

## Tracheostomy decannulation

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Once that the initial cause of respiratory failure that required tracheostomy has resolved, the patient can be evaluated for possible decannulation, taking into account age, past history and baseline disease. If tracheostomy was indicated for secretions clearance and for protecting the airways, then cough function and strength must be adequately evaluated, as well as swallowing function. Last, in patients tracheostomized for prolonged ventilation, the persisting need for ventilatory support must be carefully evaluated: If ventilation is required only during the night, a possible conversion to non-invasive ventilation and subsequent decannulation can be considered. In summary, the baseline checklist for screening candidates for tracheostomy removal should include the following items:

- clinical stability
- mental alertness and integrity, including the capacity to understand benefits and risks of decannulation
- consent of both patient and relatives
- sufficient pulmonary reserve and stability of blood gas values
- absence of tracheal or glottic stenosis
- limited volume of airway secretions and proper cough efficiency
- adequate airway protection and swallowing mechanisms

In presence of most favourable criteria, the team can proceed to the operative phase: The first step is to cap the tube for gradually longer periods in order to assess the adequacy of native airways; if the patient can comfortably breath around a capped 8 mm ID tube with deflated cuff, it is likely that his or her native airways are intact and they has sufficient pulmonary reserve. The following step can be straight forward tube removal without the intermediate phases if all the required criteria are met, otherwise gradual downsizing must be done, with patient under close observation.

### Biography

Piero Ceriana is a graduate of the University of Pavia School of Medicine. He is a specialist in respiratory medicine and anesthesia & intensive care. He is the director of the Respiratory Rehabilitation Unit and Weaning Center at the Fondazione Maugeri Hospital in Pavia. He is also head of the department of multidisciplinary rehabilitation. He is author and co-author of several scientific papers in indexed journals.

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