



## Complex Partial Seizures

## Facts

Complex Partial Seizures (CPS) are an epileptic seizure type that originates from a single area of the brain and cause impaired consciousness.<sup>1</sup> During a seizure, people with CPS may make repetitive and purposeless movements called “automatisms,” which range from chewing, lip-smacking and picking at the air, to simple verbal responses and cycling movements of the legs.<sup>1</sup> Approximately one-third of people with epilepsy are refractory, meaning their seizures are not completely controlled by treatment with two or more antiepileptic drugs (AEDs).<sup>2</sup> Among patients with refractory CPS, adverse events can be significant, including an increased incidence of cognitive impairment<sup>3</sup>, behavioral disorders<sup>4</sup>, and accidents and physical injuries, including sudden unexplained death.<sup>5</sup>

### General Facts

- ◆ More than one-third of all patients with epilepsy have CPS, making it the most frequently occurring type of seizure.<sup>1</sup>
- ◆ Complex partial seizures typically last from 30 seconds to two minutes,<sup>6</sup> and are often preceded by a simple partial seizure, also called an aura. Dependent on the location of the seizure activity within the brain, auras can begin with an odd feeling in the stomach, a tingling sensation or visual changes. <sup>1</sup>
- ◆ During a complex partial seizure, epilepsy sufferers are unaware of what they are doing and do not typically feel pain;<sup>7</sup> they can also be affected by memory loss for periods before, during and after an epileptic episode.<sup>7</sup> Complex partial seizures may also progress to generalized seizures, which affect the whole brain.<sup>1</sup>
- ◆ Approximately one-third of all epilepsies are uncontrolled or refractory. Refractory seizures are generally defined as seizures that are uncontrolled in spite of treatment with two or more anti-convulsant therapies.<sup>2</sup>
- ◆ As with other forms of epilepsy, patients with uncontrolled CPS are often faced with a loss of social interaction, productivity and positive self-image, and may experience potential changes in employment due to their inability to manage their condition.<sup>2</sup>
- ◆ While individuals with epilepsy already have a two to three times higher mortality rate that of the general population<sup>1</sup>, those who continue to suffer from uncontrolled seizures face a mortality risk that is up to seven times higher than the general population.<sup>8</sup>
- ◆ In patients with refractory epilepsy, sudden unexplained death in epilepsy (SUDEP) accounts for up to 50 percent of all deaths.<sup>9</sup>

### Epidemiology

- ◆ Three million Americans are affected by epilepsy;<sup>10</sup> approximately 35 percent of whom have CPS.<sup>1</sup> This is the single largest seizure type.
- ◆ Approximately 30 to 36 percent of patients with CPS are uncontrolled (refractory) by treatment.<sup>11,12,13</sup>
- ◆ CPS can be categorized by whether or not the cause of the seizures can be identified (symptomatic) or is unknown but is likely due to a structural abnormality. Symptomatic CPS may be more likely in people who have had a head injury, brain infection, stroke or brain tumor.<sup>6</sup>

### Diagnosis and Treatment

- ◆ Results from electroencephalograms (EEGs) and magnetic resonance images (MRIs) can assist in diagnosing complex partial seizures and pinpointing the origin of the seizures.<sup>1</sup>
- ◆ The initial management of CPS focuses on the optimal use of AEDs.<sup>13</sup>
- ◆ Patients with CPS who remain uncontrolled after trying two or more AEDs, either as monotherapy or in combination, are deemed refractory.<sup>2</sup>
- ◆ The adverse effects of epilepsy and its treatments are often magnified among patients with refractory epilepsy<sup>8</sup>. These include a higher incidence of cognitive impairment<sup>3</sup> and behavior disorders<sup>4</sup>; possible reduction in social interactions, productivity and self image<sup>2</sup>; loss or change of employment<sup>2</sup>; increased incidence of accidents and physical injuries<sup>5</sup>; and higher risk of mortality<sup>5</sup>.

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- ◆ Subsequent invasive treatment options may be appropriate for some patients, though surgery of any type is considered a major undertaking requiring general anesthesia and subject to the possibility of small but significant risks such as infection.<sup>14</sup> Even following surgery, many patients remain on AED therapies.<sup>15</sup>

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