

Which additional instrument based tests are necessary?

Scientific Session Neuro-Otology

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World Congress of Neurology

Dubai

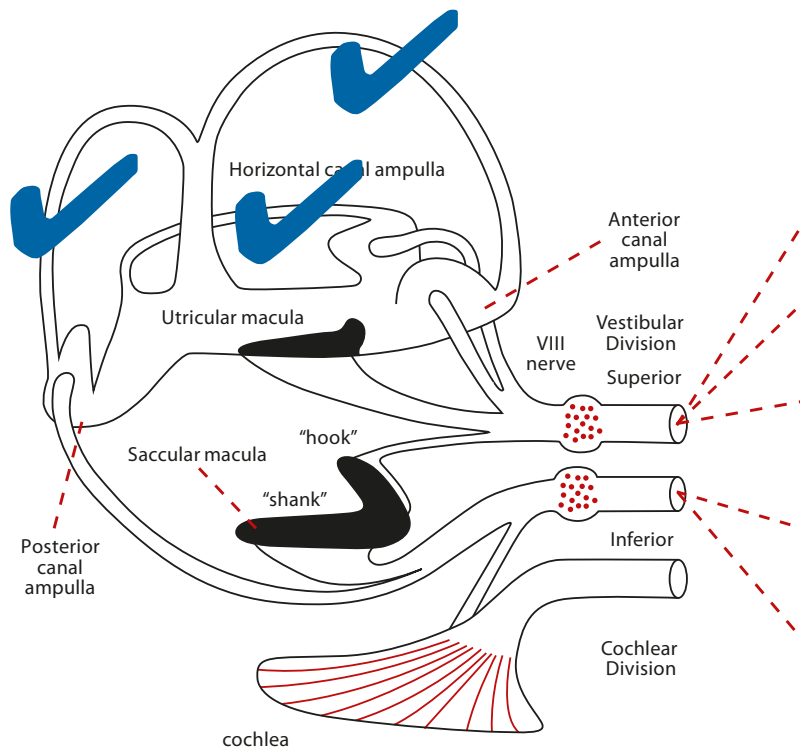
2019

Disclosure

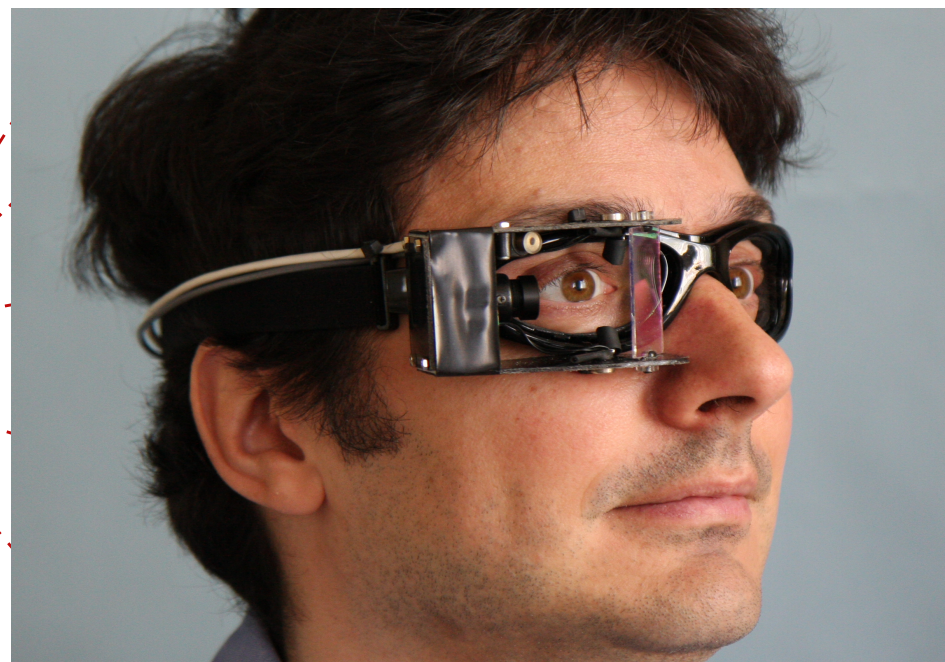
- Dr. Weber acts as an unpaid consultant and has received funding for travel from Otometrics, a division of Natus.
- Dr. Weber acts as a principal investigator for research sponsored by Alexion Pharmaceuticals.

Complete Testing of the Peripheral Vestibular System

Horizontal Canal
Anterior Canal
Posterior Canal

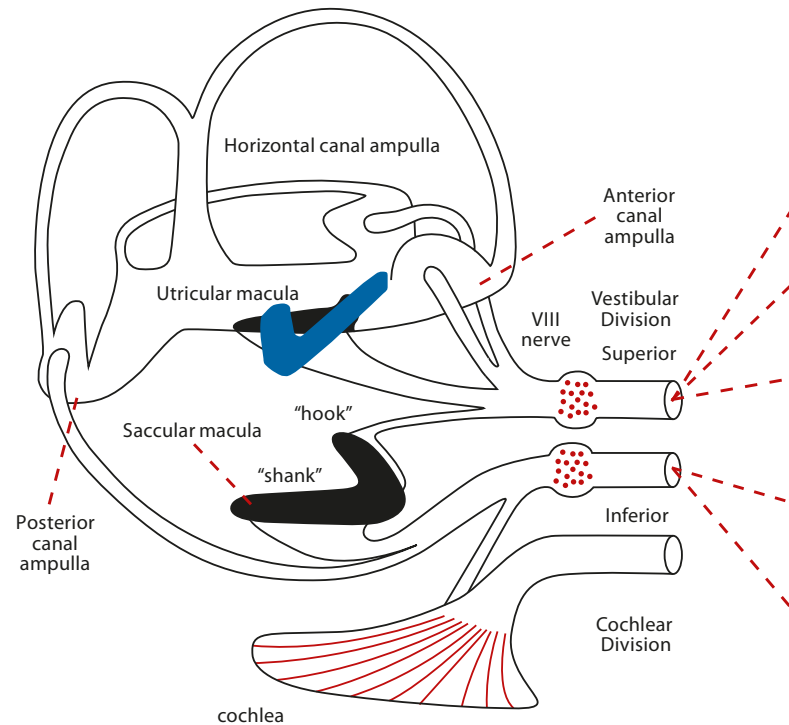


Video Head Impulse Test



Complete Testing of the Peripheral Vestibular System oVEMPs

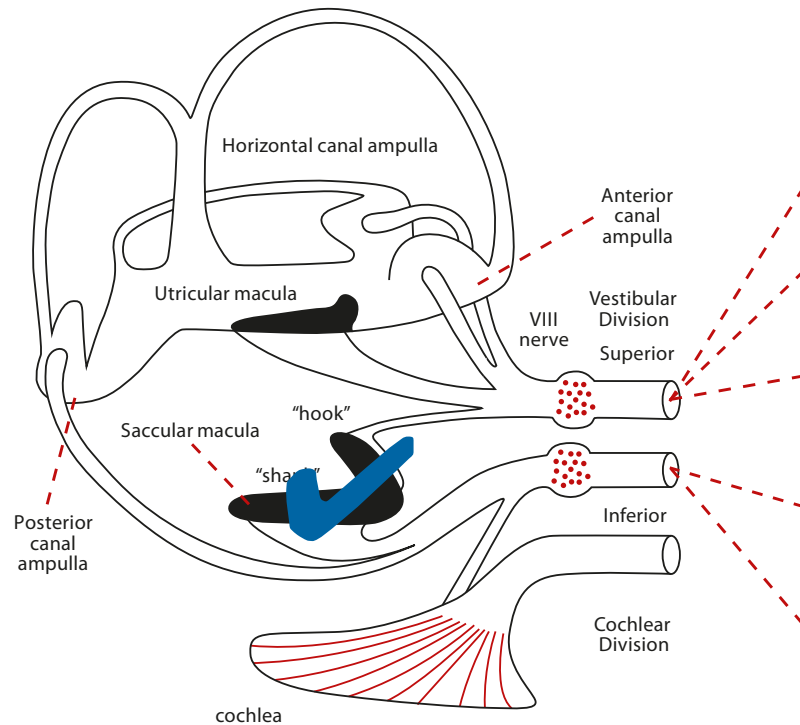
Utricle



Complete Testing of the Peripheral Vestibular System

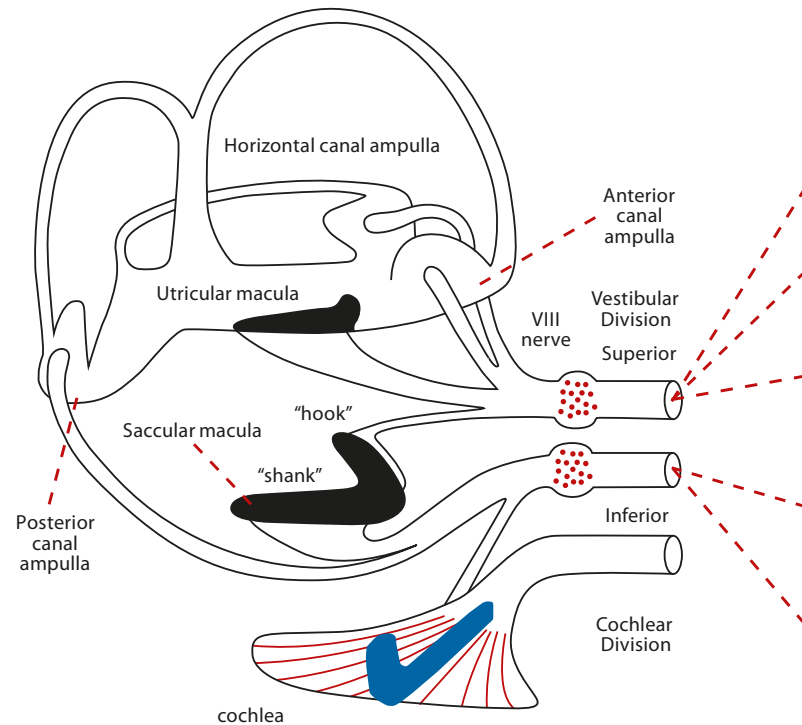
cVEMPs

Saccule

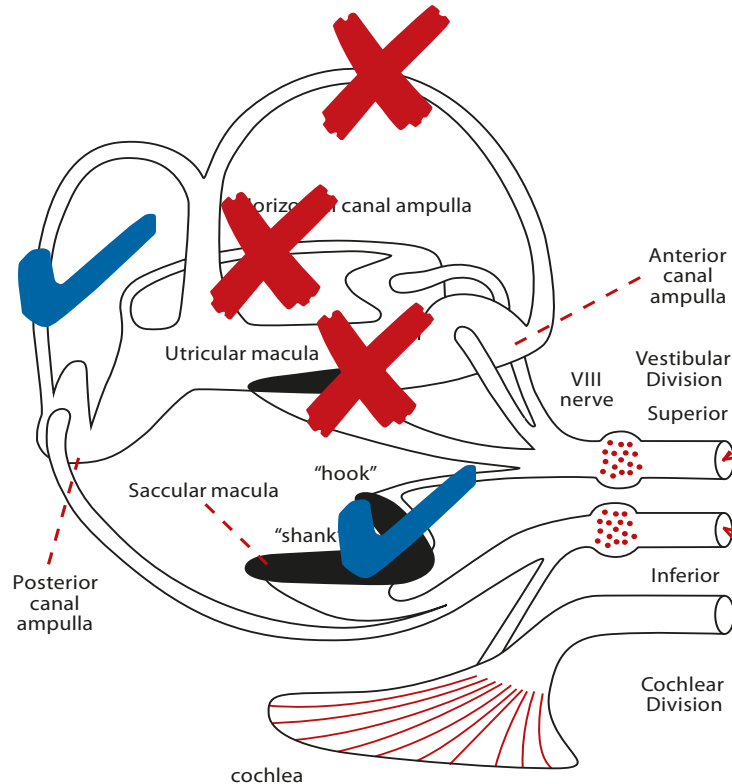


Complete Testing of the Peripheral Vestibular System

Audiogram



Complete Testing of the Peripheral Vestibular System: Example



Clinical Test	Healthy Subjects	Superior Vestibular Neuritis	Inferior Vestibular Neuritis	Unilateral Vestibular Loss
Horizontal HIT	✓	✗	✓	✗
Anterior HIT	✓	✗	✓	✗
oVEMP	✓	✗	✓	✗
cVEMP	✓	✓	✗	✗
Posterior HIT	✓	✓	✗	✗

✓ = Normal Response ✗ = Abnormal Response

Superior Vestibular Neuritis

Aw ST et al. *Neurology* 2001
Taylor RL et al. *Neurology* 2016

Courtesy of I. Curthoys

Key Message

- All 6 sensors of the labyrinth can be tested individually.
- In daily practice, the head impulse test together with an audiogram provide the most helpful clinical information.

References

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- Rosengren SM, Kingma H. New perspectives on vestibular evoked myogenic potentials. *Curr Opin Neurol.* 2013;26(1):74-80.
- Welgampola MS, Akdal G, Halmagyi GM. Neuro-otology - some recent clinical advances. *J Neurol.* 2017; 264(1): 188–203.