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Use of a spirometer

Posted by Anonymous on Fri, 2015-07-17 10:27

Use of a spirometer: One of our teachers would like to use a spirometer in class. The spirometer requires the user to breath in rather than blow air out. Are we allowed to do this, if we have disposable mouthpieces?

Voting:



No votes yet

Year Level:

Senior Secondary

Laboratory Technicians:

Laboratory Technicians

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Use of a Spirometer

Submitted by sat on 24 July 2015

Answer reviewed 27 February 2023

When using a spirometer, it is more common for the activities being conducted to use an expired air measurement. However, inspired air measurements are permissible if single-use disposable mouthpieces fitted with bacterial/viral filters are used. Bacterial filters trap expectorated matter as well as bacteria and viruses making them suitable for inspired as well as expired air activities.

Some disposable mouthpieces are fitted with one-way valves and are suitable for expired air measurements. This type allows air to flow in one direction only into the measuring device and prevents the user from inhaling bacteria, viruses or other matter from the spirometer from previous users. These are not suitable for inspired air activities.

Mouth pieces that have no filters or valves are not recommended for use with spirometers, as they offer no protection from the possibility of cross infection between users.

The National Asthma Council of Australia have developed a “Spirometer users guide”, which contains some very useful information regarding general information about spirometry. This document includes details on the importance of taking precautions to minimise the risk of cross infection, as well as the regular cleaning and calibration of the spirometer. It also deals with the factors to consider when purchasing a spirometer, such as the initial cost of the spirometer and ongoing costs of disposable items. This guide also contains a list of resource respiratory function laboratories, for health professionals to contact for advice. For more detailed information see <https://www.nationalasthma.org.au/health-professionals/spirometry-traini...>

References

National Asthma Council Australia. (2022, September). *Spirometry training and tools*. Retrieved from National Asthma Council Australia: <https://www.nationalasthma.org.au/health-professionals/spirometry-traini...>

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