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**Estimating the basilar-membrane input/output-function in  
normal-hearing and hearing-impaired listeners using forward  
masking**

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To partly characterize the function of cochlear processing in humans, the basilar membrane (BM) input-output (I/O) function can be estimated. In recent studies, forward masking has been used to estimate BM compression. If an on-frequency masker is processed compressively, while an off-frequency masker is transformed more linearly, the ratio between the slopes of growth of masking (GOM) functions provides an estimate of BM compression at the signal frequency. In this study, this paradigm is extended to also estimate the knee-point of the I/O-function between linear processing at low levels and compressive processing at medium levels. If a signal can be masked by a low-level on-frequency masker such that signal and masker fall in the linear region of the I/O-function, then a steeper GOM function is expected. The knee-point can then be estimated in the input level region where the GOM changes significantly. Data were collected from 8 normal-hearing (NH) and 5 hearing-impaired (HI) listeners with mild to moderate sensorineural hearing loss. Both groups showed large inter-subject but low intra-subject variability. When the knee-point could be estimated for the HI listeners it was shifted towards higher input levels and compression was similar to that of NH listeners.