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### Post-graduate Training:

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- **OTITIS MEDIA (Middle Ear Infection).**

Middle ear infection is the most common infection in the pediatric population, it affects 85% of infants and children. The highest risk age is between 6 months to 2 years.

Several risk factors have been identified with this infection:

- Frequent viral colds and upper respiratory infections
- Poor or absent breastfeeding during infancy
- Allergic hereditary factors
- Environmental factors:
  - Exposure to cigarette smoke
  - Bottle-fed babies
  - Breast or bottle-feeding the baby in horizontal position
  - Pacifier use
  - Day care or nursery attendance

Often, otitis media requires antibiotic treatment for 5-10 days and it resolves without complications, in general ear drops are not helpful. Up to 75% of middle ear infections may present with effusion or inflammatory middle ear fluid collection, which may or may not be pus, filling the middle ear space.

Effusion normally resolves spontaneously in a 6-12 week period. When effusion is present for a period of 3-6 months, there is a significant risk of acquired conduction hearing loss, which can be mild, moderate or severe. In these situations, it is important to monitor the presence and resolution of the effusion by performing periodic clinical evaluations and middle ear testing, known as tympanometry.

When serial clinical evaluations plus serial tympanograms in a 3-6 month period show persistence of the effusion, a more specific hearing test such as otoacoustic emissions or evoked potentials should be performed to rule out a significant hearing loss.

If hearing deficits are indeed present, the child requires an ENT evaluation to opt for the insertion of tympanostomy tubes and allow adequate drainage and ventilation of the middle ear. It is important to ensure normal hearing at a crucial age of speech development and minimize potential speech delays.

Tympanometry is a modern technology that when properly used adds to the pediatrician's clinical evaluation and provides valuable information for monitoring middle ear effusions. Our office recurs to this technology by using a device called **EARSCAN ®** by MicroAudiometrics, Inc.

Simple and reliable hearing testing may also be performed in our office using the **AUDIOPATH ®** by Welch Allyn Inc, a technology based in otoacoustic emissions. This instrument sends a sound signal to the internal ear through a transducer and the hearing response from the cochlear cells is captured by the transducer and then processed and graphed by its computed system.

- Prevention of otitis media:
  - a) Avoid exposure to cigarette smoke at home and other surroundings.
  - b) Reduce or stop attendance to day care, or kindergarten, for 6-12 weeks.
  - c) Always feed your infant in a reclined position.
  - d) Eliminate use of pacifiers.
  - e) Annual vaccination against the influenza virus, "flu shot".