. CIC (Completely in ear canal) This is only helpful in mild to moderate hearing loss and not in smaller angular canals.

C. ITC (In the canal) This is stronger than the CIC.

D. ITE (Inside the ear) This device is easier to adjust the volume.

III. HEARING AID CIRCUITRY

A. Analog, is basic and the oldest type.

B. Programmable

C. Digital, which is state of the art

D. Disposable hearing aids are not acceptable treatment

E. Average life expectancy of a hearing aid is five (5) years.

IV. SURGERY

A. Cochlear implants; used in patients with hearing loss so extreme that the best hearing aid would have no effect

B. Reconstructive surgery, for either traumatic abnormalities to the external ear canal, tympanic membrane, or middle ear

C. A second opinion is required before surgical intervention may be performed.

Example of Age Correction; Text From:

9782 Federal Register / Vol. 48, No. 46 / Tuesday, March 8, 1983 / Rules and Regulations

	Frequency (Hz)				
	1000	2000	3000	4000	5000
Age 32	6	5	7	10	14
Age 27	5	4	6	7	11
Difference	1	1	1	3	3

The difference represents the amount of hearing loss that may be attributed to aging in the time period between the baseline audiogram and the most recent audiogram. In this example, the difference at 4000 Hz is 3 dB. This value is subtracted from the hearing level at 4000 Hz, which in the most recent audiogram is 25, yielding 22 after adjustment. Then the hearing threshold in the baseline audiogram at 4000 Hz (5) is subtracted from the adjusted annual audiogram hearing threshold at 4000 Hz (22). Thus the age-corrected threshold shift would be 17 dB (as opposed to a threshold shift of 20 dB without age correction.)

Table F-1 – Age Correction Values In Decibels for Males

Years	Audiometric Test Frequencies (Hz) 1000	2000	3000	4000	6000
20 or younger	5	3	4	5	8
21	5	3	4	5	8
22	5	3	4	5	8
23	5	3	4	6	9
24	5	3	5	6	9
25	5	3	5	7	10
26	5	4	5	7	10
27	5	4	6	7	11
28	6	4	6	8	11
29	6	4	6	8	12
30	6	4	6	9	12
31	6	4	7	9	13
32	6	5	7	10	14
33	6	5	7	10	14
34	6	5	8	11	15
35	7	5	8	11	15
36	7	5	9	12	16
37	7	6	9	12	17
38	7	6	9	13	17
39	7	6	10	14	18
40	7	6	10	14	19
41	7	6	10	14	20
42	8	7	11	16	20
43	8	7	12	16	21
44	8	7	12	17	22
45	8	7	13	18	23
46	8	8	13	19	24
47	8	8	14	19	24
48	9	8	14	20	25
49	9	9	15	21	26
50	9	9	16	22	27
51	9	9	16	23	28
52	9	10	17	24	29
53	9	10	18	25	30
54	10	10	18	26	31
55	10	11	19	27	32
56	10	11	20	28	34
57	10	11	21	29	35
58	10	12	22	31	36
59	11	12	22	32	37
60 or older	11	13	23	33	38

Table F-2 – Age Correction Values in Decibels for Females

Years	Audiometric Test Frequencies (Hz) 1000	2000	3000	4000	6000
20 or younger	7	4	3	3	6
21	7	4	4	3	6
22	7	4	4	4	6
23	7	5	4	4	7
24	7	5	4	4	7
25	8	5	4	4	7
26	8	5	5	4	8
27	8	5	5	5	8
28	8	5	5	5	8
29	8	5	5	5	9
30	8	6	5	5	9
31	8	6	6	5	9
32	9	6	6	6	10
33	9	6	6	6	10
34	9	6	6	6	10
35	9	6	7	7	11
36	9	7	7	7	11
37	9	7	7	7	12
38	10	7	7	7	12
39	10	7	8	8	12
40	10	7	8	8	13
41	10	8	8	8	13
42	10	8	9	9	13
43	11	8	9	9	14
44	11	8	9	9	14
45	11	8	10	10	15
46	11	9	10	10	15
47	11	9	10	11	16
48	12	9	11	11	16
49	12	9	11	11	16
50	12	10	11	12	17
51	12	10	12	12	17
52	12	10	12	13	18
53	13	10	13	13	18
54	13	11	13	14	19
55	13	11	14	14	19
56	13	11	14	15	20
57	13	11	15	15	20
58	14	12	15	16	21
59	14	12	16	16	21
60 older	14	12	16	17	22

PROTOCOL HISTORY:
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