

# Carpe Diem – Seize the Day Blog

**Editor's Note:** Content presented in the Carpe Diem – Seize the Day Blog is for awareness and informational purposes only, and it is not meant to be a diagnostic tool.

How are an iceberg and epilepsy alike? Take a few moments to ponder your answer. Times up! With an iceberg you only see what is above the water and nothing below the water. With epilepsy, people only see the seizures and not any underlying conditions. Below is an infographic that demonstrates how an iceberg and epilepsy are alike.



According to David M. Ficker MD, Associate Professor of Neurology, University of Cincinnati Neuroscience Institute, the underlying conditions in epilepsy are called comorbidities. Some call the underlying conditions co-existing conditions. Dr. Ficker states, "A comorbidity is defined as the presence of one or more additional disorders that co-occur with a primary condition. It has been increasingly recognized that there are multiple comorbid conditions associated with epilepsy. examples of common comorbidities in epilepsy include psychiatric disorders, cognitive disorders, migraine, and sleep disorders. The CDC identified additional comorbidities. Conditions that were found in adults with epilepsy include cardiovascular, respiratory, some inflammatory, and other disorders. Other comorbidities include headaches, migraines, and various other types of pain.

Why is the identification of comorbidities important? These co-existing conditions can impact the treatment plan of a patient with epilepsy. Dr. Ficker posits that medications that have a negative impact on cognition should be avoided in people with significant cognitive dysfunction. Some antiepileptic medications can have a negative effect on mood and behavior and should be used with caution in people with depression. Anti-Epileptic Drugs (AEDs) can also cause adverse behavioral effects. These effects may be more commonly seen in people with coexisting behavioral comorbidities.

Mark R Keezer, MDCM Prof Sanjay M Sisodiya, FRCP and Prof Josemir W Sander, FRCP state that the burden of comorbidity in people with epilepsy is high. Several comorbidities including depression, anxiety, dementia, migraine, heart disease, peptic ulcers, and arthritis are up to eight times more common

in people with epilepsy than in the general population. Comorbidities can negatively affect seizure outcome and quality of life.

Dr. Nikesh Ardeshta, Medical Director of Adult Epilepsy Services at Royal Oak Hospital, Beaumont Health System, in Royal Oak, Michigan, states that associated medical conditions are seen more frequently in patients with epilepsy, compared with the general population, and these comorbidities require evaluation and treatment. The exact cause of the comorbidities is unknown. In some cases, it was hard to tell if the epilepsy caused the comorbid condition or did the comorbid condition cause the epilepsy. At times, the comorbidities' impact on quality of life can be greater than the impact of the epilepsy itself.

Aline Muhigwa, Pierre-Marie Preux, Daniel Gérard, Benoit Marin, Farid Boumediène, Charles Ntamwira & Chung-Huang Tsai did a systematic review and meta-analysis regarding comorbidities of epilepsy. A link between epilepsy and certain comorbidities such as depression, attention deficit with hyperactivity disorder, anxiety, migraine, sleep disorders and malnutrition may exist through a common etiology or common genetic or environmental factors, as well as side effects of anti-epileptics was identified.

Epilepsy in children is occasionally associated with variable comorbidities although the frequency of such comorbidity is often difficult to determine. Comorbidities can be divided into three categories: neurological, psychological, and physical comorbidities.

<b>Neurological comorbidities</b>	<b>Psychological comorbidities</b>	<b>Physical comorbidities</b>
Cognitive impairment	Autism spectrum disorders	Bone loss
Language impairment	Attention deficit/hyperactivity disorder	Immunological disturbances
Migraine & headache	Mood disorders (anxiety and depression)	Retardation of body height growth
Sleep problems	Psychosocial & familial problems	Hypothyroidism
	Rare: psychosis, oppositional defiant or conduct disorders, & tic disorders	Polycystic ovary syndrome
		Body weight changes
		Dyslipidemia
		Carnitine deficiency

Remember that Epilepsy Alliance Ohio is dedicated to supporting those impacted by epilepsy in local communities through education and awareness by confronting the spectrum of challenges created by seizures.

*Editor's Note: The Carpe Diem – Seize the Day Blog will be distributed and posted weekly.*

Always remember – **CARPE DIEM – SEIZE THE DAY!**

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