

The Acoustic Safety Programme and the National Physical Laboratory wish to develop an evidence-based definition of acoustic shock. This document is the first UK national definition of acoustic shock in telephone and headset users and is based upon currently available evidence. An updated version will be released when further research has been undertaken.

ACOUSTIC SHOCK IN TELEPHONE AND HEADSET USERS

The first UK National Definitions of Acoustic Shock in Telephone and Headset Users supported by the Department for Trade and Industry and the Communication Workers Union.

AN ACOUSTIC INCIDENT IS A SUDDEN, UNEXPECTED, NOISE EVENT WHICH IS PERCEIVED AS LOUD, TRANSMITTED THROUGH A TELEPHONE OR HEADSET

ACOUSTIC SHOCK IS AN ADVERSE RESPONSE TO AN ACOUSTIC INCIDENT RESULTING IN ALTERATION OF AUDITORY FUNCTION

Notes

Acoustic shock is NOT noise-induced hearing loss and occurs at sound pressure levels well below those which present a risk of immediate hearing damage

Physical characteristics of acoustic incidents that give rise to acoustic shock are not currently understood, and consequently no conclusive evidence-based guidance on levels or rise time can be given.

Acoustic shock is characterised by auditory symptoms occurring immediately after the acoustic incident. In some individuals further symptoms develop over time. Commonly reported symptoms include:

Early onset (within minutes of event):

Discomfort or pain around the ear
Muffled hearing
Feeling light-headed
Fatigue
Lethargy
Nausea
Dizziness

Medium onset (from hours to days after event)

Tinnitus
Hyperacusis
Dysacusis

Late onset

Anxiety
Phobic anxiety
Depression

Both medium and late-onset symptoms may continue in the long term (i.e. months to years after the event).

Symptoms vary greatly between individuals.

Key research requirements

1. Identify appropriate preventive measures
2. Develop and carry out suite of test protocols for electro-acoustic equipment
3. Characterise the noise event(s) which lead to acoustic shock
4. Quantify the incidence of these events
5. Develop a comprehensive description of the acoustic shock syndrome
6. Investigate the underlying mechanisms for the acoustic shock syndrome
7. Establish appropriate approaches to treatment

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References to other studies and papers used and released during the course of the advisory board's work can be downloaded from the "ASP-NPL Research Members area" page at

<http://www.acousticshock.org/?id=nplentrypage>

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