MASS GENERAL RESEARCH INSTITUTE
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)

GUIDELINES FOR SURGICAL FIRE PREVENTION

At the start of surgery:

- Enriched O_2 and N_2O atmospheres can vastly increase flammability of drapes, plastics, and hair. Be aware of possible O_2 enrichment under the drapes near the surgical site and in the fenestration, especially during head/neck surgery
- Place absorbent pads under animal prior to prepping.
- Remove pads after prepping.
- Wait a minimum of three minutes after prepping before draping to allow flammable preps to dry.
- Do not drape the animal until all flammable preps have fully dried.
- Fiber-optic light sources can start fires: complete all cable connections before activating the source. Place the source in standby mode when disconnecting cables.
- Moisten sponges to make them ignition resistant in oropharyngeal and pulmonary surgery.

For surgery with open delivery of supplemental O_2

- Question the need for 100% O_2 for open delivery during head/neck surgery.
- As a general policy, use air or ≤ 30% O_2 for open delivery to the face.
- If higher concentrations of O_2 are needed, consider intubating the animal.
- Arrange drapes to minimize O_2 buildup underneath.
- Use moistened towels and/or an adherent incision drape to isolate incision from O_2 and alcohol vapors.

During oropharyngeal surgery:

- Scavenge deep within the oropharynx to catch leaking O_2 and N_2O.
- Moisten sponges and other flammable material used in the oropharynx.

When performing electrosurgery, electrocautery, or laser surgery:

- Stop supplemental O_2 (if O_2 concentration is >30%) at least one minute before and during use of the unit, if possible.
- Activate the unit only when the active tip is in view, especially if looking through a microscope or endoscope
- Deactivate the unit before the tip leaves the surgical site.
- Place electrosurgical electrodes in a holster or another location away from the animal, when not in active use.
- Place lasers in standby mode when not in active use.
- Do no place rubber catheter sleeves over electrosurgical electrodes.