A preoperative smoking intervention decreased postoperative complications in elective knee or hip replacement


QUESTION: In patients having elective knee or hip replacement, is a preoperative smoking intervention more effective than usual care for reducing postoperative morbidity and mortality?

**Design**
Randomised (allocation concealed†,‡), blinded (outcome assessor),* controlled trial with follow up time to discharge.

**Setting**
3 university affiliated hospitals in Copenhagen, Denmark.

**Patients**
120 patients who were scheduled for primary elective hip or knee alloplasty and were daily smokers. Patients with a weekly alcohol intake > 35 units were excluded. 108 patients (90%) were included in the analysis (median age 65 y, 57% women).

**Intervention**
At 6 to 8 weeks before surgery, 60 patients were allocated to the smoking intervention and were offered a weekly meeting with the project nurse. At the first meeting, a Fagerstöm test was done to estimate the patient’s nicotine dependence. Test results and patient preference were used to devise a personalised nicotine substitution schedule. Patients were strongly encouraged to stop smoking, but they also had the option to reduce tobacco consumption by ≥ 50%. Smoking status was monitored, and nicotine substitution products were provided free of charge. At subsequent meetings, tobacco use was recorded, and patients were given advice about smoking cessation or reduction, benefits and side effects, and management of withdrawal symptoms and weight gain. 60 patients were allocated to usual care (little or no information or counselling on smoking).

**Main outcome measures**
Postoperative complications (death or postoperative morbidity requiring treatment within 4 wks after surgery).

**Main results**
Analysis was by intention to treat. No patients died before discharge. Rates of any postoperative complications and wound related postoperative complications were lower in the smoking intervention group than in the usual-care group (table).

**Conclusion**
A preoperative smoking intervention was more effective than usual care for reducing any postoperative and wound related postoperative complications in patients having elective knee or hip replacement.

*See glossary.
†Information provided by author.