

Sajid MS, Mallick AS, Rimpel J, Bokari SA, Cheek E, Baig MK. Effect of heated and humidified carbon dioxide on patients after laparoscopic procedures: a meta-analysis. *Surg Laparosc Endosc Percutan Tech* 2008; 18: 539-46

LINK - <https://www.ncbi.nlm.nih.gov/pubmed/19098656>

OBJECTIVE:

To systematically analyse the role of heated humidified carbon dioxide (CO₂) in laparoscopy.

METHODS:

Clinical trials on laparoscopic procedures using standard dry CO₂ versus heated humidified CO₂ for pneumoperitoneum were analysed.

RESULTS:

Ten randomized controlled trials on 565 patients were analysed. In both the fixed and random effect models, postoperative pain was significantly less in heated humidified CO₂ group. Heated humidified CO₂ group was also associated with significantly lower risk of hypothermia and lower analgesic requirement. However, statistically there was no difference in total hospital stay and lens fogging rate.

CONCLUSIONS:

The use of heated humidified CO₂ for pneumoperitoneum in laparoscopic procedures is associated with lesser postoperative pain, lower risk of postoperative hypothermia, and lower analgesic requirements. However, total hospital stay and lens fogging rates do not differ. Hence, the heated and humidified CO₂ may be considered as the first choice for pneumoperitoneum in laparoscopic procedures.