**ScentCare: A Novel At-Home Olfactory Training and Testing Device**

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**NEED:** Physicians need a consolidated at-home method for screening and training olfactory function across their patients in order to aid in the differential diagnosis of conditions in which olfactory dysfunction is a symptom.

**PROBLEM:**

**OLFACTORY DYSFUNCTION**

OD is defined as the reduced or distorted ability to smell when sniffing.

**SAFETY**

Smell can be a way to recognize potential danger around us.

**TASTE**

Much of our sense of taste comes from our ability to smell.

**MEMORY**

We commonly associate certain smells with memories.

**HEALTH**

Scents can stimulate our appetite, which drives us to eat.

**REDUCED QUALITY OF LIFE**

1. Reduced quality of life

**AFFECTED GROUPS:**

- **AGED > 55**
  - Patients at high risk for neurodegenerative diseases and frailty
- **VIRUS**
  - Patients at risk due to viral infection or sickness
- **REHAB**
  - Post-operative patients at risk due to surgery or anesthesia

- **25% OF THE WORLD POPULATION**

**PROPOSED SOLUTION:**

**NEUROPLASTICITY**

The neuronal reorganization after sensory loss, meaning that neurons can regain function after damage, disease, infection

**OLFACTORY TRAINING**

Deep inhalations of a set number of odorants several times a day for a prolonged period of time

**IMPROVED SENSE OF SMELL**

1. Increased expression of olfactory receptor
2. Improved olfactory receptor neurotransmission

**REFERENCES:**