



Emergency and Supportive Treatment

Step	Complication	Assessment	Treatment																		
Airway	Obstruction	Optimize the airway position	<ul style="list-style-type: none"> - Early use of Naloxone for opiates or Flumazenil for Benzodiazepines will obviate the need of endotracheal incubation. - Perform endotracheal incubation and may need to use NM paralysis with succinylcholine or vecuronium. 																		
Breathing	Ventilatory failure <u>Causes: hypoxia or hypercarbia</u>	Measure arterial blood gases	<ul style="list-style-type: none"> • Assist manually with Bag-valve-mask or bag-valve endotracheal-tube device until ventilator is ready. • Endotracheal incubation 																		
	<p style="color: red; margin: 0;">Selected drugs and toxins causing ventilatory failure:</p> <table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr style="border-top: 2px solid black; border-bottom: 2px solid black;"> <th style="text-align: left; padding: 5px;">Paralysis of ventilatory muscles</th> <th style="text-align: center; padding: 5px;">and</th> <th style="text-align: left; padding: 5px;">Depression of respiratory centre</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">1. Botulin toxin</td> <td></td> <td style="padding: 5px;">1. Barbiturates</td> </tr> <tr> <td style="padding: 5px;">2. Organophosphate carbamate</td> <td></td> <td style="padding: 5px;">2. Alcohols</td> </tr> <tr> <td style="padding: 5px;">3. Paralytic Snake Bite</td> <td></td> <td style="padding: 5px;">3. Opiates</td> </tr> <tr> <td style="padding: 5px;">4. Strychnine</td> <td></td> <td style="padding: 5px;">4. Sedative hypnotics</td> </tr> <tr style="border-bottom: 2px solid black;"> <td style="padding: 5px;">5. Tetanus</td> <td></td> <td style="padding: 5px;">5. Tricyclic antidepressants</td> </tr> </tbody> </table>			Paralysis of ventilatory muscles	and	Depression of respiratory centre	1. Botulin toxin		1. Barbiturates	2. Organophosphate carbamate		2. Alcohols	3. Paralytic Snake Bite		3. Opiates	4. Strychnine		4. Sedative hypnotics	5. Tetanus		5. Tricyclic antidepressants
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Hypoxia	Caused by: <ul style="list-style-type: none"> • Insufficient O2 in air due to displacement of O2 by gases. • Disruption of O2 absorption by the lung due to pneumonia, pulmonary edema, cellular hypoxia. • CO poisoning and methemoglobinemia 	<ul style="list-style-type: none"> • Correct hypoxia by administer O2 or Intubation • <u>If CO poisoning, give 100% O2</u> • Treat pneumonia • Treat pulmonary edema and avoid administration of excessive fluid. 																			



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		<ul style="list-style-type: none"> Cyanide and Hydrogen sulphide poisoning 	
	Bronchospasm	Result from: <ul style="list-style-type: none"> Direct irritant injury from inhaled or pulmonary aspiration. Organophosphate or carbamate BB Hypersensitivity 	<ul style="list-style-type: none"> Administer O2 or Intubation Administer Bronchodilators Aerosolized beta-2 stimulant (Albuterol) <ul style="list-style-type: none"> Give <u>Atropine</u> if the cause is <u>Organophosphate</u>
Circulation	Bradycardia and AV blocker	<u>Common with</u> <ul style="list-style-type: none"> CCB, BB, opiates by depress sympathetic Organophosphate, carbamate, digitalis by increase parasympathetic TCA, quinidine, Ia or Ib or Ic antiarrhythmic by membrane-depressant 	<ul style="list-style-type: none"> Administer Atropine Specific antidote: <ul style="list-style-type: none"> BB >>>> glucagon. Digitalis >>>> Fab fragment TCA or membrane-depressant >>> Na bicarb Ca Antagonist >>> Ca
	QRS interval prolongation	<ul style="list-style-type: none"> TCA, quinidine, Ia or Ib or Ic antiarrhythmic by membrane-depressant Digitalis or Ca antagonist 	<ul style="list-style-type: none"> Specific antidote: <ul style="list-style-type: none"> BB >>>> glucagon. Digitalis >>>> Fab fragment TCA or Na channel blocker >>> Na bicarb Ca Antagonist >>> Ca
	Tachycardia	Treat only if hemodynamic of pt. not stable (Sever hypotension or chest pain)	<ul style="list-style-type: none"> Specific antidote: <ul style="list-style-type: none"> Sympathomimetic-induced >>>> Propranolol or Esmolol. Anticholinergic-induced >>>> Physostigmine.
	Ventricular arrhythmias	Caused by cocaine, amphetamines, TCA and Na blocking agent.	<ul style="list-style-type: none"> CPR if necessary TCA or Na channel blocker >>> Na bicarb
	Hypotension		<ul style="list-style-type: none"> NS



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			<ul style="list-style-type: none"> • Dopamine or Norepinephrine (if from TCA due to depleted neuronal stores of catecholamines) • Specific antidote: <ul style="list-style-type: none"> ▪ BB >>>> glucagon. ▪ Digitalis >>>> Fab fragment ▪ TCA or Na channel blocker >>> Na bicarb ▪ Ca Antagonist >>> Ca
	Hypertension	Amphetamines, organophosphate and anticholinergic agent	No tachycardia >> Nitroprusside or phentolamine With tachycardia >> Propranolol or Esmolol .
	Coma	Mention before	
Other complication	Convulsions		Diazepam or Barbiturates In refractory cases >> general anesthesia.
	Rhabdomyolysis <u>Can lead to RF due to precipitate</u>	<ul style="list-style-type: none"> • Result from hyperactivity due to hyperthermia, rigidity or convulsion • CO or Snake venoms. 	<ul style="list-style-type: none"> • Restore volume in dehydrated pt • Alkalinize urine by Na bicarb to promotes deposition of myoglobin. • Treat the cause.
	Anaphylactic and anaphylactoid reaction.	Due to release of histamine from mast cell and cause sever BC and sever hypotension by sever VD.	<ul style="list-style-type: none"> • Epinephrine • Diphenhydramine • Corticosteroid
	Agitation, delirium, psychosis		Benzodiazepine: midazolam
	Hyperthermia		<ul style="list-style-type: none"> • External cooling • NM paralysis: pancuronium IV Not effective in malignant hyperthermia