



Peripheral Neuro-vascular Examination

Objective:

To be able to perform examination of the knee and to distinguish and identify an abnormal finding that suggests a pathology.

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References: Department handout, Notes(by moath baeshen), Browse's,433 OSCE Team.

WIPPPE

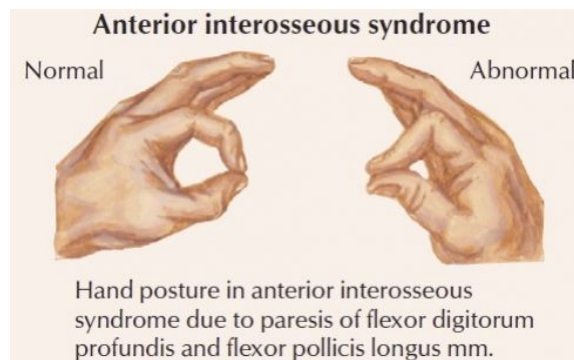
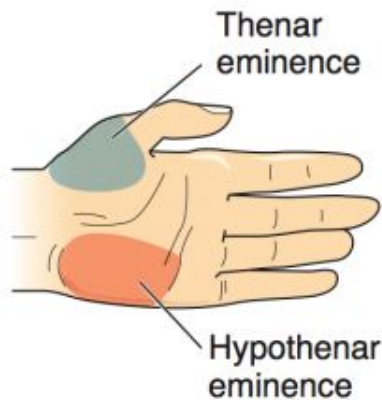
Wash hands, Introduce yourself, take Permission, ensure Privacy, Position, Exposure

Examination:

Upper limb:

❖ Median nerve:

1. **Inspection:** Thenar muscle wasting.
2. **Motor:** Thumb abduction or opposition (opposition of thumb to little finger and NOT to index finger for OK sign). (Opposition gets affected first) (The doctor said avoid the thumb abduction) (When the patient does the OK sign, try to open it and ask the patient to prevent you doing so)
3. **Sensory:** fine touch over volar aspect of (the tip of the) index finger.

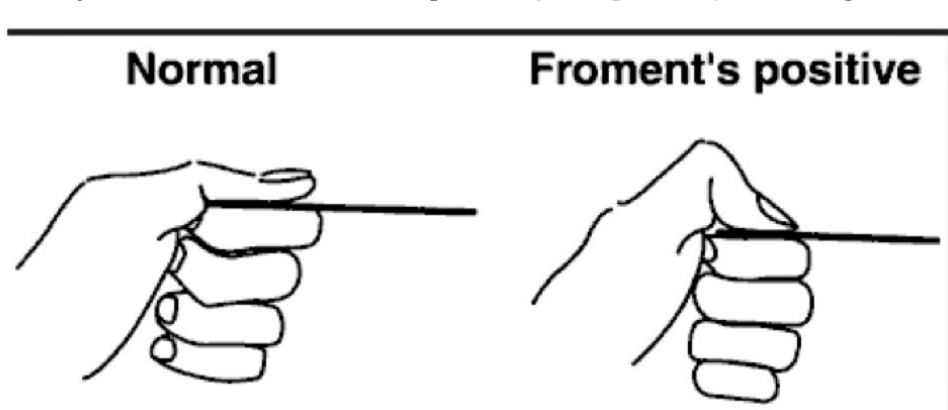


Anterior interosseous nerve is a branch of the median nerve

Median nerve Examination: <https://www.youtube.com/watch?v=PP9yKcDXfzA>

❖ Ulnar nerve:

1. **Inspection:** hypothenar muscle wasting, claw hand
2. **Motor:** finger abduction, Froment's sign (adduction of the thumb can also be used)
3. **Sensory:** fine touch over volar aspect of (the tip of the) little finger

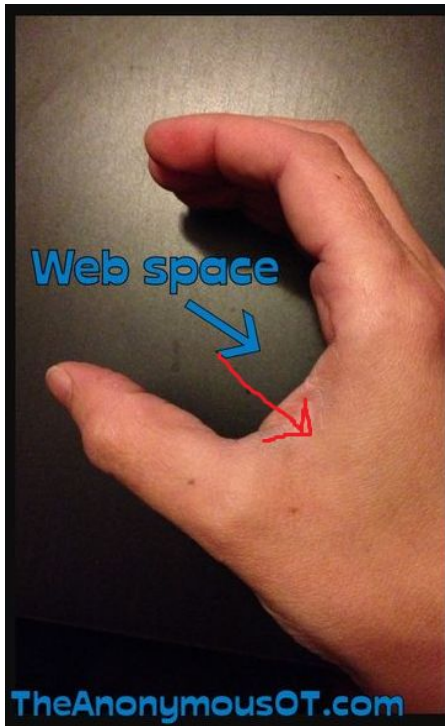


Froment's sign: <https://www.youtube.com/watch?v=yJTlhm1VfSI>

Ulnar nerve Examination: <https://www.youtube.com/watch?v=iy2xKiSAi3E>

❖ **Radial nerve:**

1. **Inspection:** drop wrist
2. **Motor:** wrist extension (assess the wrist and not forearm)
3. **Sensory:** fine touch over dorsal aspect of first web-space



ulnar
claw hand



radial
wrist drop



median
parson hand

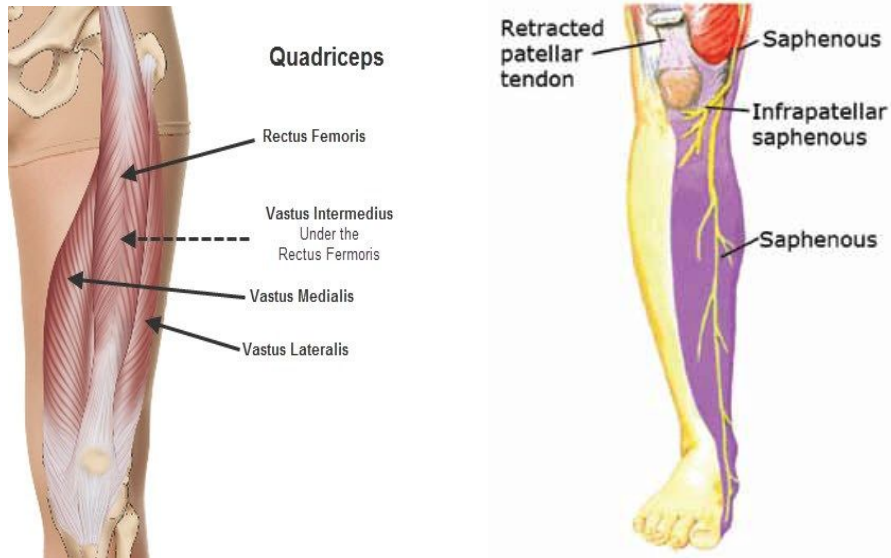
Radial nerve examination: <https://www.youtube.com/watch?v=cxoLoCOgUhl>

Upper limb (Hand) peripheral nerves examination: <https://www.youtube.com/watch?v=8fmG9cNKjlg>

Lower Limb:

❖ **Femoral nerve:**

4. **Inspection:** Quadriceps wasting
5. **Motor:** knee extension
6. **Sensory:** medial aspect of leg and foot (saphenous nerve).

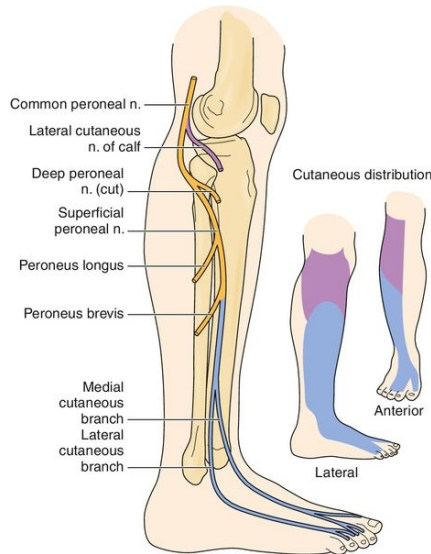


❖ **Common peroneal nerve:**

4. **Inspection:** drop foot, anterior leg muscle wasting. (For drop foot, raise the leg passively to detect it)
5. **Motor:** ankle dorsiflexion
6. **Sensory:** dorsal aspect of foot

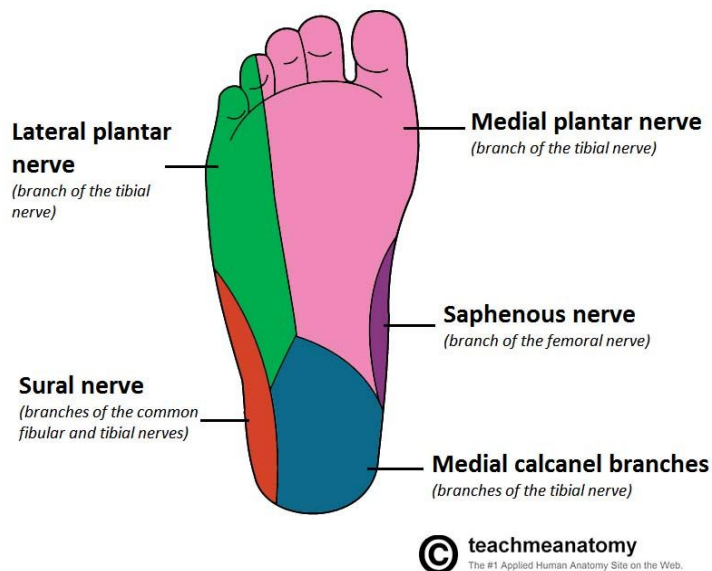


Drop foot



❖ **Tibial nerve:**

4. **Inspection:** calf muscle wasting (Look at the back of the leg !)
5. **Motor:** ankle plantar flexion
6. **Sensory:** plantar aspect of foot



Vascular exam:

- A. **Look:** Thin, shiny, hairless skin. Ulcers. Pallor.
- B. **Feel:** temperature
- C. **Special tests:**
 1. Capillary refill (normal is <2 seconds).
 2. Pulses

Important Notes:

- 1- Always **compare**.
- 2- For the motor part, it's better to ask the patient to do the movement, then assess it against resistance for power. However, **The most important thing is testing the action against resistance.**
- 3- Mention the **power grade** after comparing resistance on both sides. (e.g.; 5/5 on both sides)
- 4- When assessing the sensory function, ask the patient:
 - A- Do you **feel** it? B- **Is it the same** in both sides?
- 5- For **fine touch**, use a cotton.

Grade	Description
0	No muscle contraction at all
1	Visible muscle contraction, but no movement
2	Movement without influence of gravity
3	Movement against gravity
4	Movement against resistance
5	Normal strength

Grade 5	Normal movement
Grade 4	Movement against resistance, but weaker than the other side
Grade 3	Movement against gravity, but not against resistance
Grade 2	Movement only with gravity eliminated
Grade 1	Palpable contraction but no visible movement
Grade 0	No movement

During inspection, the most important thing (in orthopaedics) is the muscle bulk (i.e.; wasting and deformities).

(Doctor H. Al. Sanaawi said that one test for each part is sufficient. For instance, when testing the motor function of the ulnar nerve, you can test either the finger abduction or the Froment's sign)

A wasted (Atrophied muscle) indicates prolonged nerve injury.