Guidelines for the Blink reflex study – supraorbital trigeminal nerve

- Select nerve from the nerve list (supraorbital trigeminal n)
- Select blink reflex from the programme menu.
- The recording is bilateral: amplifier 1 = right side, amplifier 2 = left side.
- The reflex habituates - stimulate every other second (= 0.5Hz)

Patient position: reclining or lying down, relaxed with eyes closed

Type of recording electrode: Surface plate electrode

Position of recording electrode: over the orbicular oculi muscle, at the lower eyelid

Position of the reference electrode: over the orbicular oculi muscle, lateral to the eye

Type of stimulating electrode: surface electrodes on a fixed bar.

Stimulation
Principle: Use a stimulation strong enough to elicit a visible blinking. Stimulate with 0.5 Hz to avoid habituation.
Site: above the eye (1 cm from midline at the supraorbital notch), cathode over the supraorbital nerve.
Bifasic stimulation pulse can reduce the stim artefact.

Recorded potentials:
A two-channel recording is performed:
R1: muscle action potential from the facial nerve (ipsilateral to stimulated side)
R2: reflex response from trigeminal nerve input ipsilateral side and facial nerve output bilaterally.

If R1 muscle action potential is recorded from both sides simultaneously, both supraorbital nerves has been stimulated. This can occur if the stimulating electrode is too close to the midline, or if the stimulating intensity is too high.

Results:
Measure the shortest latency of the R1 and R2 potentials of 5 recordings of each side.
The measurement is done at the page called “last five”. Selected trace will appear and saved at the “analyse” page in the programme.
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Guidelines for the Blink reflex study – infraorbital trigeminal nerve

- Select nerve from the nerve list (infraorbital trigeminal n)
- Select blink reflex from the programme menu.
- The recording is bilateral: amplifier 1 = right side, amplifier 2 = left side.
- The reflex habituates - stimulate every other second (= 0.5Hz)

Patient position: reclining or lying down, relaxed with eyes closed

Type of recording electrode: Surface plate electrode

Position of recording electrode: over the orbicular oculi muscle, at the lower eyelid

Position of the reference electrode: over the orbicular oculi muscle, lateral to the eye.

Type of stimulating electrode: surface electrodes on a fixed bar.

Stimulation
Principle: Use a stimulation strong enough to elicit a visible blinking. Stimulate with 0.5 Hz to avoid habituation.
Site: Over the infraorbital trigeminal branch – at the cheek, just below the cheekbone, cathode proximal.
Bifasic stimulation pulse can reduce the stim artefact.

Recorded potentials:
R1: muscle action potential from the facial nerve (ipsilateral to stimulated side)
R2: reflex response from trigeminal nerve input ipsilateral side and facial nerve output bilaterally.

Results:
Measure the shortest latency of the R1 and R2 potentials of 5 recordings of each side.
The measurement is done at the page called “last five”. Selected trace will appear and saved at the “analyse” page in the programme.
Guidelines for the Blink reflex study – mental trigeminal nerve

- Select nerve from the nerve list (mental trigeminal n)
- Select blink reflex from the programme menu.
- The recording is bilateral: amplifier 1 = right side, amplifier 2 = left side.
- The reflex habituates - stimulate every other second (= 0.5Hz)

Patient position: reclining or lying down, relaxed with eyes closed

Type of recording electrode: Surface plate electrode

Position of recording electrode: over the orbicular oculi muscle, at the lower eyelid

Position of the reference electrode: over the orbicular oculi muscle, lateral to the eye.

Type of stimulating electrode: surface electrodes on a fixed bar.

Stimulation
Principle: Use a stimulation strong enough to elicit a visible blinking. Stimulate with 0.5Hz, in order to avoid habituation.
Site: Over the mental trigeminal branch – between the lip and the chin, 2 cm lateral to the midline, cathode proximal.
Bifasic stimulation pulse can reduce the stim artefact.

Recorded potentials:
R1: muscle action potential from the facial nerve (ipsilateral to stimulated side).
Note! Seldom appearing when stimulating this trigeminal branch.
R2: reflex response from trigeminal nerve input ipsilateral side and facial nerve output bilaterally.

Results:
Measure the shortest latency of the (R1 and) R2 potentials of 5 recordings of each side. The measurement is done at the page called “last five”. Selected trace will appear and saved at the “analyse” page in the programme.
1. N supraorbitalis
2. N infraorbitalis
3. N mentalis