Is Noninvasive Positive Pressure Ventilation (NPPV) a Feasible and Safe Prehospital Treatment for Swimming-Induced Pulmonary Edema (SIPE)?

**STUDY DESIGN**
- Prospective observational study at Sweden’s largest open water swimming event from 2017-2019
- 119 swimmers with SIPE and SpO₂ <95% and/or persistent respiratory symptoms
- NPPV given on site by continuous positive airway pressure (CPAP) face mask or positive expiratory pressure (PEP) device

**RESULTS**

**NPPV:**
- Increased SpO₂ from 91% to 97% median (P < .0001)
- Improved respiratory symptoms
- Did not change crackles or pulmonary edema on lung ultrasound (LUS)

- 91% were discharged
- 9% required hospital transfer

Outcome measures before and after treatment with CPAP or PEP device for discharged individuals. (A) Peripheral oxygen saturation (%). (B) Patient-reported respiratory symptoms, rated by numerical scale 0-10.

NPPV administered as CPAP or PEP device proved feasible and safe as a prehospital treatment for swimming-induced pulmonary edema, with improved SpO₂ and respiratory symptoms.

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