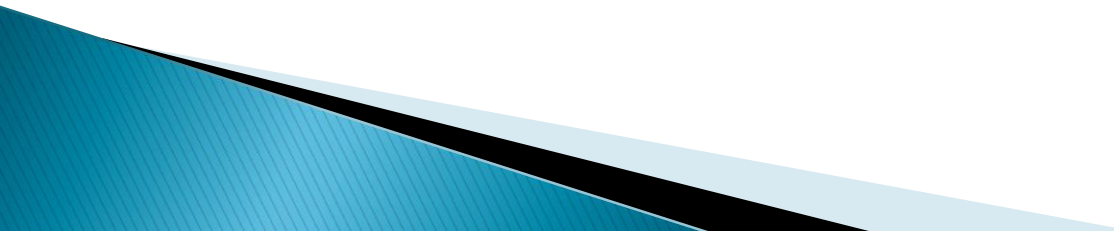


# Alternative Treatments in Epilepsy

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# Objectives

- ▶ Define Complementary and Alternative Medical (CAM) treatments
  - ▶ Understand the role CAM can have in management of epilepsy
  - ▶ Understand the different treatment options
  - ▶ Promote your well-being through CAM
- 

# Complimentary and Alternative Medical Treatments

- ▶ Diverse group of health care practices and products that fall outside the realm of traditional Western medicine

*(National Center for Complementary and Alternative Medicine)*

- ▶ Used to complement or replace conventional medical therapies
- ▶ Increased use over past 2 decades

# Prevalence

- ▶ Varies slightly depending on populations studied
- ▶ At least 24–44% of epilepsy patients are already using some form of CAM

*(McElroy-Cox, C)*

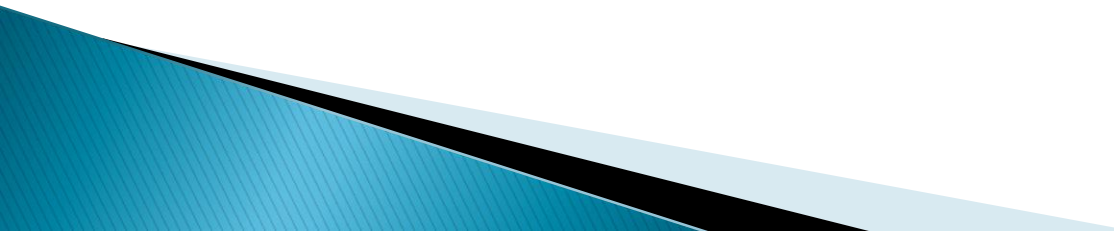
- ▶ High prevalence in developing countries
  - Nigeria, Zambia
  - Of 40 million people worldwide with epilepsy, 80% live in developing countries

*(Institute of Medicine: Neurological and Psychiatric disorders: meeting the challenge in the developing world)*

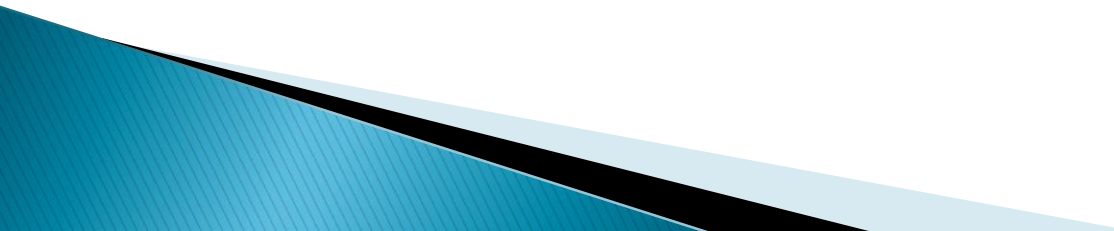
# Epilepsy

- ▶ Many people achieve seizure freedom with conventional therapy
- ▶ Up to 1 / 3 of patients are refractory to medical treatment *(Kwan, P, Brodie, MJ)*

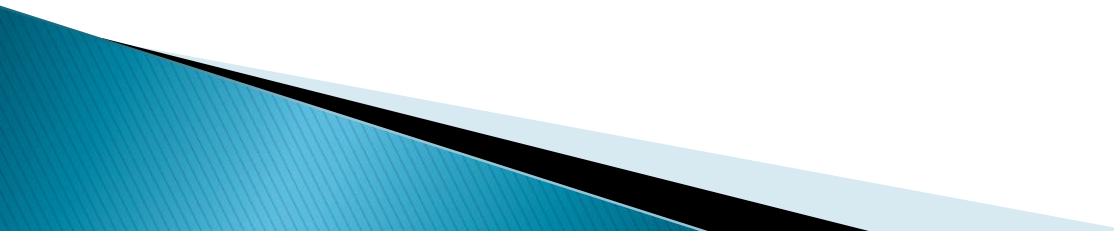
# Reasons to consider CAM

- ▶ Inadequate seizure control with drug therapy
  - ▶ SE from AED
  - ▶ Concern for harmful effects from long term usage
  - ▶ Teratogenicity
  - ▶ Allergic reactions
- 

# GOAL

- ▶ Supplement rather than alternative to conventional drug therapy
  - ▶ Finding less toxic ways of improving quality of life
- 

# Most common forms of CAM

- ▶ Mind–body therapies
  - ▶ Biologic–based therapies
  - ▶ Manipulative and body–based therapies
  - ▶ Energy medicine
- 

# Mind–body therapies

- ▶ Facilitate development of mind's inherent ability to affect body's function
- ▶ Relatively few SE

## ✓ **Yoga and Meditation**

- ✓ 62% reduction at 3 mos
- ✓ 86% reduction at 6 mos
- ✓ No significant change in control/placebo

*(Panjwani, et al)*

# Mind–body therapies

- ✓ **Relaxation techniques**
  - ✓ stress management and seizure reduction
- ✓ **Biofeedback**
  - ✓ monitor HR, brain waves, or skin resistance
  - ✓ transmitted directly to patient
  - ✓ aware of unconscious process
  - ✓ gain control

# Mind–body therapies concussion

- ▶ Studies have been small and of varying quality
- ▶ May be useful as adjunctive
- ▶ Poorly understood pathophysiological mechanism

# Biologic-based therapies

- ▶ **Herbal and dietary supplements**
  - Do not undergo same regulatory scrutiny as prescription/OTC
  - Need to be aware of potential interactions
- ▶ **Omega-3 fatty acids**
  - Neuronal transmission
  - Anti-inflammatory
  - Prevent neuropathological changes in hippocampal formation in rats with epilepsy
  - *(Ferraru, et al)*
- Need further studies with larger sample sizes, doses, longer treatment

# Biologic-based therapies

## ▶ Whole diets

- Ketogenic diet
- Modified Atkins diet

## ▶ Herbal remedies

- Chinese medicine

# Manipulative and body-based therapies

- ▶ Manipulation or movement of body to stimulate healing and foster wellness
- ▶ **Chiropractic and massage therapies**

# Energy Medicine

- ✓ **Acupuncture** (traditional Chinese medicine)
  - May theoretically release inhibitory neurotransmitters
  - Effect on EEG conflicting

Cochrane Review: 11 studies included

- Has not been proven to be effective and safe for treating pts with epilepsy
- Requires further investigation

# Energy Medicine (cont)

## ✓ Reiki

- Healing practice originated in Japan
- Hands on or above pt to facilitate healing
- Only 1 study: need further research

## ✓ Homeopathy

- Originated in Germany
- “Like cures like”
- Individualized for each person’s needs
- Need further studies

# Exercise

- ▶ Important for seizure control and improvement in quality of life
- ▶ Always maintain seizure precautions
- ▶ Rare cases of exercise-induced seizures
- ▶ Studies have generally shown:
  - Physical activity can decrease seizure frequency
  - Improve cardio and psychological health
  - Suggest anticonvulsant effect on pts with epilepsy
  - B–endorphins release inhibitory epileptic discharges

*(The potential role of physical exercise in the treatment of epilepsy)*

# Cautions in sports participation

- ▶ Determine whether benefits outweigh risks
- ▶ Benefit/risk ratio
  - Dependent on sports activity
  - Type of seizure that may occur
  - Probability that seizure will occur during activity

## Contributing factors:

Fatigue, stress of competition, hypoxia, hyperthermia, hypoglycemia

Prohibiting pts from participating in sports can result in emotional distress (*Livingston, S; Berman, W*)

# Exercise

## ➤ Benefits on psychiatric conditions

- Anxiety, depression

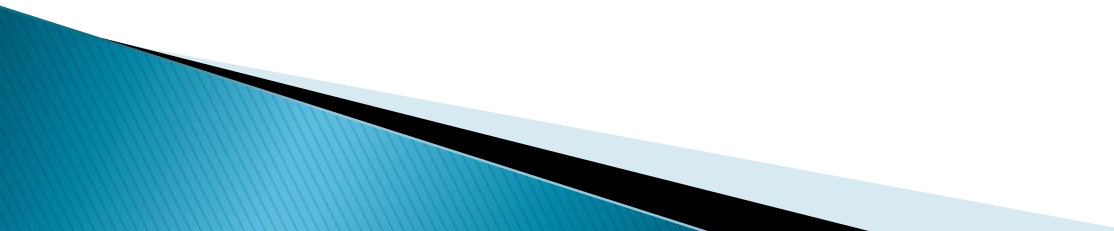
Roth et al:

physical exercise, stressful life experiences, and depression in adults with epilepsy

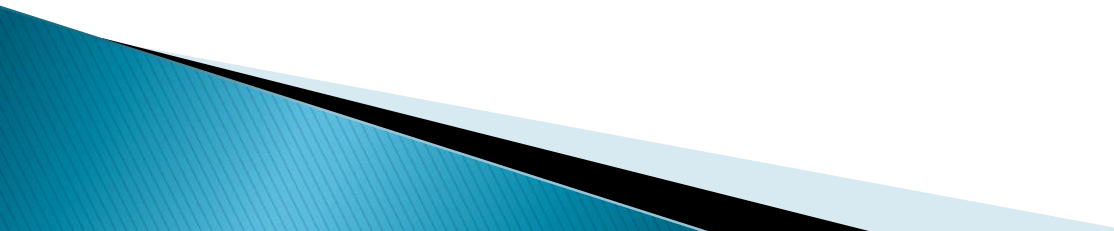
*Active subjects had significantly lower levels of depression and better psychosocial adjustments than inactive subjects*

- Sleep
- Pain
- Preventing and treating illness
- Stress management

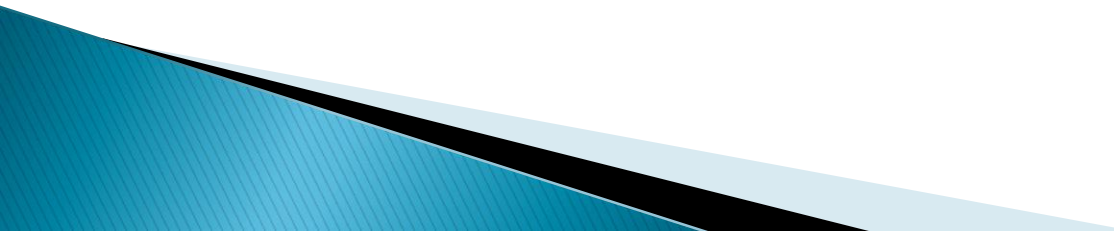
# General health benefits of exercise in patients with epilepsy

- ▶ Increased maximal aerobic capacity
  - ▶ Increased work capacity
  - ▶ Weight reduction w/ reduced body fat
  - ▶ Bone density
- 

# Other non-conventional treatments

- ▶ Steroids
  - ▶ Immunoglobulins
  - ▶ Diet
  - ▶ Vitamins
- 

# Promotion of well-being

- ▶ Exercise
  - ▶ Sleep hygiene
  - ▶ Avoid ETOH
  - ▶ Coping strategies
  - ▶ Educational interventions
- 

# Conclusion

- ▶ CAM increasingly popular over last 2 decades
  - ▶ Strong evidence to support that many pts with epilepsy are using CAM
  - ▶ Lack of evidence showing efficacy
  - ▶ Need better designed, large, prospective, randomized studies
  - ▶ Discuss with practitioner
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