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Paediatric history and examination

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Outline

1. Key-points for **patient records**
   - **Not**: A step-by-step walkthrough of our patient record template
     → study yourselves, simply a recipe
2. **How to achieve a good consultation** with a child/adolescent and its family
   - Age-related tips
3. Important patient **history** points
4. How to do a pediatric **examination**

Paediatric patients record- Important!

- Patient records are **legal** documents
  - Thorough
  - Avoid spelling mistakes, use normal grammatical rules
- Write «x many days ago» and **not** weekdays
- In «**present** situation», the information stems from **parents** and the **child**
- In «status presens», describe what you **observe**, not interpretations
- **Always** include **weight**, **height/length** and **percentiles**. Children < 2 years: **head circumference** with percentile
  - Measures at birth/previous measures to assess progression
- Include profession of parents
- Who is the receiver? Avoid abbreviations (CHD, PE)

How is a pediatric consultation different from an adult one?



- **Empathy** is necessary to get **your job done**
  - Here, you simply won't get away with bad behavior
  - ...but you might be well rewarded for a good one!

Use your observational skills and empathy

- «where» is the child is at the moment?
  - Emotionally
  - Energy level – Due a nap? Hungry?
  - Language-wise – understand what you're saying?
  - Stage of cognitive development
  - Ability to abstract

Connect to the patient

- You need to be:
  - **gentle**, **understanding** and **respectful**
  - **efficient**, **decisive** and **flexible**
  - **never be in a rush**
- **Humor**: sense the situation carefully, do not mock the child (they sense it!)
  - If you get a good connection, you can both have a fun experience where you laugh together
- **Connect to the parents**:
  - Hear them out completely
  - In the conversation, put their concern before your own agenda
  - Respect their concern even if you think it is exaggerated

Tips for infants 0 – (8-)10 months

- Often not sceptical to strangers
- **Very good understanding of non-verbal language and moods**

Tips for toddlers and preschool children 10 months – 4-5 years

- Most children of this age **evaluate strangers through their parents' attitude to them**, and require **«warm-up-time»**
- In most cases, **greet the parents first** (but do send a kind smile to the child)
- The child will often «warm up» to you through the relation between you and the parent
- Little understanding of irony

Tips for children (4-)5-12 years old

- Requires you to **sense the situation** – some children are very shy, others are extremely outgoing
- Generally, **greet the patient first**
- «Muzzle» method often works here also
- The parents should usually stay in the room

Tips for teenage patients

- **Greet the patient first.**
- Independent beings, not just children of their parents.
- Children 12-16 years should be offered a **chat without the parents present**.
- The parents should also be heard out!

Teenage consultation

1. Meet/greet, smalltalk, friendliness, explain how you plan the consultation
2. Tell the parents that they will now be asked to be silent for 5-10 minutes («muzzle»), but that they will be allowed to say everything they want later
3. Do a full history-taking with the child as if the parent was not present
4. Let the parent fill in the gaps / say all that it wants.
5. Ask the parent to leave the room
6. Ask the child if there is anything it would like to add in private
7. Ask the child questions that may be easier to answer in private (i.e. drugs, alcohol, sex – and whether it has experienced abuse/violence)
8. Invite the parent back. Sum up.

Paediatric history

Where to start?

- Presenting complaint/ “aktuelt”
  - Most important!! Use time to explore

- **Primary focus**: **Parents’ concern** (or for older children/adolescent, the patient’s)
- **Secondary focus**: Your thoughts about diagnoses etc.
  - In more obvious emergencies, the balance between these points may change

1. Start by **listening without questions**
2. Explore through **open questions**
3. Finally, **closed questions** are needed

Vegetative function

- Appetite
  - Pattern of feeding
    - Infants: breastfeeding, formu
      foods
  - Known or impression of
    gain?
- Urination
  - Frequency
  - Wetness of diapers
- Defecation
  - Frequency
  - Appearance
  - Pain/discomfort
- Sleeping cycle, alertness and activity



Social background:

- Family structure/occupations:
  - Whole family? Married, live in common law, divorced, only a mother/father
  - Siblings, which number in the order
- Day care
  - Kindergarten, school

Past medical history

- Are there any diseases in the family?
  - Consanguinity
  - (Known genetic diseases)

- Pregnancy, birth, neonatal period
  - Maternal illness or problems during pregnancy
  - Mode and difficulties during delivery
  - Gestational age
  - Birthweight, length, head circumference
  - Birth complications?
    - F.ex. Jaundice, infection.
    - Admitted NICU?
  - Feeding history if appropriate

Past medical history

- Development
  - Appropriate for age?
  - Major milestones
  - Compared to siblings, friends (and parents)
- Growth
  - Infants: proper weight gain?
  - Head circumference
  - Older children: length/weight assessment
  - Immunization
    - Followed the Norwegian vaccination program? If not, why?

- Life (older children)
  - Hobbies, interests
  - More detailed on school – social well-being, subjects/performances, relation to teachers
  - Social life
  - Experienced problems in life – at home, at school

- Allergies
  - To medication and foods
  - Important in obstructive airway disease

- Medication
  - Compared to internal medicine:
    - Parents almost always have the full, actual information

Examination

General points on examination



Pragmatic, efficient and gentle

- Least intruding examination first, most intruding last
- **Do not ask for permission** (small children) – but be as gentle as possible!
- If impatience and low level of cooperation
  - **Prioritize**
  - Often better to perform a suboptimal exam than no exam at all (i.e. Auscultation through clothes, abdominal palpation on parent's lap)
- All body parts should be **examined undressed** during the examination, but clothes do not need to be removed at the same time

- A good time to play together if the mood allows it!

1. The first minutes (during history taking)

- Gives you a large portion of the information you need
- Use your eyes and ears

- What can you tell us about these children? →

- Picture of child smiling, good colour, connected to SpO2 probe

- Picture of drowsy child, supported by mum to sit upright, eyes closed.

- Patient with Down's syndrome

2. General description and vitals

- *<u>Should always be included (see template):</u>*
  - *All vitals* *(except BP in many cases)*
  - *Weight and height/length*
  - *Head circumference* (< 2 years)

- Information mentioned under «the first minutes»
- Palpate extremities (temperatur, dry/clammy)
- Peripheral pulses (brachial > radial in infants)
- Capillary refill time (**always** in the ER!)
- Skin: Rashes/jaundice/cyanosis/pallor (especially important in pediatrics)
- Eyes: Sunken? Moist? Injected? Pus?

- Some of this information is obtained at other points in the examination

2. General description and vitals

How to describe general condition

- Good/normal – lightly reduced – moderately reduced – seriously reduced
- *«**Alert**, **curious, talkative**. Actively and eagerly explores the exam room while chewing on a banana. **Cooperates actively** to the examination, but **protests** firmly to unpleasant procedures.»*
- *«Appears **sleepy**, eyes closed during history taking. Sits on father's lap, torso **hanging flaccidly** over father's arm. Does **not react** to examination, not even to blood sampling»*

3. Auscultation of heart, lungs and stomach

- Why first? The child usually starts to cry during the examination
- Warm the stethoscope
  - Or auscultate through clothes (→ pragmatism!)

4. Head to toe except ENT exam

- **Caput** (head)
  - Shape (some syndroms, flat heads)
  - Anterior fontanelle
  - Separation/Fusion of sutures
  - Dilated veins (hydrocephalus)

- **Collum** (neck)
  - Lymph nodes
  - Neck stiffness (flexion – chin on chest!)
  - (Kernig/Brudzinski)

4. Head to toe except ENT exam

- **Thorax** (chest)
  - Anatomical variation
  - Surgical scars
  - (Axillary lymph nodes)
- **Abdomen**
  - In younger children, often better performed on the parents' lap
  - Eyes on patient's face
  - Distraction
  - (Groin lymph nodes)

4. Head to toe except ENT exam

- **Genitalia**
  - In small children, always examine genitalia
    - Diaper rashes
    - Hernias
    - Scrotum – abdominal pain
    - Undescended testicles

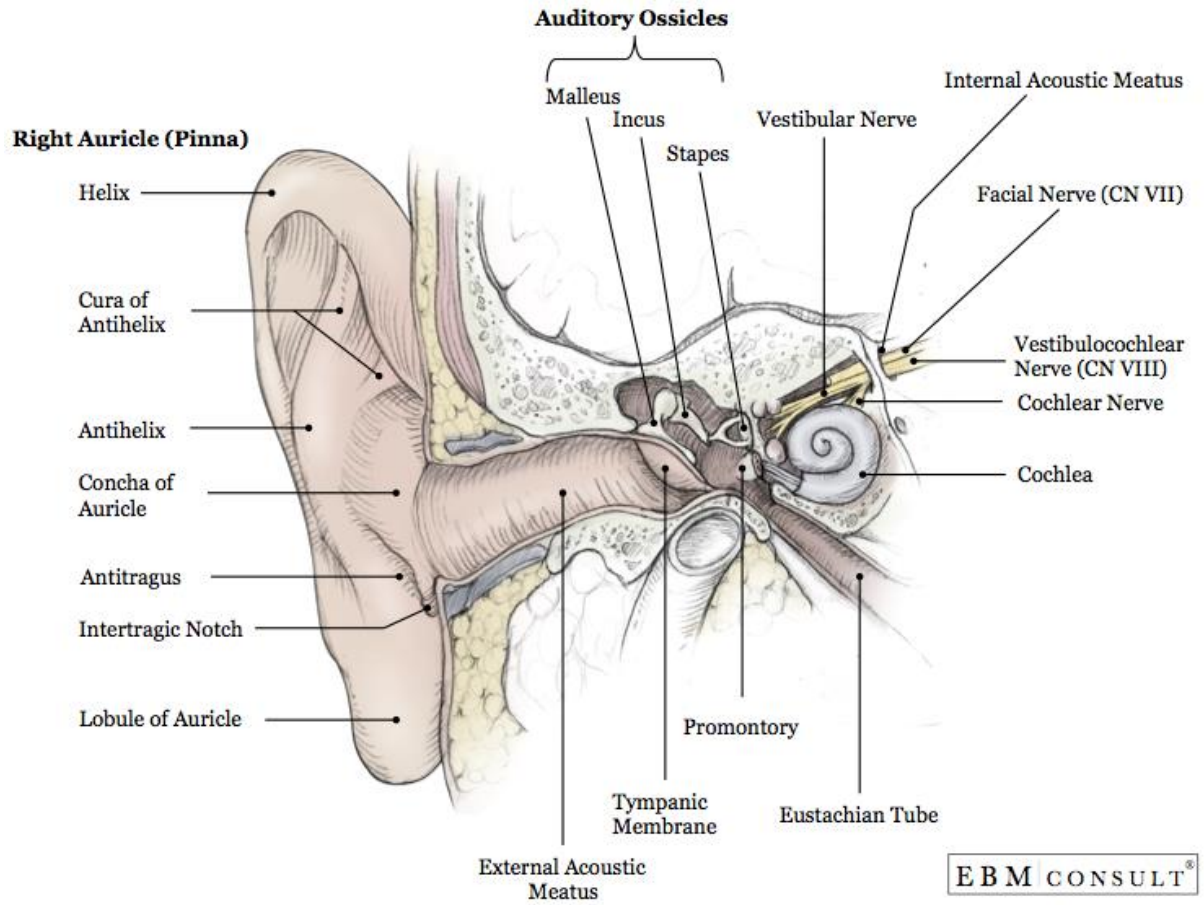
- **Rectal exam**
  - Usually **not** performed.
    In some cases, it may provide info on possible constipation

5. Neurological exam/screening

- Primitive reflexes
  < 6 months, at least when < 3 months
- Brief neurological screening
  Contact level, movement patterns, muscle tone
- (Full neurological exam)
  When indicated (convulsions, paresis etc.)

NEWBORN REFLEX	DISAPPEARANCE
BLINKING	N/A
MORO	3-6 months
GRASP	3-4 months
STEPPING	1-2 months
TONIC NECK	3-4 months
SNEEZE	N/A
ROOTING	4-6 months
GAG REFLEX	N/A
COUGH REFLEX	N/A
BABINSKI SIGN	12 months

6. ENT exam



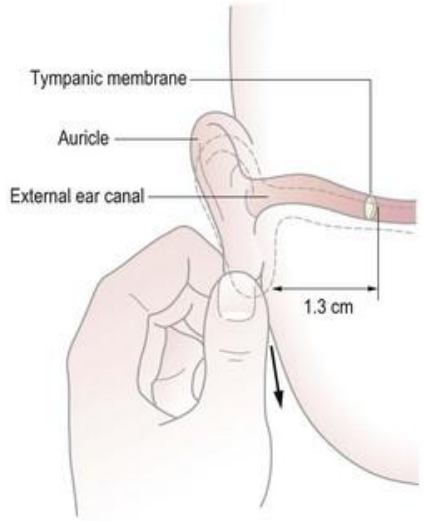
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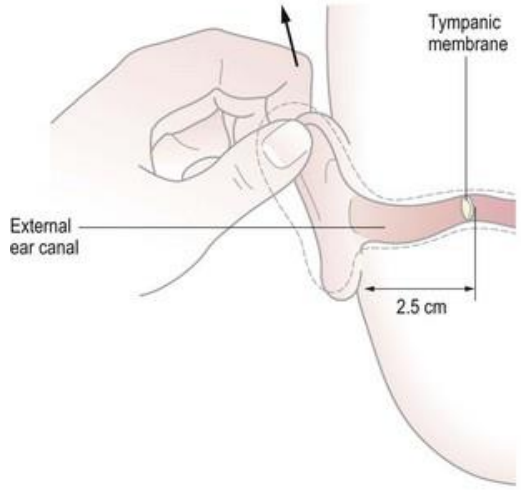
Anatomy

- The external auditory canal (EAC) curves inward
- EAC is approximately 2,4 cm long.
- Infants:
  - The EAC is directed upward and backward
  - The examiner pulls the pinna posteriorly and inferiorly.

- Children >3 years of age:
  - The EAC curves downward and forward
  - The examiner gently retracts the pinna posteriorly and superiorly.

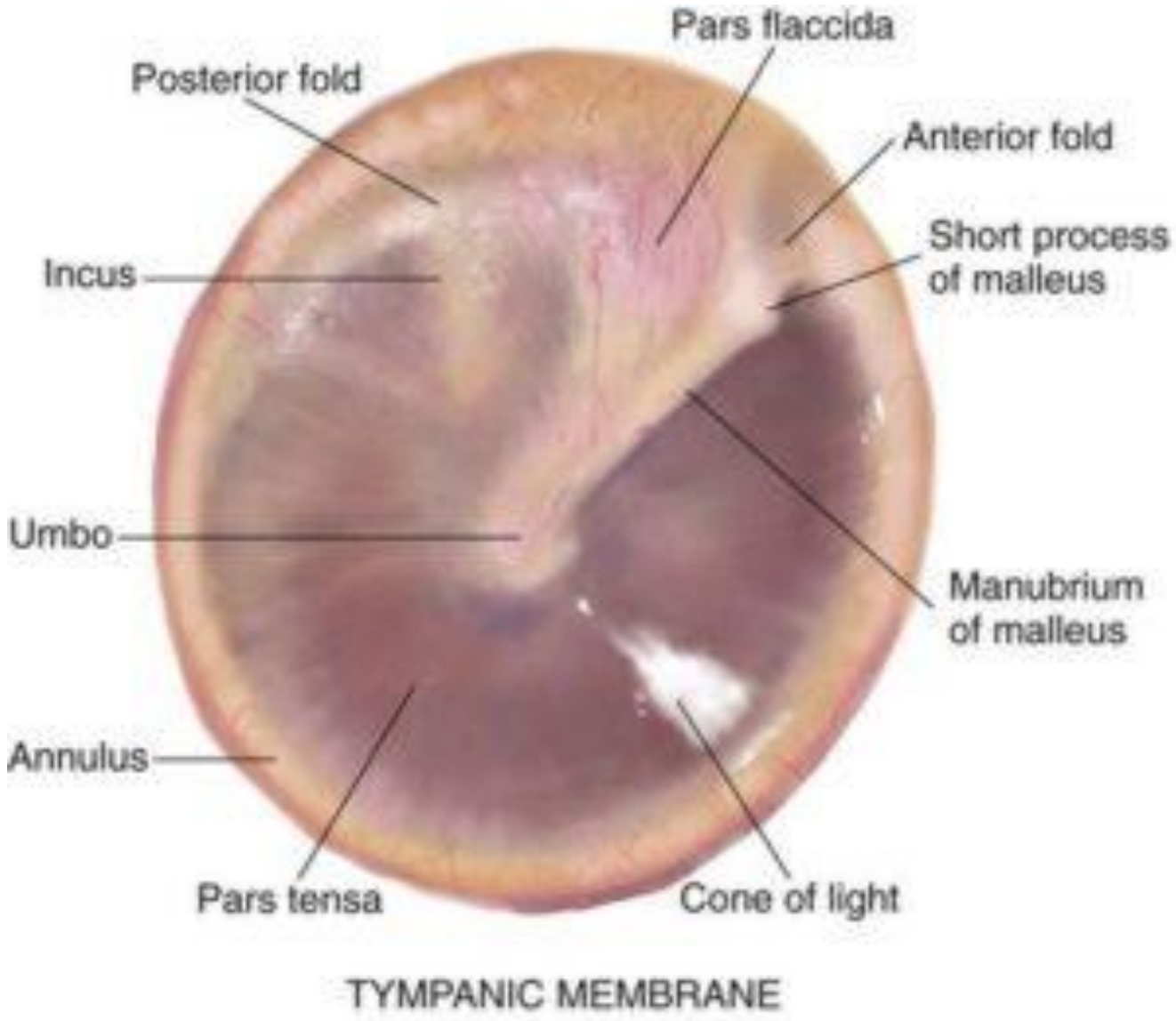
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- Top: Infant
- Bottom: Child/Adult

Picture from https://basicmedicalkey.com/ear-conditions/



TYMPANIC MEMBRANE

Picture from https://oxfordmedicaleducation.com/clinical-examinations/ear-examination/

Acute otitis media

- Bulging tympanic membrane
- Opaque membrane, not translucent
- Fluid behind



Picture from https://www.rch.org.au/clinicalguide/guideline_index/acute_otitis_media/

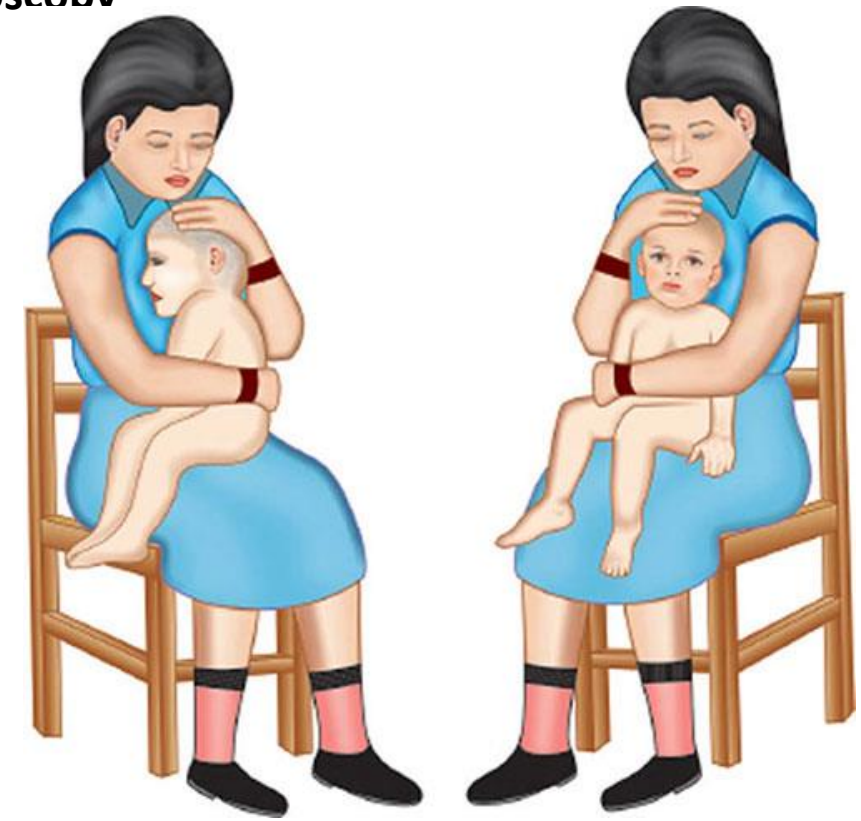
Last, but not least

Throat exam

- Equipment:
  - Source of light
  - Tounge depressor
- Tip:
  - Gentle maneuver but firm pressure
  - Be quick! Only get a few seconds glimpse if difficult exam

Positions

Otoscopy **Oral cavity / throat exam**



***Claim**: Possible in 95% of cases*

Picture from "Clinical examination: 7th edition. MacLeod J. Munro J(Eds) ELBS-Churchill Livingstone, Edinburg, 1986).

These exams are important in all fever cases (especially fever of «unknown» origin)

Let’s try!

References

- Lissauer, T. (2017). Illustrated textbook of paediatrics (5th ed.). Elsevier Science.
- Otoscope Examination. https://www.ebmconsult.com/articles/otoscope-examination