Nebulized Hydrogen Peroxide

Abbreviated Instructions - refer to complete document for more details about H2O2 Nebs

Ingredients:

- ☐ **Nebulizer** (choose one or both)
 - Handheld
 - Desktop
- ☐ Food-Grade Hydrogen Peroxide (choose one option)
 - Food-grade 3% dilute with saline for use in nebulizer
 - Food-grade 12% since even this may sting and irritate skin, you may choose to dilute to 3% using distilled water before further diluting with saline for neb use
 - Food-grade 36% this is very caustic, and requires extra precaution as it can burn skin and eyes if you choose to purchase this, also use gloves and eye-protection
- ☐ Preservative-Free Saline Solution (choose one or both)
 - · Homemade saline solution
 - Preservative-free saline vials

Mixing Instructions Using Homemade Saline:

- ☐ Step 1 Optional Dilute 12% hydrogen peroxide down to 3% hydrogen peroxide
 - If purchasing 12% H2O2, to make it easier to use, you may want to dilute it with distilled water to make a 3% solution (which you will further dilute with saline to use as a neb, as directed below)
 - this is easy to do simply use 1 part 12% H2O2 and 3 parts distilled water
 - practical example: if you have a 4 oz amber dropper bottle fill with 3 oz distilled water and add 1 oz of 12% hydrogen peroxide
 - note: one fluid ounce = 2 Tablespoons
 - if you choose to NOT first dilute the 12% down to 3%, please use chart below to see how much to add to saline
 - If purchasing 35%, use safety precautions!
 - to dilute down to 3% use 1 part 35% H2O2 and 11 parts distilled water
 - be sure to LABEL THE BOTTLE as "3% Hydrogen Peroxide" this is NEVER nebulized see step 3 on how to dilute it to 0.1% with saline
- ☐ Step 2 Optional Make homemade saline solution
- Ingredients:
 - 1 cup (8 oz) of purified water (ideally distilled or at least filtered, NOT plain tap water)
 - 1/2 tsp salt (make sure it is non-iodized salt, without preservatives or "flow agents"; use non-iodized sea salt or Redmond Real Salt https://a.co/d/esiqCOr)
- Instructions:
 - 1. If using distilled water, using a clean measuring cup, simply measure out 1 cup (8 oz) of water. If using filtered water, to be safe, bring 1.5-2 cups of water to a boil. Boil for ~10 minutes to get rid of impurities. Let it cool down a bit, and then using a clean measuring cup, measure out 1 cup (8 oz) of water.

- 2. Mix salt into the water and stir until dissolved
- 3. Let the mixture cool to lukewarm temp before using it.
- 4. Homemade saline by itself (without hydrogen peroxide) can be stored in a clean sealed jar for up to 3 days in the refrigerator.
- ☐ Step 3 ESSENTIAL to use in nebulizer, dilute hydrogen peroxide with saline down to 0.1% solution
 - Using 3% food-grade hydrogen peroxide
 - add 2 tsp (10 ml) to 8 oz of homemade saline
 - Using 12% food-grade hydrogen peroxide
 - add 1/2 tsp (2.5 ml) to 8oz of homemade saline
 - Storage: since H2O2 is antiseptic, you can store this at room temperature for a week or so, or in the refrigerator for longer
 - LABEL THE BOTTLE as "0.1% H2O2-Saline Mix for Nebs"

Starting H2O2 Concentration	Hydrogen Peroxide	Saline	Ending H2O2 Concentration
3%	2 tsp (10 ml)	1 cup (8 ounces)	0.1%
12%	1/2 tsp (2.5 ml)	1 cup (8 ounces)	0.1%
35%	0.167 tsp (16-17 drops)	1 cup (8 ounces)	0.1%

☐ Step 4 - Nebulizing

- Add ~3-5 ml (~1 tsp) of 0.1% H2O2-Saline solution into the well of your handheld or desktop nebulizer, and follow the machine's instructions
- Note: 1 tsp = 5 ml = 100 drops
- Most droppers are between 20-30 drops when full, so count how many drops are in your particular dropper, and then divide 100 by that number to know how many dropper-fulls to use each time

Mixing Instructions Using Pre-filled Preservative-Free Saline:

empty contents of a 5ml preservative-free saline ampule into the nebulizer well
then add 3% food-grade hydrogen peroxide to the well using 1ml TB syringe, or you can closely estimate by simply adding drops as noted below (1 ml = 20 drops)

Starting H2O2 Concentration	3% Food-Grade Hydrogen Peroxide	Saline Vial	Ending H2O2 Concentration
3%	0.13 ml (~3 drops)	3 ml	0.1%
3%	0.21 ml (~5 drops)	5 ml	0.1%

Frequency of 0.1% Hydrogen Peroxide-Saline Nebs:

☐ Acute Respiratory Illness

- Start 0.1% H2O2-Saline Nebs, as soon as you start feeling unwell.
- Do a neb every hour you are awake until you start feeling better.
- Hopefully you will feel better within the first day or two.
- Once you are better, you can reduce the nebs to every 4-6 hours for 2-3 days beyond feeling completely well.

☐ Chronic Respiratory Illness

- · Exercise-induced Asthma
 - try nebulizing 0.1% H2O2-Saline before activity
 - you can always use albuterol as well if needed, but you may find that it's not necessary.
- · Persistent Asthma and COPD
 - nebulize 0.1% H2O2-Saline twice daily
 - afterward you can use albuterol if needed
 - also use your steroid inhaler as prescribed by your doctor, but the goal would be to eventually be able to wean off the steroids if possible, as steroids can increase risk of certain infections such as thrush
 - For acute illness on top of chronic pulmonary conditions, increase frequency as recommended above.

