

## Practicing vHIT with a remote camera

### PRODUCT INSIGHTS

author:

**Enrico Armato, Dr.**

This document provides a comprehensive overview of how to perform the video Head Impulse Test, starting from the physiological bases up to daily diagnostics. SYNAPSYS VHIT is a unique system that represents a fundamental step forward in the evaluation of the vestibular system. It does not require the patient to wear any goggles; all results are obtained from the analysis of the patient's head and eye movements, recorded by a remote camera.

#### Patient setting

- Room with LED or fluorescent lighting but no direct sunlight (RC vHIT).
- Use a chair without wheels that is solid and has a sufficiently high back but doesn't impede the examiner's maneuvers (any vHIT).
- Position the target on the wall >110cm from the lens of the device (RC vHIT).



- Measure, for each individual patient, the distance between the eye and the front lens of the device which must be 90cm (interindividual difference in the size of the head and torso) for maximum image definition and a consequent increase in signal and the reduction of noise during the acquisition.
- Place the pupils in the center of the yellow reference rectangles (RC vHIT).



### Guidelines to be given to the patient

- Look carefully at the target on the wall (any vHIT).
- Always keep the eyes wide open, especially while performing the movement (partial closure should also be avoided) (any vHIT).
- If at the end of the movement, the patient realizes that the gaze is no longer on the target, he/she has to reposition him/her eyes to regain it immediately (any vHIT).
- Keep the neck as soft as possible and do not oppose and/or contribute to the movement (any vHIT).
- Keep the back straight and in contact with the backrest (frequent tendency to anteropulsion of the head and torso during the examination – distance from device must remain at 90cm) (RC vHIT).



### Performing the test

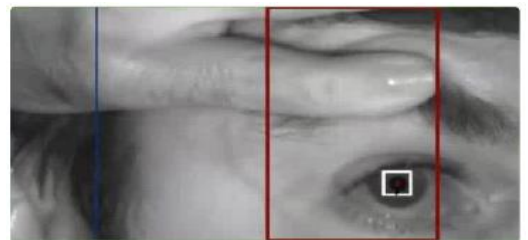
- Initially move the patient's head slowly in the examination field, to make the patient understand the direction and amplitude of the movements (RC vHIT).



- Avoid head bounce: you must stop at the end of the movement and not immediately return to the initial position (any vHIT).



- During the head movement the pupil must not go beyond the area of the examination field because otherwise that impulse will not be valid (RC vHIT).



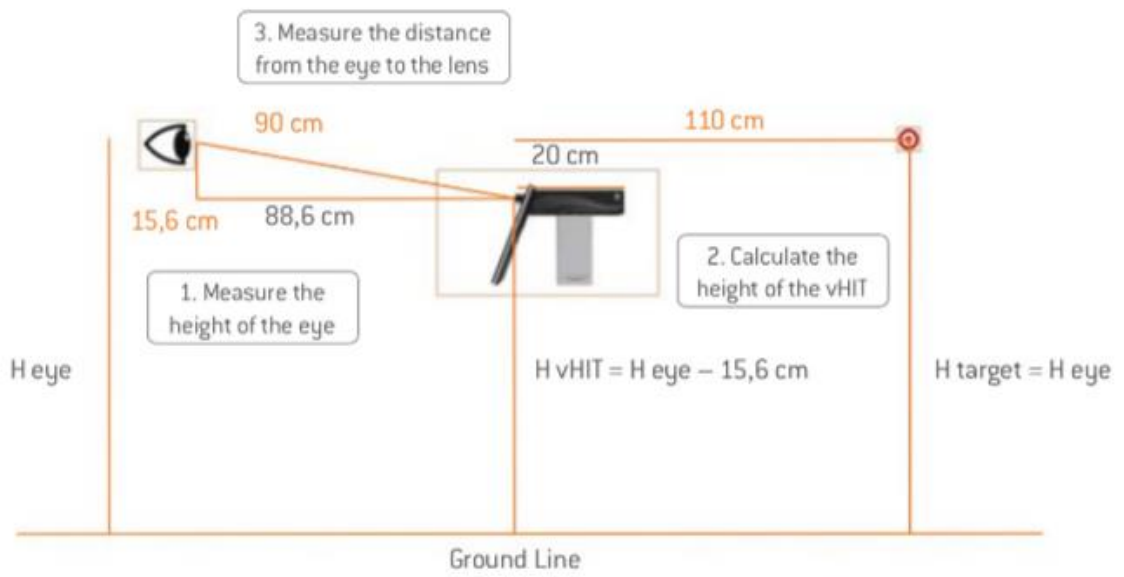
- Prevent hair (even individual hairs) from being present in the examination field (any vHIT).
- In some people wearing latex gloves can improve the grip of the patient's head (any vHIT).

### Warning

- Mascara (usually does not interfere too much, but it is preferable that there is as little as possible).
- Crystalline prothesis (parasitic reflexes).
- Tear films on the free edge of the lower eyelid (parasitic reflexes).
- Distraction of the patient.

### Impulse number

- Minimum of 5 for each canal.
- 7/8 per canal is better to cancel impulses with artifacts.
- In case of pathological subjects, 10 per canal to better put in evidence saccadic covert/overt and to build a plot head velocity and gain.





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**INVENTIS S.r.l.**  
**CORSO STATI UNITI, 1/3**  
**35127 PADOVA - ITALIA**  
**TEL: +39 049.8962 844**  
**FAX: +39.049.8966 343**  
**Ino@inventis.it**  
**www.inventis.it**