

## Disequilibrium syndrome: Findings

AKA dialysis disequilibrium syndrome (DDS): rare syndrome characterized by neurologic symptoms of varying severity that affect dialysis patients, particularly when they are first started on hemodialysis. It is thought to be due primarily to cerebral edema.

Risk factors for DDS include the following:

- First dialysis treatment
- Markedly elevated blood urea concentration predialysis (ie, >175 mg/dL or 60 mmol/L)
- Chronic kidney disease (CKD, as compared with acute kidney injury [AKI])
- Severe metabolic acidosis
- Older age
- Pediatric patients
- Pre-existing neurologic disease (head trauma, stroke, seizure disorder)
- Other conditions characterized by cerebral edema (hyponatremia, hepatic encephalopathy, malignant hypertension)
- Any condition that increases permeability of the blood brain barrier (such as sepsis, vasculitis, thrombotic thrombocytopenic purpura-hemolytic uremic syndrome [TTP/HUS], encephalitis, or meningitis)

**Findings:** Early symptoms include headache, nausea, disorientation, restlessness, blurred vision, and asterixis. In general, symptoms of DDS are self-limited and usually dissipate within several hours. Some patients, however, may progress to confusion, seizures, coma, and even death.

**Prevention:** The most important preventive measure is to limit the reduction in BUN per treatment so that there is a gradual reduction that is distributed over several days.