



Consciousness is a spectrum. **Altered level of consciousness (ALOC)** is any change from normal mental status \pm a GCS (or pGCS) < 15.

DIFFERENTIAL DIAGNOSES

Consider a broad differential using **DIMS**:

- **D**rugs: ingestions, missed doses
- **I**nfection/Inflammation: CNS infections, sepsis
- **M**etabolic/Endocrine: inborn errors of metabolism, renal/liver failure, electrolyte abnormalities, hypoglycemia, DKA, etc
- **S**troke/Seizure/Structural: trauma, fevers, tumors, etc.

HISTORY

Important Points:

- Infectious symptoms
- Ingestions
- Missed medication doses
- Seizure activity
- Changed behaviour
- Trauma

PHYSICAL

- GCS/pGCS < 15
- Abnormal vitals
- Full neurological exam, including pupils, strength, tone, reflexes, sensation, signs of meningeal irritation
- Skin findings: rashes, petechiae, purpura, café au lait spots, flushing, jaundice, signs of trauma, active bleeding.

INVESTIGATIONS

- Infectious workup (\pm lumbar puncture, CSF analysis, inflammatory markers)
- Extended electrolytes
- Liver enzymes & liver function tests
- Toxicology screens, serum ammonia
- Blood glucose, thyroid studies
- Blood gases, lactate
- Renal function tests, serum osmolality

Depending on presentation & suspicion, also consider:

- EEG, ECG, coagulation studies
- CT head \pm MRI

INCREASED INTRACRANIAL PRESSURE

It is important to recognize increased ICP, as it can lead to brain herniation, such as with **Cushing's Triad**: ALOC plus **hypertension**, **bradycardia**, and **irregular respirations**.



		<4YR	\geq 4YR
EYES 	4	Eyes open to pain	
	3	Eyes open to voice	
	2	Eyes open to pain	
	1	No response	
VERBAL 	5	Coos/Babbles, interactive, oriented	Oriented & alert
	4	Irritable cry, consolable, disoriented, confused speech	Disoriented, confused speech, consolable
	3	Cries persistently to pain	Inappropriate words, inconsolable, non-sensical speech
	2	Moans to pain	
	1	No response	
MOTOR 	6	Normal, spontaneous movement	Follows commands
	5	Withdraws to touch	Localizes pain
	4	Withdraws to pain	
	3	Decorticate flexion	
	2	Decerebrate extension	
	1	No response	

A	Alert		Responding appropriately to external stimuli
V	Voice		Responds only when name is called by caregiver
P	Pain		Responds only when painful stimuli received
U	Unresponsive		No response

MANAGEMENT

First, stabilize! Consider supplemental O2, intubation, and IV access/fluids,

Next, address the suspected cause of ALOC:

- Administration of antidotes
- Treatment of infectious causes
- Management of seizures
- Correcting metabolic disturbances
- Contacting appropriate specialists, such as poison control, neurology, neurosurgery, etc.