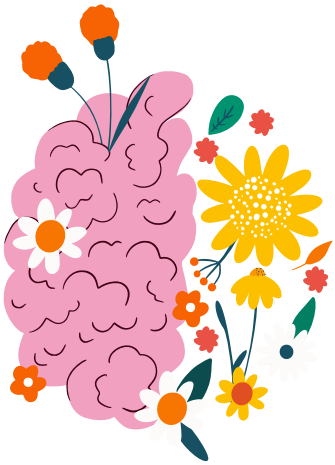


Kids Brain Doc

Dr. Laila Mohammad

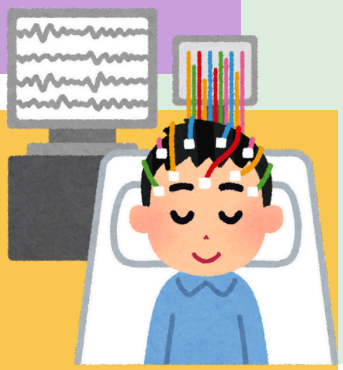
# Vagal Nerve Stimulator (VNS)

## Patient Packet

# Diagnosis: VNS Therapy

## What is it?

The vagus nerve, found in your neck, helps your brain and body talk to each other, controlling things like breathing, heartbeat, and swallowing. Vagal Nerve Stimulator (VNS) Therapy uses a tiny device to send gentle signals to the brain, which helps manage seizures by keeping them from starting or stopping them altogether.



## Who does it help?

There's a new option for kids aged 4 and up with partial-onset drug-resistant epilepsy (DRE) that's been okayed by the FDA. DRE happens when a child continues to have seizures even after trying at least two different medicines. For about one in three kids with seizures, medicine alone doesn't do the trick.

## How does it help?

With VNS Therapy, many experience fewer and shorter seizures that aren't as severe, and they recover better afterward. Many people notice an improved quality of life, with some also feeling more alert, in a better mood, and having sharper memory and thinking skills.

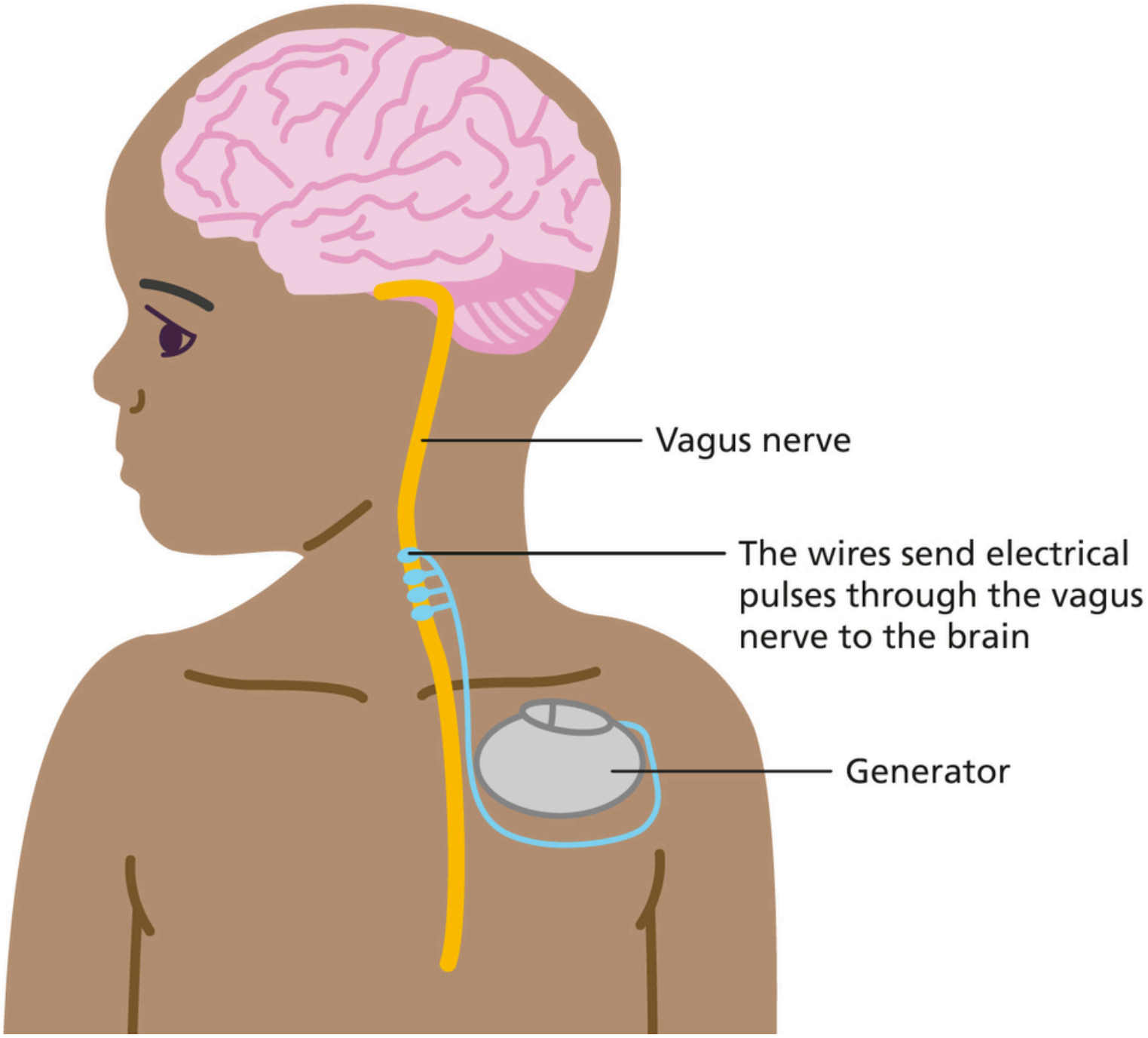
## Is it Harmful?

Infection is the most common risk when having surgery. With VNS Therapy, some usual side effects are hoarseness, shortness of breath, a sore throat, or coughing. These typically happen during stimulation and tend to lessen as time goes on.

## What is the Treatment?

VNS Therapy can work alongside medicine and other treatments. It’s not a drug and doesn’t have drug-related side effects.

# Vagal Nerve Stimulator (VNS)



# Surgery: VNS Implant

## 1 Goals of Surgery

- Place the implant on the vagus nerve
- Goal is to improve seizure frequency, duration, severity, and improve recovery.

## 2 Risks of Surgery

- Blood loss
- Injury to the vagus nerve
- Infection
- Need for battery changes or revision surgery
- Side effects when turned on: hoarseness, shortness of breath, sore throat, coughing

## 3 Alternatives

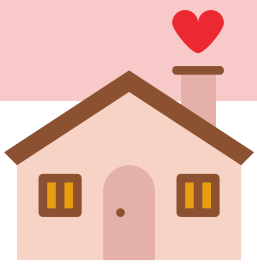
- Anti-seizure medications, ketogenic diet
- Epilepsy surgery (if a candidate)
- Other neuromodulation options: RNS or DBS (if a candidate)

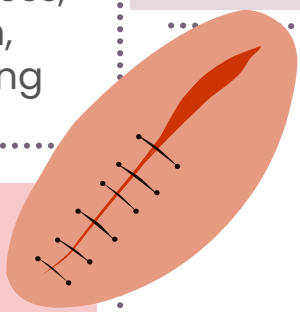
## 4 Right after Surgery

- Mild neck/chest soreness and hoarse voice
- Pain medications: Tylenol/Motrin, narcotics
- Recovery in the recovery room (PACU)

## 5 Hospital Recovery

- Once taking all medicine by mouth, eating/drinking, peeing, moving ok, your child can go home

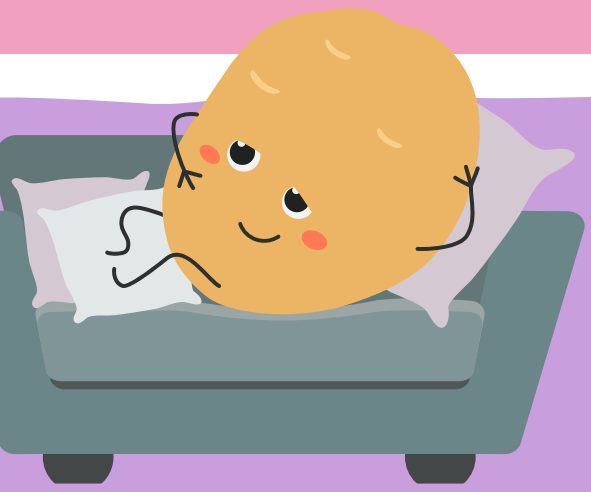




## 6 Incison Care

- Ok to shower 2 days after surgery. Wash daily
- No bathing or soaking incision in tub for 4 weeks after surgery
- Surgical glue will fall off on it's own in 2-4 weeks
- No need to cover the incision

# Recovery & Follow-Up



## ACTIVITY RESTRICTIONS

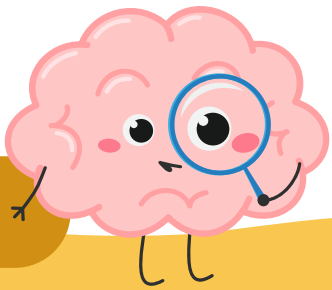
- Week 0-2: Couch potato
- Week 2-4: Light activity
- 1-3 months: Return to regular activity

## HOME CARE

Will see in clinic for incision check at 2 weeks. Can return to school or work after this appointment.

## FOLLOW-UP

- 2-week: incision check
- Follow-up with neurologist
- Return if complications or time for new battery



## LONG-TERM CARE

- Most MRIs (1.5 and 3.0T) are usually safe.
  - You can easily access brain MRIs.
- At the airport, show security your VNS Therapy ID card to explain your medical device. You can ask for a pat-down instead of going through the metal detector.
- Stay in touch with your neurologist for any VNS changes.
  - This is crucial for ensuring the treatment works well and managing any side effects.
- The battery needs to be replaced every 2 to 10 years.