**Amar Seva Sangam**

Date of Presentation: Nov 20 2019

**Diagnostic and screening impedance audiometry and OAE**

Impedance Audiometry and Oto Acustic Emission can be done in one  single equipment which  will helps to screening of middle and inner ear function of  our early intervention children and special need children .We need only this equipment.

Total cost of this equipment is Rs.315000/-

Our beneficiaries’ details: 58 kids from Sangamam School (plus kids from neighboring villages)

**1.Impedance audiometry**

Impedance audiometry: Used to asses middle ear functions

Impedance or immittance [audiometry](https://www.sciencedirect.com/topics/medicine-and-dentistry/audiometry) is an objective assessment method of the function of the middle ear. By increasing acoustic pressure in the external ear canal, impedance audiometry measures the sum of resistance which a sound wave encounters on its way through the middle ear to the [cochlear](https://www.sciencedirect.com/topics/neuroscience/cochlea) [receptor](https://www.sciencedirect.com/topics/neuroscience/eicosanoid-receptor). Middle-ear resistance depends on the physical properties of its elements, such as the mass of ossicles, thickness and flexibility of [tympanic membrane](https://www.sciencedirect.com/topics/medicine-and-dentistry/tympanic-membrane), and the stiffness of the middle-ear tendons and muscles. The measurement is simple and can be performed in a quiet room without or with very limited cooperation on the patient's side.

The secondary purpose of impedance audiometry is to register the acoustic [reflex](https://www.sciencedirect.com/topics/neuroscience/reflex) from the [stapedius](https://www.sciencedirect.com/topics/medicine-and-dentistry/stapedius) muscle, as well as to evaluate the function of structures involved in [reflex arc](https://www.sciencedirect.com/topics/medicine-and-dentistry/reflex-arc) pathway, i.e., the [cochlea](https://www.sciencedirect.com/topics/neuroscience/cochlea), auditory nerve, ventral [cochlear nucleus](https://www.sciencedirect.com/topics/neuroscience/cochlear-nucleus), [trapezoid body](https://www.sciencedirect.com/topics/medicine-and-dentistry/trapezoid-body), medial superior olive, [facial nerve](https://www.sciencedirect.com/topics/medicine-and-dentistry/facial-nerve) and its motor nucleus, and stapedius muscle.

Impedance audiometry cannot be used to directly assess auditory sensitivity, but its results can be interpreted in conjunction with other threshold measures. For mild to moderate sensorineural [hearing loss](https://www.sciencedirect.com/topics/medicine-and-dentistry/hearing-impairment) with recruitment, [acoustic reflex](https://www.sciencedirect.com/topics/medicine-and-dentistry/acoustic-reflex) thresholds remain within the normal range. Thus, the distance between audiometric thresholds and acoustic reflex thresholds decreases to 60 dB or less. This symptom, known as the Metz symptom, is used to confirm cochlear recruitment.

**2. Oto Acoustic Emissions(OAE)**

It is used to assess inner ear functions

Distortion Product Otoacoustic Emissions are responses generated by the test subject’s cochlea when provided with a two-tone stimulation.

OAEs may be used to diagnose certain auditory conditions. It can provide a health professional with very useful information about types of hearing loss in a patient and other conditions. OAEs can help with:

• Detection Cochlear auditory dysfunction

• Investigation of frequency specifi c hearing loss

• Diagnosis of CAPD

• Monitoring of drug ototoxicity

• Confirmation of cochlear malfunction on patients with tinnitus

• Diff erentiation between sensory and neural hearing loss in certain patients

• Detection of genetic diseases

Product includes: Tymp ipsi contra ETF +diagnostic and SCREENING DPOAE

**Final price: 3,15,000 all inclusive**