

# G 20 Extended supplementary examination NOISE III

Surname \_\_\_\_\_ First name \_\_\_\_\_  
Address: street \_\_\_\_\_  
Postcode, town \_\_\_\_\_  
Date of birth \_\_\_\_\_ Nationality \_\_\_\_\_

Patient referred for the examination NOISE III on \_\_\_\_\_  
Determination of acoustic impedance of the eardrum suggested,  yes  no  
provided that it does not seem inadvisable to the ENT specialist  
Indications: generally unclear audiometric findings; objective exclusion of a sound conduction disorder;  
differentiation between damage to the auditory cells and the auditory nerves  
  
\_\_\_\_\_  
Date, stamp, signature of the physician<sup>1</sup>

Examination completed on \_\_\_\_\_ Results sent to<sup>1</sup> on \_\_\_\_\_  
  
\_\_\_\_\_  
Signature, stamp of the examining physician (unless identical with<sup>1</sup>)

## 1 Findings (summary)

1 On the basis of audiometric and perhaps ear drum impedance measurements, a sound conduction disorder (a difference between the hearing losses determined by air-conduction and by bone-conduction of more than 15 dB at more than one frequency) has been

right  excluded  left right  confirmed  left

2 Cochlear sensorineural hearing loss is

right  unlikely  left right  likely  left

3 Hearing loss for numbers determined audiometrically especially for the frequencies 500, 1.000 und 2.000 Hz was

right  not confirmed  left right  confirmed  left

4 The plot of proportion of single syllables understood against loudness lies in the abnormal hatched area

right  no  left right  partially  left  
right  entirely  left

The understanding of single syllables could not be determined because the patient does not speak the local language sufficiently well. The other examination results, especially the audiogram and the loss of hearing for numbers, suggest that the results of the test for understanding of single syllables would also be abnormal

right  no  left right  yes  left

5 Given continued exposure to noise, even if hearing protection is worn, a further noise-induced increase in hearing loss is

unlikely  
 likely because \_\_\_\_\_

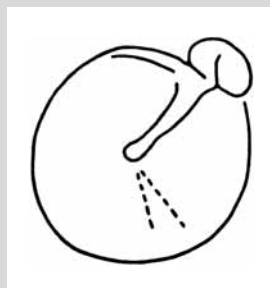
6 Diagnosis \_\_\_\_\_  
\_\_\_\_\_

7 Notification of an occupational disease  no  yes Date of notification \_\_\_\_\_

## 2 Otoscopy

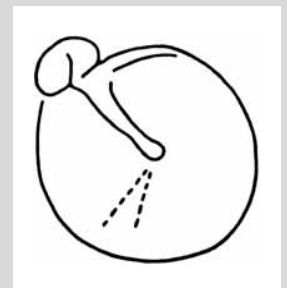
external auditory canal

right  normal  left  
 very narrow  
 moist



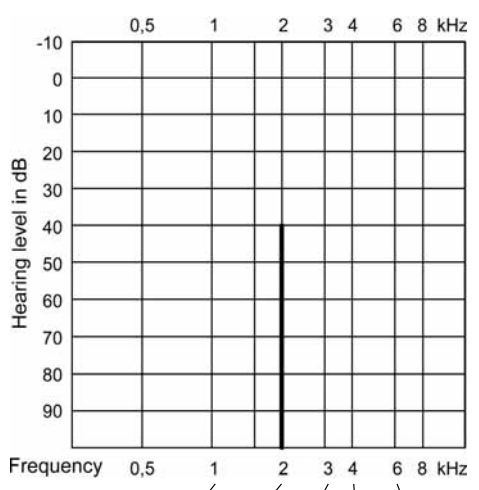
eardrum

right  normal  left  
 central defect  
 defect at the edge  
 state after an operation  
 scarring



### 3 Pure tone audiogram

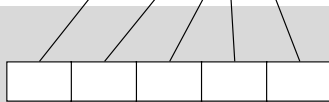
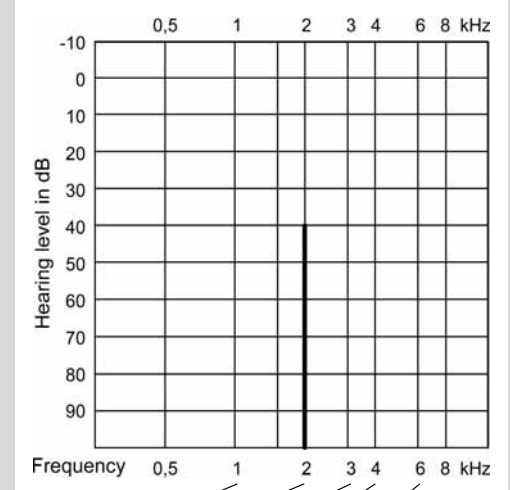
right ear



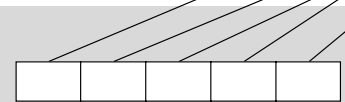
Person gave uncertain responses

WEBER at 500 Hz		
right	med	left
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

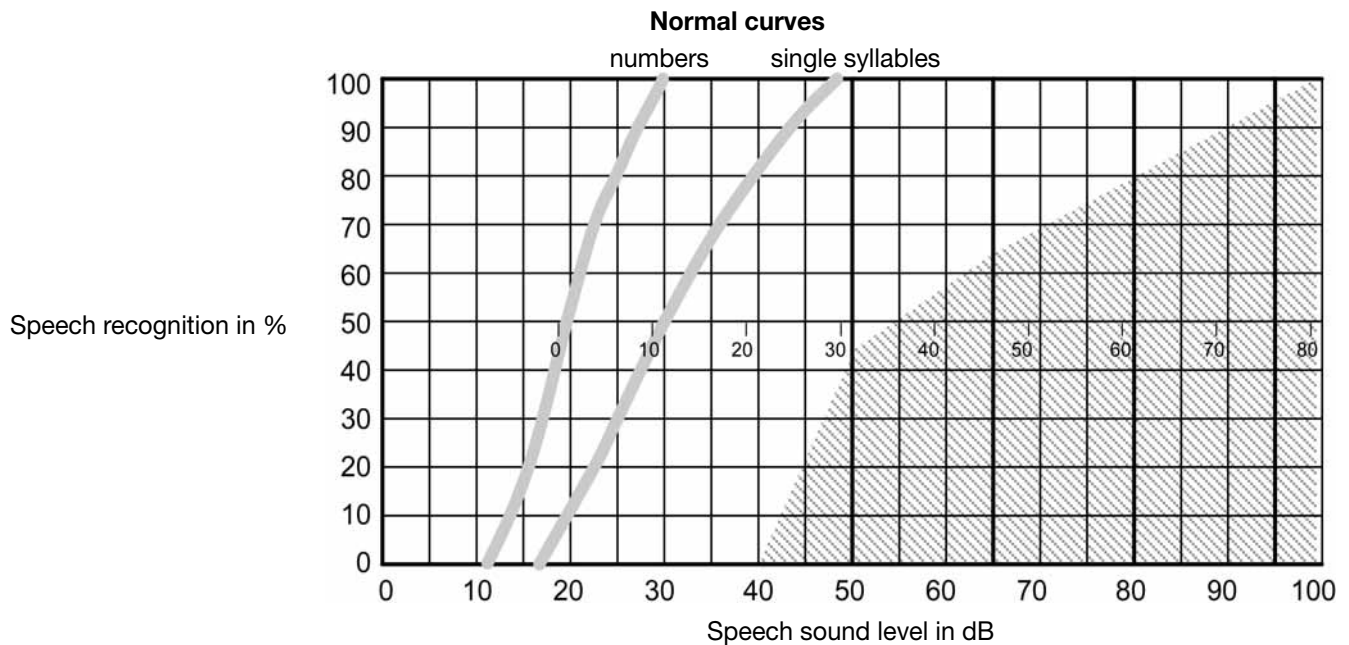
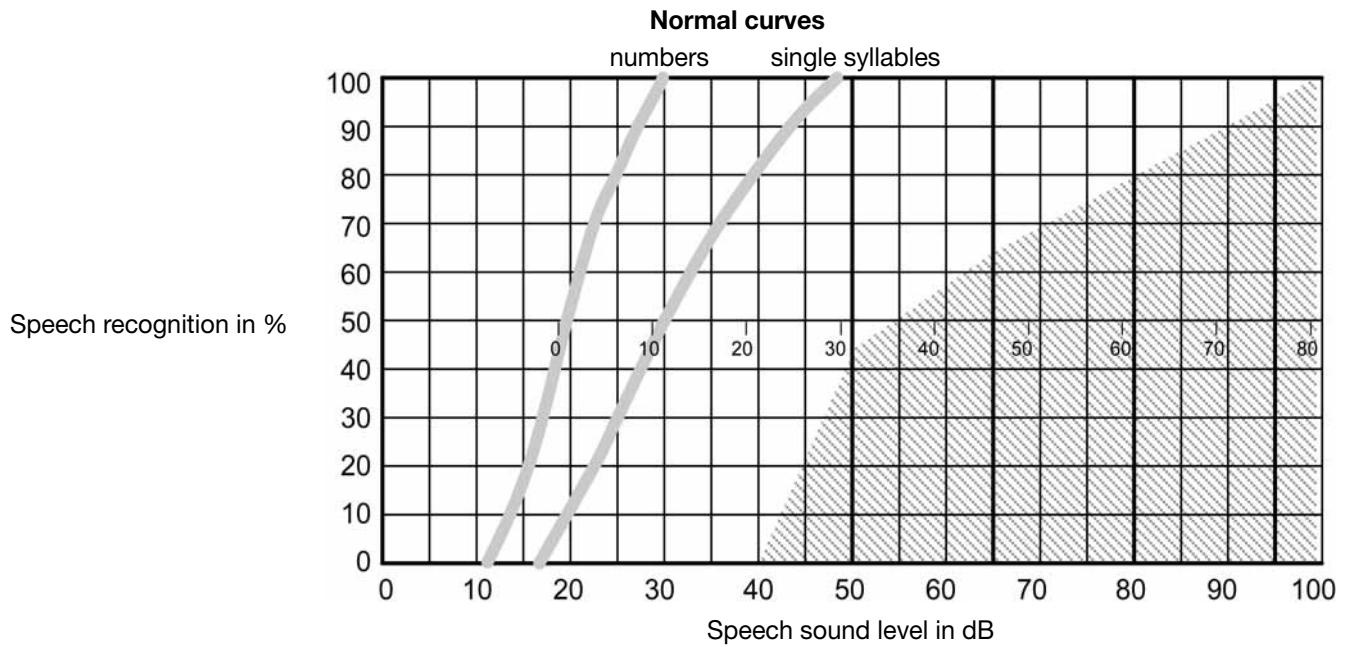
left ear



SISI at 1 dB in %



### 4 Speech audiogram (only when the bone-conduction hearing loss at 2 kHz is already 40 dB or more in both ears)



## 5 Acoustic impedance of the eardrum (if indicated)

### 1 Tympanometry

right	type of tympanogram	left
<input type="checkbox"/>	normal	<input type="checkbox"/>
<input type="checkbox"/>	increased amplitude	<input type="checkbox"/>
<input type="checkbox"/>	negative pressure	<input type="checkbox"/>
<input type="checkbox"/>	curve flattened	<input type="checkbox"/>
<input type="checkbox"/>	completely flat curve	<input type="checkbox"/>

right	no compliance	left
<input type="checkbox"/>	eardrum defect	<input type="checkbox"/>
<input type="checkbox"/>	auditory canal not sealed	<input type="checkbox"/>

middle ear pressure in mm H<sub>2</sub>O

### 2 Impedance changes in the monitored ear

		monitored ear right				stapedius reflex		monitored ear right			
stimulus left						contralateral					stimulus left
kHz		0.5	1	2	4		0.5	1	2	4	kHz
stimulus right						ipsilateral*					stimulus right

(\* only if contralateral is not possible)

## Comments

### Explanations

The examination NOISE III is, according to G 20, necessary for persons for whom the occupational medical assessment "long-term concern about health" is being considered. It provides the basis for a more extensive otological diagnosis than is possible with the examination NOISE II.

If the responsible physician is not in a position to do the examination himself, he is to commission an ear, nose and throat specialist to carry it out.

The examination must be immediately preceded by a noise-free period (for recovery of hearing) of at least 12 hours.

**Point 1.3** The hearing loss (HL) for numbers is considered to confirm the air-conduction audiogram if  $(HL_{500\text{Hz}} + HL_{1000\text{Hz}} + HL_{2000\text{Hz}}) \times 1/3 \approx$  hearing loss for numbers

**Point 1.4** Whereas the understanding of single syllables can rarely be determined when carrying out speech audiometry of foreigners, apart from those with a very good knowledge of the local language, the hearing loss for numbers can often be determined successfully. In such cases, the plot of the proportion of single syllables understood against loudness may be assumed to lie in the hatched area for the ear in question if

- the bone-conduction hearing loss at 2 kHz is more than 40 dB and
- the hearing loss for numbers is more than 25 dB and the pure tone audiogram reveals a local loss of hearing at high frequencies (valley or drop at high frequencies)

**Point 3** The pure tone audiometer should meet the requirements of DIN EN 60645-1 class 2 and requires regular servicing. It is expedient to carry out the SISI test at the frequency for which the bone-conduction hearing loss is about 60 dB. Note: careful determination of the air-conduction hearing threshold is necessary **before** setting the listening level to 20 dB above the hearing threshold.

**Point 4** The speech audiometer should meet the requirements of DIN EN 60645-2 class 2 and requires regular servicing. The test material should meet recognized quality control standards.

**Point 5** The tympanogram or a copy of it should be included with this form. The range of auditory canal pressures used in the measurements is between -300 daPa and +300 daPa.