

Prone Positioning



Figure 1. A patient in prone positioning

What is this procedure?

Mechanical ventilation is traditionally delivered with the patient facing upwards. Prone positioning means the patient lies facing down. This procedure is carried out in patients with severe lung failure while on mechanical ventilation. It aims to improve oxygen delivery to the damaged lungs into the blood. The mechanisms include beneficial effects on lung volumes, better matching between gas and blood supply, easier drainage of secretions, etc. In some patients, it may improve survival compared with the usual face-up positioning.

Why there is a need to do it?

In case of severe lung failure, the lung function is suboptimal if the patient is facing up. Having the patient face down would allow air exchange in healthy lung tissue.

How is it done?

Trained staff will coordinate the switch from a face-up to face-down position while ensuring patient safety. Adequate padding and support will be placed for potential pressure areas (face, upper chest, pelvis, knees) to decrease pressure over those areas. Checks of the patient's eyes, pressure areas, tubes/lines/drains are done at regular intervals. Regular turning of the patient's head and/or arms may be performed according to the practice of the responsible unit.

When to stop?

The duration depends on the clinical situation upon decision of the doctor.

Risks and complications

- Significant hemodynamic instability or arrhythmia
- Dislodgement / displacement / kinking of tube / lines / drains e.g. breathing tube, central venous line, chest drain, abdominal drains
- Pressure injury, for example: over face, breast, pelvis, male genitals, knees
- Blindness
- Nerve injury especially at the brachial plexus
- Difficulty in carrying out certain procedures in a face-down position, such as insertion of central venous lines, re-insertion of breathing tube (in case of dislodgement), cardiopulmonary resuscitation
- Increase head and / or abdominal pressure

Possibility that the procedure cannot be carried out

- Known difficulties during insertion of breathing tube
- Spinal instability
- Unstable facial fracture, pelvic fractures and/or long bone fractures
- Unstable blood pressure and/or heart rhythm
- Known increases in abdominal or head pressure
- Immediately after an operation on the abdomen
- Pregnancy
- Extreme obesity
- Patients receiving end-of-life care

Other treatment options

If the patient chooses not to perform this procedure, it may affect their overall condition. A variety of clinical factors can impact the degree of change, including the individual patient's physical condition before the onset of illness, the type of disease, the response to treatment and the progress, etc. Your doctor will explain other suitable options to you.

Disclaimer

The information provided in this booklet is for general reference only. The risks and complications listed above are not exhaustive. Please consult your attending doctor for details.