

VR LAB3

Virtual Life Support



Introduction

Virtual Life Support is a Virtual Reality training module that prepares people to provide CPR assistance in the real world. Existing CPR courses let you train your technique, but no amount of classroom training can truly prepare you for encountering someone unconscious on the ground. With virtual reality we can close the gap between classroom training and the real world unlike any other tool, giving people the confidence to act when there is a life on the line.

With Virtual Life Support (VLS) VR Lab offers a complete, innovative and fun virtual reality application for learning to resuscitate according to the guidelines of the European Resuscitation Council (ERC). The target groups for VLS are very diverse: from organizations that want to introduce their employees to resuscitation and the use of an AED in an innovative way, to professional training courses, such as first aid training, training for first responders and training in health care.



Features

Virtual Life Support:

- Has been developed according to the guidelines of the European Resuscitation Council.
- Is skills training. Not only **knowing** the right thing to do is important, but also being able to **perform** them.
- Is intuitive to use: use your **hands** instead of controllers.
- Includes a fully implemented virtual AED with real time feedback about your CPR performance.
- Provides a fun and engaging way to practice CPR with an AED as often as you like, wherever you like.
- Is a standard software solution: supported, maintained with regular updates and new releases.
- Uses standalone Virtual Reality hardware, which does not require a connected PC.

Prerequisites

Virtual Life Support has been developed for the Meta Quest 2 and Meta Quest Pro. Support for other HMDs is on the roadmap.

VLS requires hand tracking to be enabled. It does not support controllers. Hand tracking can be enabled on the Quest 2/Quest Pro. Go to the *Settings* application, select *Device* on the left side and then *Hand and controllers*. You can now enable hand tracking. [More information can be found here.](#)

As you need to be able to kneel down with the victim you need to set up a room scale playspace and guardian. [More information can be found here.](#)

VLS measures your CPR performance. For the best results we recommend using a manikin with a chest height of at least 21 cm (the chest height of a Laerdal Little Anne). Using a different manikin is possible as the chest height can be adjusted in the setup. It is also possible to use some other object that you can compress, such as a firm cushion. The object should ideally have a height of at least 21 cm and compressing the object should require some force (as is the case with a human body). Accurate CPR measurements are only possible with a proper manikin (half or full body). Make sure the manikin or alternative object does not shift during the training.

Installation

VLS is distributed via various channels and installation depends on the channel. The following channels are currently supported:

- Oculus for Business
- ArborXR
- ManageXR
- Meta store release channels on an invite-only basis

More channels will be made available in the near future. Note that vanilla sideloading will not be supported.

You will receive an email with further information about installation.

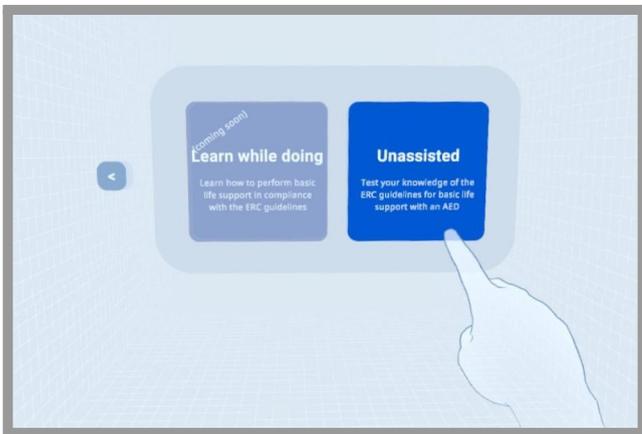
Note that by installing Virtual Life Support you accept the Virtual Life Support License Agreement that has been provided to you.

Setup

Once you launch Virtual Life Support you will be in the setup environment where you first need to:

- Select language (**English** or **Dutch**)
- Select the training mode (currently only one training mode is available: **Unassisted**)
- Check fitting and sound of your headset

Buttons can be pressed with a stretched index finger.



Select manikin

The next step is to select either a predefined manikin, currently presets for the Laerdal Little Anne and AmbuMan are provided, or to select Other. Use Other for manikins for which no preset is provided or for a manikin alternative, such as a firm cushion.



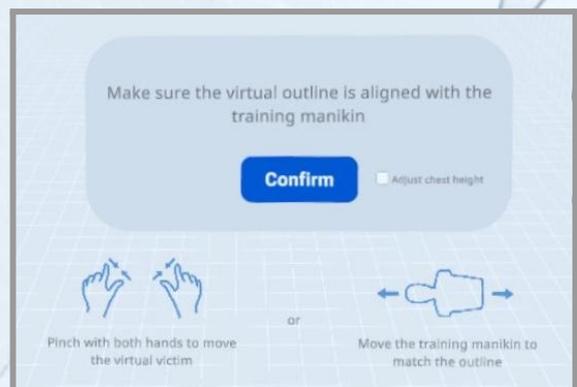
When you select Other you will have to specify the height of the manikin or alternative object. Please specify the accurate height of the

"thorax" (where you will push to apply the compressions). You can check whether the height is correct by aligning the manikin and putting your flat hand on the right spot. When the height is too high, your ghost hand will disappear in the outline of the manikin. When it is too low, your hand will appear to float above the manikin outline.



Align manikin

The most important part of the setup is the careful alignment of the victim outline with the manikin. This will take some getting used to. Use a combination of adjusting the position of the virtual victim as well as moving around the real world manikin. You can also adjust the height of the manikin by ticking the checkbox.



Once you're ready, select **Confirm** and you can start the training.

Use

Once you have started the training you will see a victim on the ground, unresponsive. You need to follow the ERC guidelines from here on.

These guidelines can be found [here](#).

You will be all by yourself at this moment. Someone is going to get an AED, but there is nobody there to assist you further.

It's important that you perform all steps correctly and quickly. If you're not fast enough or do not know what to do the software will give you some visual clues. For time sensitive steps you will see a timing indicator (circle filling up).

Note that we cannot measure everything in all cases. It is for example not possible to measure whether you are actually giving two breaths. In those situations; it is the intent that is important.

The software currently measures CPR performance by tracking the head movement, using the sensors in the headset. This works well as long as you give the compressions with stretched arms, which is the proper form for performing CPR anyway!

Near the end of the training, emergency services will arrive to take over for you. You will then get a score of your CPR performance.

Good luck!

Contact and support

For questions regarding setup and use of Virtual Life Support, please use the [form on our website](#) or send an email to support@virtuallifesupport.eu.