

“Ten Things Patients Should Know” Series

SURGICAL FIRES

1. **KNOW THE RISK:** There are approximately 650 surgical fires each year. In addition, other fires start but are put out before they reach the patient. Fires in the operating room are rare but potentially life-threatening.
2. **HOW FIRES HAPPEN:** Three things have to be present for a fire to start. This “Fire Triangle” includes heat, a source of “fuel” (something that will burn) and oxygen.
3. **SURGICAL FIRES ARE PREVENTABLE:** Surgical fires do not have to happen and can be avoided with proper precautions and communication by the surgical team.
4. **HEAD AND NECK SURGERY:** Procedures in the head and neck area pose a greater risk of fire due to the potential for an oxygen-rich environment around a patient’s face from a breathing mask.
5. **PRE-OPERATIVE SKIN CLEANSERS:** Skin “preps” often contain alcohol, which is flammable. Skin cleaners may pool in the skin folds –especially on overweight patients – so they need time to dry before surgery begins.
6. **DRAPING:** Surgical drapes can catch fire and they can hide the “pooling” of liquid alcohol skin preps. Drapes can also trap alcohol vapors from skin preps, which can ignite if exposed to heat and oxygen.
7. **DEVICES USED TO CUT TISSUE:** Tools such as electrocautery (tissue-cutting) units (sometimes called a Bovie), lasers, fiber-optic lights and cables can generate heat or sparks and cause a fire. These devices are also used in dental offices, so ask about safety precautions.
8. **FACIAL HAIR:** Hair on the face may need to be covered with water soluble jelly – this is important for head and neck surgeries and for patients with beards, moustaches and thick eyebrows.
9. **ROOM AIR:** If possible, the patient should be kept on room air and not highly concentrated oxygen. If extra oxygen is needed, it should be the lowest concentration that is safe for the patient.
10. **STAFF TRAINING:** Ask if the staff is trained in preventing, recognizing and putting out surgical fires. What precautions do they have in place to protect patients? Will water and CO2 fire extinguishers be readily available in the OR?