

## Non-Pharmacological Interventions in Epilepsy

People with refractory epilepsy often resort to alternative therapies that include yoga, biofeedback EEG technique, aerobic exercises, aroma therapy, music therapy, Ayurveda, ketogenic diet, acupuncture, herbs etc. The scientific evidence for their effectiveness is very limited.

### YOGA AND MEDITATION

Studies in Yoga have shown to slow the production of stress hormones and increase the level of serotonin, modify brain rhythms resulting in stress reduction and modulation of cardiac autonomic balance in refractory epilepsy. Initial results of randomized controlled trial on the role of yoga in refractory epilepsy are promising.

### AYURVEDA

Ayurvedic medicines should not be recommended in refractory epilepsy. As of now there are very limited randomized controlled trials without sufficient scientific evidence for their use.

### KETOGENIC DIET

Ketogenic diet (KD) has been used especially in children with refractory epilepsy for many years. KD is high in fat and low in carbohydrates. It induces ketosis in the body and is thought to suppress seizures by release of leptin but the exact mechanism remains uncertain. Diet is difficult to continue for a long time as it is unpalatable & needs supervision from dietician and pediatrician. A modified KD to suit Indian patients is available in a few centres in India.

### EEG BIOFEEDBACK

Also known as EEG - operant condition or neurotherapy. It controls internal processes by learning voluntary control over EEG rhythm resulting in suppression of seizure activity.

### HERBS

Certain botanical herbs have been used but properly conducted scientific studies proving their usefulness are limited. On the other hand, certain herbs are also known to cause drug interactions with AEDs leading to side effects.