



## Identification of the auditory hazards of extracorporeal shock wave lithotripsy

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### ABSTRACT

The aim of this work was to determine the effect of extracorporeal shock wave lithotripsy (ESWL) on the hearing of both patients and staff members exposed to such treatment. It used different hearing screening instruments, and compared the sensitivity of these instruments for the detection of the earliest change in hearing induced by this procedure.

The results of this study show that ESWL has a potentially hazardous effect on hearing. This effect is subtle, could only be detected by transient evoked otoacoustic emissions (TEOAE), and is manifested in some of the subjects under study as temporary subjective hearing loss and tinnitus, reflecting a state of temporary biomechanical derangement of the outer hair cells. This effect seems to be related to the frequency of exposure to ESWL.

**Key Words:** [Lithotripsy](#); [Audiometry](#); [Otoacoustic Emissions](#); [Spontaneous](#); [Hearing Loss](#); [Noise-Induced](#).