

Prone Positioning



Figure. A patient in prone positioning

What is this procedure?

Mechanical ventilation is traditionally delivered with the patient in the supine position. Prone positioning means laying the patient face-down. This procedure is carried out in patients with severe lung failure while on the mechanical ventilator to improve oxygen entry into the blood through the damaged lungs. The mechanisms include beneficial effects on lung volumes, better matching between gas and blood supply, easier drainage of secretions, etc. In some but not all patients, it may improve survival compared with the usual face-up positioning.

Why is there a need to do it?

When the usual mechanical ventilation position cannot maintain blood oxygen level because of the severe lung failure, this procedure may be able to improve oxygen entry.

How is it done?

A group of trained staff is needed to coordinate turning of face-up to face-down position safely. Adequate padding and support will be placed for potential pressure areas (face, upper chest, pelvis, knees) to decrease pressure over those areas. Checking of patient's eyes, pressure areas, tubes/lines/drains is done at regular intervals. Regular turning of patient's head and/or arms may be performed according to the practice of the particular unit.

When to stop?

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

Risk 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 genital, knees.
- Blindness.
- Nerve injury especially at brachial plexus.
- Difficulty in carrying certain procedures in face-down position, such as insertion of central venous lines, re-insertion of breathing tube (in case of dislodgement), cardiopulmonary resuscitation.
- Increase in pressure of abdomen and/or head.

Possibility that the procedure cannot be carried out

- Known difficulty during insertion of breathing tube
- Instability of spine
- Unstable facial fracture, pelvic fractures and/or long bone fractures
- Unstable blood pressure and/or heart rhythm
- Known increase pressure inside abdomen or head.
- Immediately after operation of abdomen
- Pregnancy
- Extreme obesity
- Patients receive end-of-life care

Other treatment options

If the patient chooses not to perform this procedure, it may affect the overall condition. The change of the condition is affected by a variety of clinical factors, 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.