Breathing & Sleep Symposium II
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Building on the successful 2009 program about the breathing and sleep problems of individuals with neuromuscular (NM) conditions, new topics at the November 21, 2010, symposium covered pulmonary function tests and pre- and post-operative surgical considerations. The audience of primarily polio survivors also included respiratory therapists and trainees from the local San Diego area who received continuing education credits for the five-hour program. The setting was again the Salk Institute for Biological Studies in La Jolla, California, and sponsors were the Salk Institute and ResMed Corp.

Presenters included Josh Benditt, MD, FCCP, and Louie Boitano, MS, RRT, RPFT, the Northwest Assisted Breathing Center at University of Washington in Seattle; Helen Kent, BS, RRT, Progressive Medical, Carlsbad, California; Selma Calmes, MD (retired), UCLA School of Medicine; and Angela King, BS, RPFT, RRT-NPS, ResMed Corp.

HIGHLIGHTS

Sleep-disordered breathing, tests and equipment
- During sleep, everyone breathes less deeply but when there is also respiratory muscle weakness, individuals can get started on the slow road to respiratory insufficiency.

- Sleep studies may not be necessary when pulmonary function tests such as MIP (maximum inspiratory pressure), MEP (maximum expiratory pressure), peak cough flow, and FVC (forced vital capacity) can identify breathing problems and underventilation due to weakening respiratory muscles. It is important to measure FVC in the supine (lying face up) position.

- Most sleep labs are not set up for people with neuromuscular conditions who may have breathing problems due to underventilation. CPAP units are appropriate for obstructive sleep apnea, but when underventilation is present, the appropriate equipment is a bilevel device with a backup rate that can initiate breaths for the individual.

- Oxygen may be necessary but should only be used in conjunction with assisted ventilation.

- Pulse oximetry measures O₂ saturation, but not CO₂ buildup.

- Follow-up monitoring after assisted ventilation has been initiated is important, but often not done. Annual tests of MIP, MEP, and FVC are recommended to monitor progression of respiratory muscle weakness.

Pre-op and post-op considerations
- When possible, choose a large teaching hospital, and check out the surgeon carefully.
Complications are due more to the surgery than the anesthesia.

Meeting with the anesthesiologist before surgery, while preferable, may not be possible. Many large hospitals have pre-op clinics that can take the information and pass it along in case the anesthesiologist should change.

Post-op phase can be critical for people with NM disorders; these individuals need closer monitoring and should not be discharged too quickly.

If the hospital permits, the individual can bring his/her own ventilator and interface to use, but this requires discussions with hospital staff as surgery is being planned.

Gladys Swensrud, Co-Facilitator of the San Diego Polio Survivors, was saluted for her hard work in organizing and promoting the symposium. Videos of the presentations are available on www.poliotoday.org.