

Appendix G : Delirium Risk Factors and Interventions

The literature and clinical guidelines list various predisposing and precipitating risk factors for delirium.

Bolded text indicates factors of particularly high risk. Health-care providers can apply a variety of preventative interventions tailored to the specific precipitating risk factors. In the second table, examples of specific interventions outlined in the literature are listed alongside the related risk factors. This list is not exhaustive, but includes the risk factors and interventions most frequently cited in the literature. Some risk factors and interventions are more relevant to certain health-care sectors than others.

RISK FACTORS	
Note: see below for risk factors with associated interventions	
Advanced age (older than 65 or 70)	
Alcohol use/abuse	
Depression	
Extensive surgery that causes greater-than-usual physiological stress (e.g., more extensive blood loss, length of operation, or extent of dissection) (e.g., cardiac surgery)	
Hip Fracture	
Previous delirium	
Severe illness or co-morbidity burden	

RISK FACTORS AND INTERVENTIONS	
<i>Risk Factor</i>	<i>Sample Intervention</i>
Cognitive impairment, dementia, disorientation	Cognitive orientation/re-orientation
	Environmental aids: <ul style="list-style-type: none"> ■ adequate lighting ■ clear signage ■ clock ■ calendar
	Avoid unnecessary room changes
	Use clear communication
Sensory deprivation, isolation	Therapeutic or cognitively stimulating activities: <ul style="list-style-type: none"> ■ personally valued activities and familiar background stimulation ■ reminiscence^G ■ family/friend visits Note: avoid unnecessary isolation, sensory deprivation, and sensory overload
Sensory impairment (e.g., hearing or vision impairment)	Optimize sensory function by: <ul style="list-style-type: none"> ■ ensuring hearing and visual aids are available and working ■ ensuring adequate lighting ■ resolving reversible causes of impairment (e.g., impacted ear wax)
Infection, fever	Look for and treat infection

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RISK FACTORS AND INTERVENTIONS	
<i>Risk Factor</i>	<i>Sample Intervention</i>
Presence of urinary catheter	Avoid unnecessary catheterization Screen for and treat urinary tract infection Remove indwelling catheters as soon as possible Consider in-and-out catheterization over indwelling catheter
Dehydration and/or constipation	Monitor nutrition, hydration, and bladder/bowel function
Electrolyte abnormalities (hyper- or hyponatremia)	Prevent electrolyte disturbance/dehydration by: <ul style="list-style-type: none"> ■ ensuring adequate fluid intake ■ considering offering subcutaneous or intravenous fluids, if necessary ■ restoring serum sodium, potassium, and glucose levels to normal limits
Sodium and/or potassium and/or calcium abnormalities	Pay attention to those who are at increased risk for dehydration (i.e., taking diuretics, diarrhea, pneumonia, UTI, etc.)
Poor nutrition	Follow nutrition support advice Maintain adequate intake of nutrients and glucose Ensure proper fit of dentures Take time to open food packaging/set up meal tray Encourage families to be present at meal times to assist with feeding
Anemia	Identify and manage treatable causes of anemia
Hypoxia	Optimize oxygenation and monitor oxygen saturation levels
Inadequately controlled pain	Assess, monitor, and control pain
Sleep deprivation or disturbance	Promote high-quality sleep Use non-pharmacological sleep enhancement methods
	Avoid nursing or medical procedures during sleeping hours, and schedule medication rounds to avoid disturbing sleep if possible
	Reduce noise and light to a minimum during sleeping hours
Immobilization or limited mobility: <ul style="list-style-type: none"> ■ Use of restraints ■ Prolonged bed rest or sedation, immobility after surgery 	Avoid use of restraints Minimize use of medical devices (e.g., intravenous lines, catheters) that may restrict mobility or function Encourage mobilization, including: <ul style="list-style-type: none"> ■ walking (if possible) ■ getting out of bed ■ range-of-motion exercises ■ self-care activities
Poor functional status/functional impairment	Provide appropriate walking aids, if needed Encourage mobilization soon after surgery Physiotherapy and occupational therapy as needed (after surgery)
Polypharmacy and use of high-risk medications (e.g., psychoactive medications, sedative-hypnotics, benzodiazepines, anticholinergics, antihistamines, meperidine)	Carry out medication reviews for people taking multiple drugs, and modify dosage or discontinue drugs that increase the risk of delirium when possible

Sources: AGS, 2014; AMDA, 2008; Brooks, 2012; CCSMH, 2010; Clegg et al., 2014; Gage & Hogan, 2014; Holroyd-Leduc et al., 2010; Inouye et al., 2014; Khan et al., 2012; NICE, 2010.