

Peak-cough-expiratory-flow (PCEF) and maximum expiratory pressure (MEP) measured with and without manual cough support in persons with neuromuscular disorders and a vital capacity below 50% of normal value

By Werlauff, Ulla

Persons with neuromuscular disorders, reduced vital capacity, and reduced ability to cough run a greater risk for lung infections. For this group of persons manual cough support is used to improve their ability to cough.

The aim of the study was to assess whether manual cough support influences the flow (PCEF) and the power (MEP) that results from a cough made by persons with a significantly reduced vital capacity, and whether the effect depends on the degree of reduction of vital capacity (FVC).

Eight persons with neuromuscular disorders and FVC less than 10%-50% of normal value took part in the study. PCEF with and without cough support was measured in a Pneumotachograph, and MEP with and without cough support were measured by an electronic transducer.

The study showed that it was possible to increase PCEF and MEP by manual cough support in persons with neuromuscular disorders and FVC below 50% of normal value.

The increase was not dependent on the degree of reduced FVC.

None of the persons reached the value for an effective cough.

Further measurements have to be done to clarify if the results are significant. Moreover, it might be investigated whether the effect from cough support depends on diagnosis.

Keywords: Neuromuscular disorder, manual cough support, PCEF and MEP