

INFORMATION FOR PHYSICIANS WHO PLAN TO USE LIDOCAINE IN THE TONSIL FIRE EXTINGUISHER

Safe lidocaine dosing:

The recommended maximum dose for lidocaine is 3 mg/kg(1). For a 40kg 10 year old, The oldest patient we recommend treating, a maximum dose would be 120mg. Four sprays with the tonsil fire extinguisher filled with 4% lidocaine (our recommended dose) delivers 20mg, one Sixth of the recommended safe dosage. The half-life of the drug in the body is 90 min, so a maximum every 2 hour dosing should be safe. There is a published study which documents efficacy of topical lidocaine postoperatively (2), in which 10% lidocaine spray was used. There have been Studies using repeated dosing aerosolized lidocaine in the treatment for chronic cough and for asthma (3), (4), (5). There were no incidences of lidocaine toxicity or serious aspiration in these studies. Nevertheless, there are no pharmaokinetic studies showing the clearance of lidocaine after repeated aerosol spraying on a raw wound. It is therefore very important to keep the dosage low and infrequent.

Total amount of 4% lidocaine in the filled spray bottle is 17ml x 40mg/ml, or 680 mg. This would be a toxic dose if swallowed all at once. The Tonsil Fire Extinguisher comes in a child proof container, where it should be kept when not in use.

Patients should be made aware of the signs of lidocaine toxicity:

Early signs: Nervousness, lightheadedness, dizziness, anxiety or confusion, tinnitus, blurred or double vision, a sensation of heat, cold, or numbness, twitching, tremor or vomiting

More severe toxicity: Tachypnea, tachycardia, fever, tonic-clonic siezures, cardiovascular collapse

Other Concerns:

In over 250 patients treated in out practice, we have had

No lidocaine toxicity,

No aspiration,

No increase in post tonsillectomy bleeding.

We don't use this on small children under 10yo. We are avoiding lidocaine toxicity, and find it is more trouble to get them to accept the spray intervention. They get better quicker in any case.

Practical tips:

Have some devices in the exam room. Introduce the device at the pre op visit. It brings a smile to your patient to see it, and this is a good way to start a tough week. Make sure they can get the tongue low enough to get the sprayer where it needs to go. Click on **Sample** and we'll send you some.

Have your Hospital or Surgery Center order the device, so you can have it in the OR filled with Lidocaine.

2 sprays on each side once the hemostasis is achieved eases the emergence from anesthesia

Send the Tonsil Fire Extinguisher with the patient to the Recovery Room. The nurses love having this option for managing the post op pain.

At home, we recommend the Tonsil Fire Extinguisher for breakthrough pain. We still recommend you offer your routine medications such as acetaminophen and/or ibuprofen as you have in the past for basic pain control. Our recommended dose for the Lidocaine is 2 sprays on each side every 2 hours, as needed. It is especially useful before drinking or eating, or when waking from sleep. Most patients will need only one filled 15ml device with 30 doses for the entire post op period.

The Tonsil Fire Extinguisher will help most, but not all patients (about 70% find it useful). Gag reflexes, inability to tolerate the taste of lidocaine, and large tongues can affect a patient's ability to benefit from our device.

Ordering:

We have recently partnered with Edge pharmacy, a 503B FDA licensed facility. In the 31 states in which they are licensed Edge is the exclusive provider for the Tonsil Fire Extinguisher. Because of this special license, Edge can provide multiple devices to have on hand, already filled with flavored 4% lidocaine for your hospital surgery center or office for approximately \$40 per device.

In the states they do not serve, we are happy to work with a pharmacy you may already have a relationship with. Have them contact us, and we will add them to the network in a simple, no cost process.

In addition, in States where Edge is not yet licensed, The Tonsil Fire Extinguisher is most affordably provided when the physician purchases the device on the store page on our website and fills it with 4% lidocaine in the office. 4% lidocaine is available from [Moore Medical](#)

Regulatory:

The Tonsil Fire Extinguisher is a Class 1 medical device according to the FDA, and requires no premarket approval as such. It is manufactured in complete compliance with FDA guidelines for such devices.

References:

1. S Derbyshire M J Donald, Lignocaine toxicity: a complication of local anaesthesia administered in the community Emerg Med J 2004;21:249-250
2. Kaygusuz I, Susaman N. The effects of dexamethasone, bupivacaine and topical lidocaine spray on pain after tonsillectomy. International Journal of Pediatric Otorhinolaryngology 2003;67(7):737-42
3. Long-term Safety of Nebulized Lidocaine for Adults With Difficult-to-Control Chronic Cough CHEST 2013; 143(4):1060–1065
4. Treatment of asthma with nebulized lidocaine: a randomized, placebo-controlled study. J Allergy Clin Immunol. 2004 May;113(5):853-9.
5. Nebulized lidocaine in the treatment of severe asthma in children: a pilot study. Ann Allergy Asthma Immunol. 1999 Jan;82(1):29-32