

Breaking the Silence

Healthcare and Communication



Introduction to Tinnitus

Tinnitus: The Invisible but Loud Tribulation

- Tinnitus is a relentless **internal sound**, often perceived as **ringing** or **buzzing** in the ears, disrupting the peace of silence.
- It affects millions, **impacting sleep, focus, and overall well-being**, but there is **no cure**



Introduction to Tinnitus

Tinnitus: Unacknowledged, Underfunded

Lack of funding = **limited innovation**

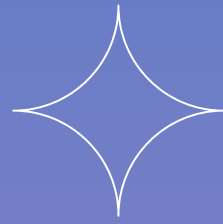


Absence of healthcare coverage = **limited access to care**

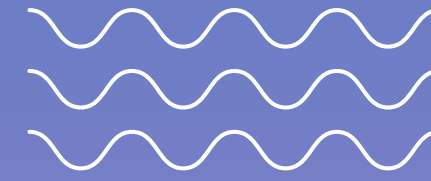




Health Savvy



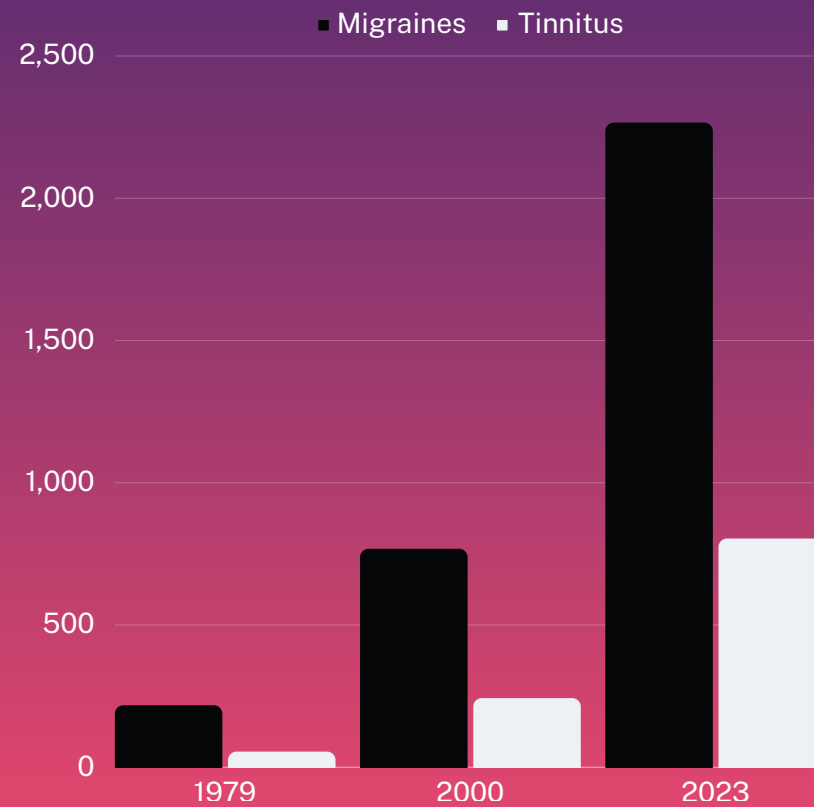
The Silence Around Tinnitus



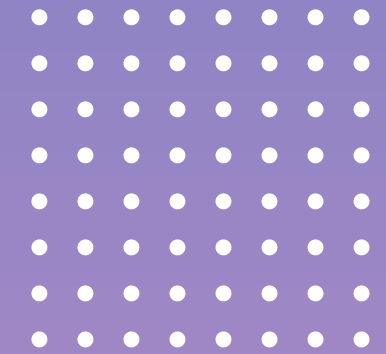
Underresearched

MIGRAINES VS TINNITUS

On Pubmed



Women are less likely to receive a formal diagnosis of tinnitus



Estimated Societal Cost of Tinnitus as a whole
\$26 BILLION

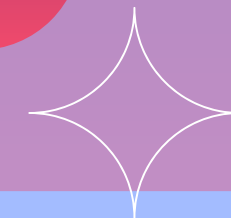
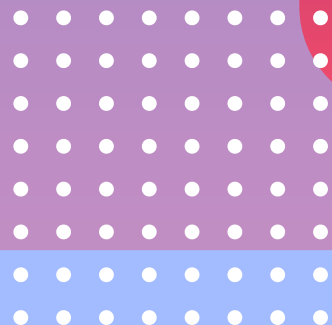
<https://www.ata.org/>

More than 1 in 6 in the UK



Experience tinnitus like symptoms often

Statistics from bodytrak.co



Challenge Statement

Breaking the Silence: Tinnitus Health and Awareness

We are working to solve this underrepresented and underfunded medical condition. Our project aims to bridge the gap between health knowledge and users, enhancing the **accessibility of tinnitus management solutions**, even in the absence of healthcare coverage.



With **innovative applications of machine learning** we are creating an open and accessible space for sufferers who are often left behind. We aim to create a personalized experience while simultaneously increasing awareness of this underfunded condition and **advocating for further research and funding**.



RAG Solution

Support, Research, Innovation

Article Feed

Promote Knowledge &
Research

Innovative Accessible
Health Care

Guiding Users

Tinnitus Insights

Get to the heart of the matter with articles, summaries, and expert insights. It's time to take control of your tinnitus journey.

Click on any keyword to filter by that keyword.

Displaying articles based on keyword: "headache"

12 articles found

Suggested
Keywords:

#Loss

#Pulsatile

#Treatment

#Study

#Hearing

#System

#Obesity

#Brain

#Treat

#Intracranial

#Nerve

#Disease

Understanding the physiology of idiopathic intracranial hypertension (iih): a review of recent developments.

Authors: Colman BD, Boonstra F, Nguyen MN, Raviskanthan S, Sumithran P, White O, Hutton EJ, Fielding J, van der Walt A

Publication Title: Journal of neurology,
neurosurgery, and psychiatry

Publication
Year: 2023

Abstract: Idiopathic intracranial hypertension (iih) is a condition of significant morbidity and rising prevalence. it typically affects young people living with obesity, mostly women of reproductive age.

Keywords:

The effect of symptomatology and mental wellbeing on quality of life in people with acoustic neuroma.

Authors: Nowacka A, Barker-Collo S, Miles A, Ben-Harosh L

Publication Title: Journal of clinical neuroscience : official journal of the
Neurosurgical Society of Australasia

Publication
Year: 2023

Abstract: A nationwide online survey was distributed to 24 community organisations. mental well-being was assessed using the hospital anxiety and depression scale (hads) and quality of life was assessed using the penn acoustic neuroma qol scale (panqol)

Keywords:

#hear

#loss

#study

#associate

#participant

#hearing

#health

Read More →

Personalizing RAG



Researching

- Higher lambda for a precise search
- A responsive measure for relevant document retrieval



Coping

- Zero-shot model for a more user-friendly experience
- Another corpora including management tips



Exploring

- A balanced hybrid and zero-shot model offering a more open-ended search
- Diversity bias for more versatility

Chapter 1: Historical Reflections on Current Issues in Tinnitus

"The simple surgical procedure (electrode insertion) has been reported to suppress or exacerbate tinnitus in some cases. In a series of 42 patients, Gibson (1992) reported after surgery but before switch-on CI, that tinnitus was abolished or reduced in 5% and 33% of tinnitus subjects, respectively. In a series of 15 patients, Kim et al. (1995) reported (before using the device, while the implant was off) complete relief in five implanted ears; no worsening of tinnitus was reported."

Springer Handbook of Auditory Research

Hashtag Consistency



LOGIN REGISTER

ights

ights. It's time to take control of your tinnitus journey.

Click on any keyword to filter by that keyword.

Displaying articles based on keyword: "surgery"

27 articles found

Feedback

Affordance

Mapping

Please choose what best represents you. I am...

Researching

Coping with Tinnitus

Just Exploring

Surgery in relation to tinnitus involves different approaches and outcomes. Some studies suggest a correlation between the subjective severity of tinnitus and its loudness after surgery ¹. However, this correlation may not be observed in all cases ¹. Surgical procedures, such as electrode insertion in cochlear implantation, have been reported to either suppress or exacerbate tinnitus ³. Interestingly, tinnitus can be abolished or reduced after middle ear surgery in patients with chronic otitis media or after removing excessive ear wax from the ear canal ⁴. Overall, the effects of surgery on tinnitus can vary depending on the individual and the specific surgical intervention ^{1 3 4}.

Change Role

Constraints

Visibility

Suggested Keywords:

#Deafness

#Right

#Vestibular

#Study

#Disorder

The prevalence of hearing symptoms associated with patulous eustachian tube dysfunction following bariatric surgery at king kholid

Fractionated stereotactic radiotherapy compared to stereotactic radiosurgery for vestibular schwannoma in patients with type 2 neurofibromatosis.

Authors: Mauro GP, Da Róz LM, Gico VC, Weltman E, César de Souza E, Figueiredo EG, Teixeira MJ

Tech Stack

Neon Tech

- Cloud Database (PostgreSQL)

Tailwind CSS

- Responsive UI Design

React Library

- Frontend UI Library

Django Rest Framework

- Backend Web Framework

Data Science

- Dashboards, Data Visualizations, Pandas

Machine Learning

- LDA topic Modeling, Classifiers, Data Generating, Web Scraping

Vectara

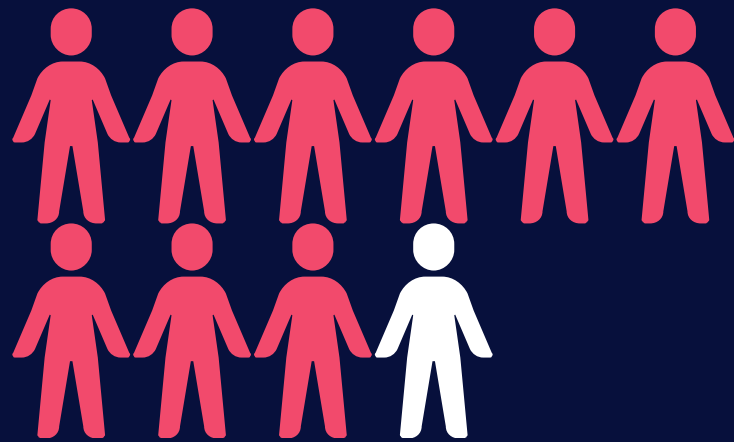
- RAG



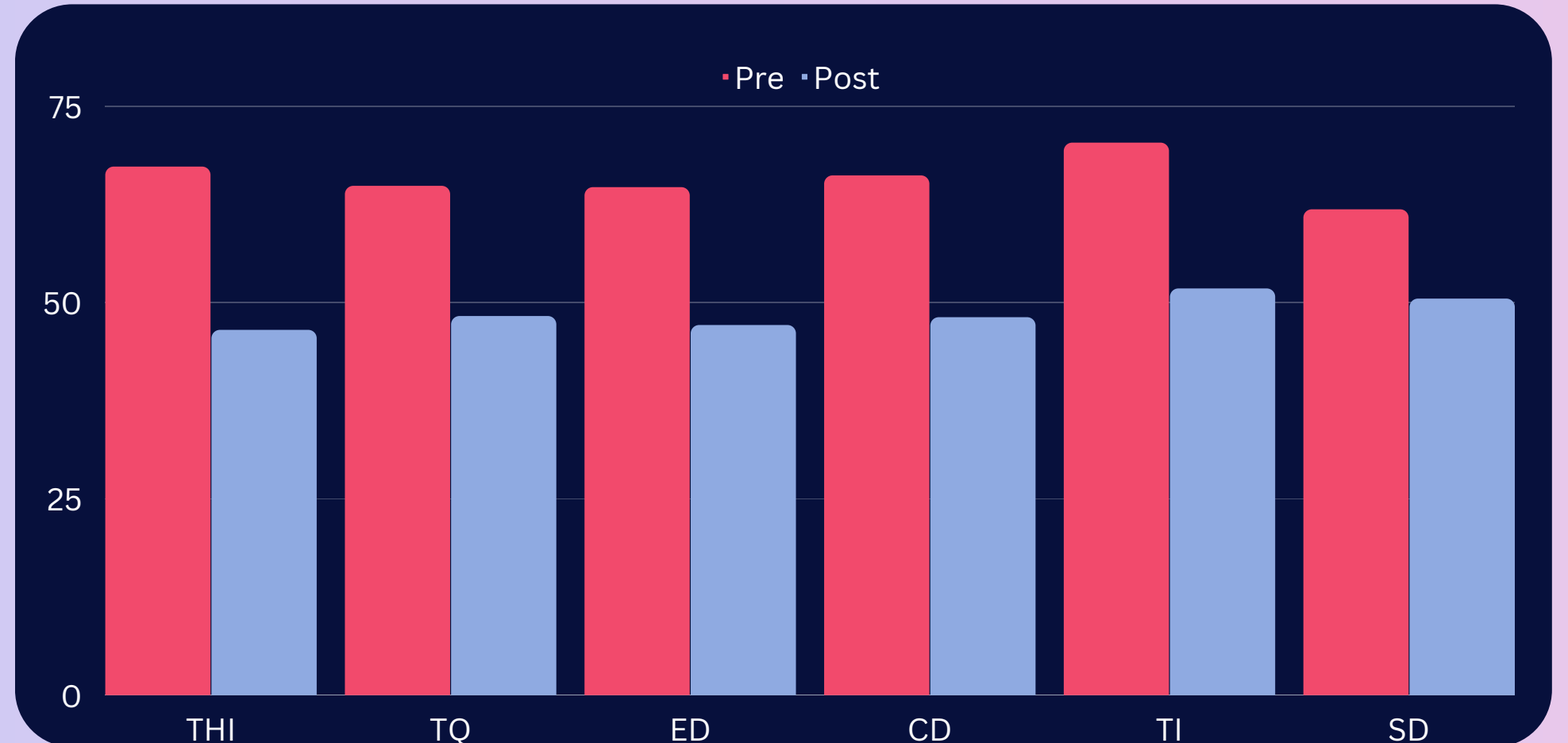
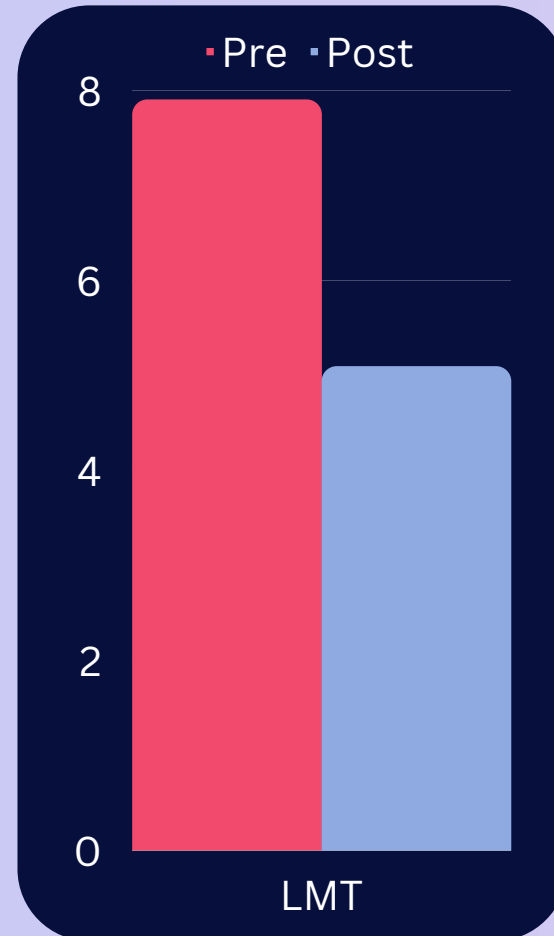


Impact

More than 9 in 10



Saw improvements in their THI score after intervention



ED : Emotional distress measurements

CD: Cognitive distress measurements

TI: Tinnitus intrusiveness measurements

SD: Sleep disturbances measurements

LMT: Loudness Matching Test

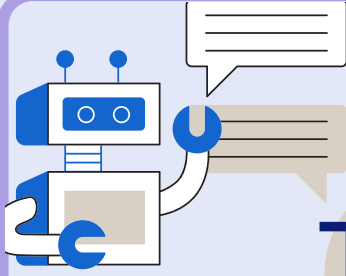
THI: Tinnitus Handicap Inventory

TQ: Tinnitus Questionnaire



Future RAG Plans

Our Mission towards Raising Awareness for Underrepresented Conditions



Tinnitus Management Chatbot

RAG's QnA capabilities with Worksheets

Interactive knowledge sharing



General Improvements

Understanding best parameters for different roles

Leverage Vectora's HEM



Thank
you very
much!

-Sound Saviors

Innovating AI Solutions for Underfunded Health Challenges

