**Original article:**

**Efficacy of incentive spirometer in improving pulmonary functions after upper abdominal surgery**

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**ABSTRACT:**

**Introduction:** Incentive spirometer(IS) is widely used in prevention and treatment of postoperative pulmonary complications after upper abdominal surgery. The aim of study was to evaluate efficacy of Incentive spirometer in improving pulmonary functions after upper abdominal surgery.

**Methodology:** Patients in Incentive spirometer group were given three supervised sessions of IS daily. Patients were also told to use IS 10 times during each waking hour .Patient in Deep breathing exercise group (Control Group) were taught deep breathing exercises preoperatively and encouraged to do deep breaths with 10 times during every waking hour. Spirometric values of FEV1, FEV6, and PEFR were obtained one day before surgery, three days after surgery and five days after surgery.

**Results and conclusions:** A marked reduction in pulmonary function variables of PEFR, FEV1, and FEV6 were present after surgery. The patients in Incentive spirometer group have better pulmonary functions as compared to deep breathing exercise group after three days and five days of surgery. So incentive spirometer improves the pulmonary functions earlier than Deep breathing exercise group after upper abdominal surgery.

**Keywords**: Incentive Spirometer, Abdominal surgery, Breathing Exercise