

# Epilepsy and Depression

**Douglas G. Heck, Ph.D.**  
**Duluth Psychological Clinic**

A photograph of a rectangular concrete sign. The word "CAUTION" is written in large, red, sans-serif capital letters at the top. Below it, the words "DEPRESSION" and "AHEAD" are written in large, black, sans-serif capital letters, stacked vertically. The sign is mounted on a dark post and is set against a background of green grass and some trees. The entire image is framed by a dark, semi-circular border on the left and bottom sides.

**CAUTION**  
**DEPRESSION**  
**AHEAD**

# Epilepsy and Depression: Take-Home Messages

- **Depression is quite common in epilepsy**
- **Many different factors can combine to cause depression**
- **Depression can be subtle, and easily overlooked**
- **Depression should not be ignored or minimized!**

“Happiness depends not on what happens,  
but on how we handle what happens”

--Elisabeth Kubler-Ross

# What Brings About Happiness?


- Based on three studies, the following are most important:
  - Autonomy (believing that one is choosing their own path in life)
  - Competence
  - Relatedness
  - Self-esteem
  - Security

“ The way to achieve happiness is  
to have a high standard for yourself  
and a medium one for everyone else ”

-- *Marcelene Cox*

# Epilepsy and Depression

- Sadness vs Depression
- Types of depression in epilepsy
- Prevalence
- Suicide
- Effects
- Recognizing depression
- Causes



Sadness  
vs  
Depression

# Sadness vs Depression

- Most people become “down”, discouraged, sad, or irritable
- Depression involves:
  - Long duration of symptoms
  - Significant distress to patient or others
  - Impaired day-to-day living
  - Risk if symptoms continue

# Mood Spectrum

- Depression

- Deep sadness
- Irritability
- Disrupted sleep
- Withdrawal
- Lack of motivation
- Self-criticism
- Strong guilt
- Suicide
- Apathy
- Anger

- Mania

- Euphoria
- Irritability
- Little need for sleep
- Rapid speech
- Poor judgment
- Excessive activity
- Glorified self
- Lack of guilt
- Suicide

# Types of Depression in Epilepsy

# Types of Depression in Epilepsy

- Ictal
  - Brief, stereotypical, out-of-context, associated usually with CP seizure phenomena
  - 4% of auras will involve depression
- Periictal
- Interictal

# Types of Depression in Epilepsy

- Most common form is a chronic, mild depression (interictal dysphoric disorder)
- Episodes of more severe depression also occur
- Diagnoses usually include:
  - Dysthymic disorder
  - Major depressive disorder
  - Depressive disorder not otherwise specified

# Daily Activity Log

## Time

## Wednesday

## Thursday

9 a.m.

woke up  
stayed in bed

12 noon

got out of bed

woke up  
listened to music  
read

3 p.m.

spent day in bed

6 p.m.

rode bike  
took nap

9 p.m.

woke up  
TV/dinner

12 midnight

slept

listened music  
slept

# Prevalence of Depression in Epilepsy

# Lifetime Major Depression

- Epilepsy

- Range = 8-48%

- Average = 30%

- General population

- Males = 5-12%

- Females = 10-25%

# Depression in Children with Epilepsy

- 45 children with absence epilepsy
  - Higher rates of anxiety (22%) and depression (6%) than children without epilepsy
- 44 children ages 7-18 years
  - 26% with depressive symptoms
  - 16% with anxiety symptoms

# Depression and Epilepsy Surgery

- 60 patients undergoing surgery
  - MTE + NMTE
  - 43% with history of major depression
  - 30% developed depression after surgery
  - Predictors included:
    - Preoperative history of depression
    - Postoperative dysfunctional family

# Depression and Suicide in Epilepsy

# Depression and Suicide

- Leading cause of suicide is depression
- Most common means of attempt in people with epilepsy is overdose on medication
- Per year:
  - General population                      1 per 10,000
  - Epilepsy                                      5-7 per 10,000

# Epilepsy, Suicide, and Psychiatric History

## Relative Risk

- Epilepsy without PH 2
- Epilepsy with PH 14
- Newly Diagnosed without PH 5
- Newly Diagnosed with PH 29

# Effects of Depression

# Effects of Depression In General Population

- Increased disability
- More frequent absences from work
- Decreased quality of life
- More frequent use of medical care
- Increased medical care costs

# Effects of Depression in Epilepsy

- Increased disability
- Missed work
- Hopelessness
- Non-compliance with medical treatment
- Worsens pre-existing cognitive problems
- May intensify AED side effects
  - Fatigue
  - Sleep disturbance

# Effects of Depression in Epilepsy

- Motivation/initiative lapses
- Increased social withdrawal/isolation
- Family conflicts may intensify
- Increased vulnerability to illnesses
- Decreased school performance
- Behavior problems

# Recognizing Depression in Epilepsy

# Depression is Under-Recognized

- Is associated with all seizure types
- N=200 people with epilepsy
  - 22% had current major depression
  - 33% of these had not been diagnosed
  - 48% of these had been seizure free for the last year

# Why Is Depression Hard to Recognize In Epilepsy?

- Medication side effects
  - Sedation and sleep pattern
  - Cognitive effects
  - Activity level
- Seizure frequency and post-ictal recovery
- Effects of epilepsy on lifestyle

# Why Is Depression Hard to Recognize In Epilepsy?

- Patient can be reluctant to seek treatment
- Lack of involvement of mental health care providers in epilepsy care
- Limited time in a physician's appointment
- Most tests/questionnaires not normed on epilepsy population
- Neurological Disorders Depression Inventory for Epilepsy (NDDI-E)



# Common Physical Symptoms

- Weight change
- Decreased energy
- More frequent physical complaints
- Changes in pattern of sleep, sexual interest, eating
- Fatigue
- More frequent illness

# Common Emotional Symptoms

- Deep sadness
- Guilt
- Hopelessness
- Apathy
- Anger
- Numbing of pleasure
- Irritability
- Tearfulness

# Common Behavioral Symptoms

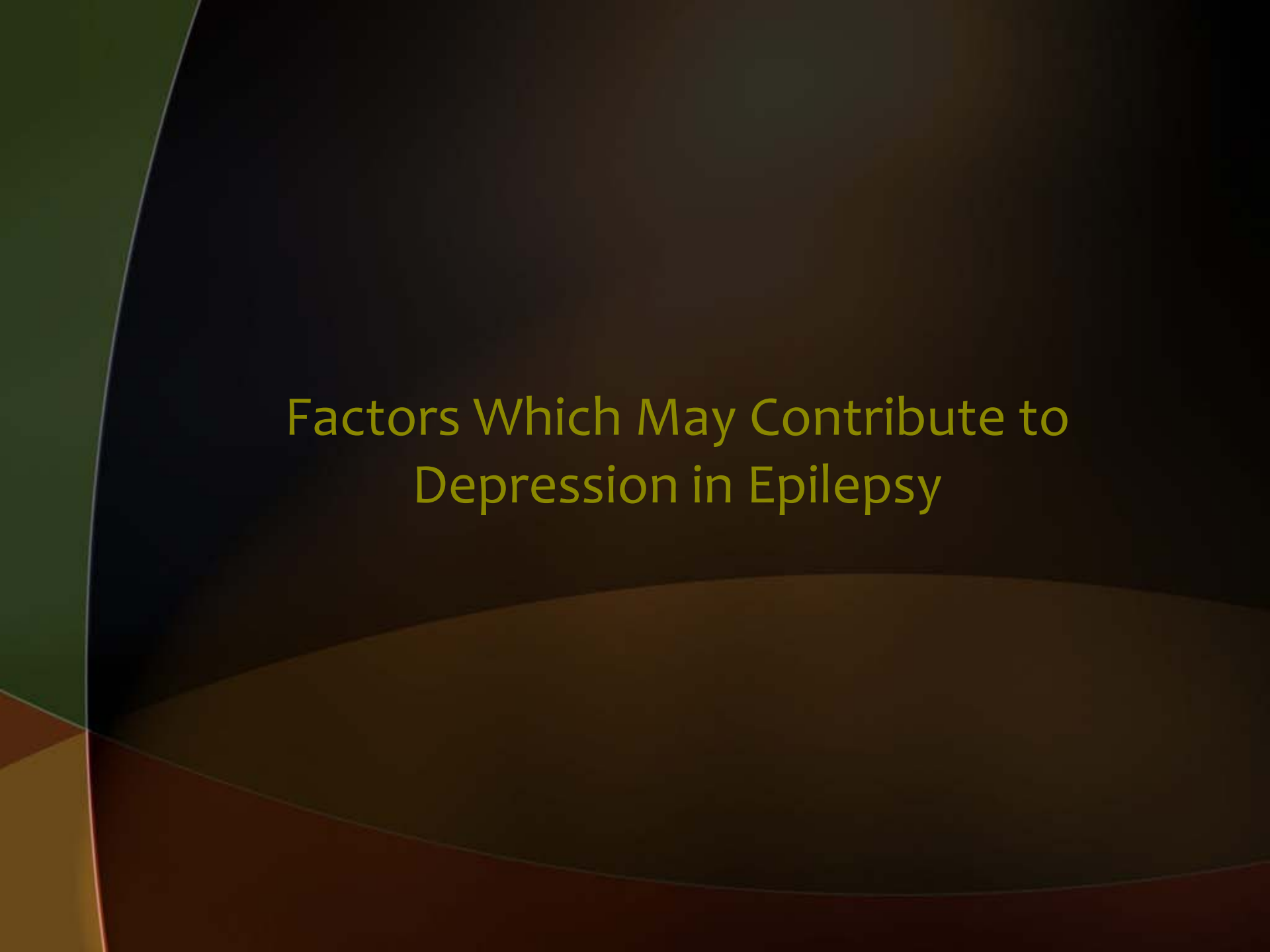
- Social withdrawal
- Crying
- Decreased initiation
- Agitated or slowed movements
- Reduced activity
- Argumentativeness
- Acting out behavior

# Common Cognitive Symptoms

- Poor concentration
- Worthlessness
- Short-term memory problems
- Slowed thought processes
- Helplessness, reduced sense of self-control
- Indecisiveness

# Common Cognitive Symptoms

- Distortions in expectations, beliefs, attributions
  - “I’ll never get better control over these seizures!”
  - “No one will hire me as long as I have seizures”
  - “I can never have children!”
  - “Why can’t people just leave me alone!”
  - “I’m taking over seven pills a day and my seizures still haven’t stopped! My doctor must not know what she’s doing!”
  - “I’ll never have any friends!”



# Factors Which May Contribute to Depression in Epilepsy

# Possible Contributors to Depression in Epilepsy

- Organic/Biological
  - Area of brain that is causing, or affected by, epilepsy
  - Seizures
  - Medication
  - Abnormal neurotransmitter levels

# Possible Contributors to Depression in Epilepsy

- Environmental
  - Isolation
  - Unemployment
  - Stigma
  - Lack of friends
  - Independence conflicts

# Possible Contributors to Depression in Epilepsy

- Family history of mental health problems
- Psychological adjustment
  - Anger toward epilepsy or others who are perceived to have caused it
  - Feelings of worthlessness
  - Lack of meaning in life
  - Poor self esteem
  - Reduced sense of self-control

# Depression in Epilepsy: Possible Causes

- 2009 study involving 150 patients
  - Level of stress
  - Social support
  - Anxiety
  - Self-efficacy
  - Employment status

# Possible Contributors to Depression in Adolescents

- Negative attitude toward epilepsy
- Low satisfaction with family relationships
- External locus of control
- Poor coping skills

# Possible Contributors to Depression in Adolescents

- **Social isolation**
- **Rejection by peers**
- **2001 EFA national survey of > 19,000 teens:**
  - **51% knew that epilepsy is not contagious**
  - **28% knew that epilepsy is not a mental disorder**
  - **31% said they would date someone with epilepsy**
  - **33% knew what to do if someone had a seizure**

# Possible Contributors to Depression in Children


- Children with epilepsy have significantly greater external locus of control than do children with diabetes, or those without health problems
- Children with seizures will generalize their feelings of lack of control to other areas of their life
- External locus of control is associated with social isolation, negative attitude, passivity, decreased motivation, poor self-concept, poorer grades

# Possible Contributors to Depression in Children

- Family members are likely to see child with epilepsy as unassertive, immature, thus are less likely to give opportunities for decision making
- Children with epilepsy see themselves as problematic for their family
- Children feel they have disappointed their family

# When to Get Professional Help

- When your health is negatively affected
- If you or close one is significantly distressed
- If you are impaired in your ability to carry out daily responsibilities
- If you have tried to help yourself, but have been unsuccessful



“Happiness comes from seeing ourselves as being okay, just as we are, today, without comparison to others, without reference to the way we were or the way we fear we will be”

--Elisabeth Kubler-Ross

"The Constitution only gives people the right to pursue happiness. You have to catch it yourself."

--Ben Franklin

# Epilepsy and Depression: Take-Home Messages

- **Depression is quite common in epilepsy**
- **Many different factors can combine to cause depression**
- **Depression can be subtle, and easily overlooked**
- **Depression should not be ignored or minimized!**