

# Sukha-electrical Steam Inhaler

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## ABSTRACT

The present invention is a "Sukha-electrical Steam Inhaler" which can be used instead of the existing Nelson's Steam Inhaler in clinical setting to facilitate good steam inhalation for promoting good respiratory outcome.

**Keywords:** Inhaler, Lower respiratory tract disorders, Respiratory outcome, Steam inhalation.

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## STATEMENT OF INVENTION

The present invention is a "Sukha-electrical Steam Inhaler" which can be used instead of the existing Nelson's steam inhaler in clinical setting to facilitate good steam inhalation for promoting good respiratory outcome.

## BACKGROUND OF THE INVENTION

Steam inhalation is one of the most widely used remedies to soothe and open the nasal passages and get relief from the symptoms of a cold or sinus infection.

Also called steam therapy, it involves the inhalation of water vapor. The warm, moist air is thought to work by loosening the mucus in the nasal passages, throat, and lungs. This may relieve symptoms of inflamed, swollen blood vessels in your nasal passages.<sup>1</sup>

Steam inhalation may provide some temporary relief from the symptoms of the common cold, the flu (influenza), sinus infections (infectious sinusitis), bronchitis, and nasal allergies.<sup>2</sup>

There are reports available in the literature for the existence of various steam inhalers. Nelson's steam inhaler is one such inhaler widely used.

Nelson's steam inhaler is a double-valved ceramic inhaler invented by Dr Nelson. It can be used to treat chest infections and diseases by inhaling the medicated steam directly as it emerges from the glass funnel. However, this apparatus pose various drawbacks which includes easy breakability and need of additional source for making hot water.<sup>3</sup>

Hence, there exists a need in the state of the art to fabricate a simple and novel steam inhaler which is devoid of above-said drawbacks and thus replace Nelson's steam inhaler.

## DESCRIPTION OF DRAWINGS

Figure 1 depicts the Sukha-electrical steam inhaler of the present invention.

## SUMMARY OF THE INVENTION

The present invention shall disclose a simple and cost-effective Sukha-electrical steam inhaler for efficient and effective inhalation of steam to promote good respiratory outcome, to relieve spasmodic breathing, to loosen bronchial secretions (mucolytic), and to facilitate expectoration of mucus (mucokinetic). The Sukha-electrical

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**Conflict of interest:** None

steam inhaler of the present invention comprises of the following parts:

- A hollow container with a handle, graduated with scale marking, opened at top end for filling and ensuring maximum and minimum level of water or any medicated liquid to inhale.
- A lid for tightly closing the open end of the container with a provision on the upper surface and a hollow chamber opened at the bottom end enclosed with a heater on the lower surface of the lid in which heating element of the heater extends outside the chamber for contacting and heating the water or any medicated liquid through electrical connections.

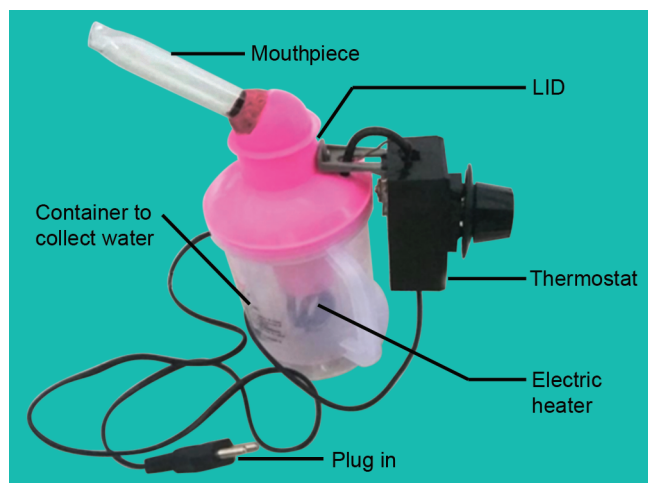


Fig. 1: Prototype of Sukha-electrical steam inhaler with its parts

- Characterized with a heat thermostat attached to the heater and disposed on the upper surface of the lid to adjust and maintain constant temperature throughout the inhalation process thereby making the inhalation more effective.
- Characterized with a mouthpiece fixed on the provision on the upper surface of the lid to help the patient inhale the medicated/non-medicated steam directly into the respiratory tract.

## DESCRIPTION OF THE INVENTION

The present invention is Sukha-electrical steam inhaler which has an inbuilt heater that can be used instead of the existing Nelson's steam inhaler to facilitate good steam inhalation for promoting good respiratory outcome. It is a plastic jug which is inbuilt with an electric heater. It is attached with a thermostat which controls the heat of the steam and maintains the constant temperature throughout the inhalation process which makes the inhalation more effective and a mouthpiece which helps the individual to inhale the medicated steam directly into the respiratory tract.

### Method of Use

- The lid of the device has to be opened initially.
- Fill the container with water and/or medication as prescribed by the physician by considering minimum and maximum level of water which is mentioned in the device.
- Close the lid, clean the mouthpiece, and wrap it with a gauze piece.
- Plug in the device into the socket and switch it on.
- Adjust the thermostat according to the tolerable temperature.
- Wait for the steam to come from the mouthpiece and inhale by placing the mouth in the mouthpiece.
- Discard the water after inhalation and allow it to dry.

### Advantages of the Present Invention

- Lightweight.
- Easy to carry and operate.
- Constant maintenance of temperature through electricity and helps in more sputum production.
- Temperature can be adjusted according to the tolerance.
- Easy to wash as it has wide opening.
- Mouthpiece helps in direct inhalation of medicated steam to the respiratory tract.
- Cost-effective.
- Need to have at every home
- Nurse can spend the productive time for care instead of spending time to prepare Nelson's inhaler.

In one of the preferred embodiment, the present invention shall disclose a simple and cost-effective Sukha-electrical steam inhaler for efficient and effective inhalation of steam to promote good respiratory outcome, to relieve spasmodic breathing, to loosen

bronchial secretions (mucolytic), and to facilitate expectoration of mucus (mucokinetic). The Sukha-electrical steam inhaler of the present invention comprises of the following parts:

- A hollow container with a handle, graduated with scale marking, opened at top end for filling and ensuring maximum and minimum level of water or any medicated liquid to inhale.
- A lid for tightly closing the open end of the container with a provision on the upper surface and a hollow chamber opened at the bottom end enclosed with a heater on the lower surface of the lid in which heating element of the heater extends outside the chamber for contacting and heating the water or any medicated liquid through electrical connections.
- Characterized with a heat thermostat attached to the heater and disposed on the upper surface of the lid to adjust and maintain constant temperature throughout the inhalation process thereby making the inhalation more effective.
- Characterized with a mouthpiece fixed on the provision on the upper surface of the lid to help the patient inhale the medicated/non-medicated steam directly into the respiratory tract.

As per the invention in the Sukha-electrical steam inhaler, the container and the lid is made up of material comprising of plastic, thermosteel, insulated hindalium, or stainless steel.

In accordance with the invention in the Sukha-electrical steam inhaler, the mouthpiece is of any shape with a narrow end and made up of materials comprising of glass, bakelite, or synthetic plastic.

According to the invention in the Sukha-electrical steam inhaler, the heater is selected from a group comprising of coiled or straight copper or stainless steel rod.

As per the invention in the Sukha-electrical steam inhaler, the thermostat is selected from a group comprising of any kind of heat thermostats which controls the temperature of a water heater.

## CONCLUSION

The Sukha-electrical steam inhaler is a simple and cost-effective steam inhaler for efficient and effective inhalation of steam to promote good respiratory outcome, to relieve spasmodic breathing, to loosen bronchial secretions (mucolytic), and to facilitate expectoration of mucus (mucokinetic).

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