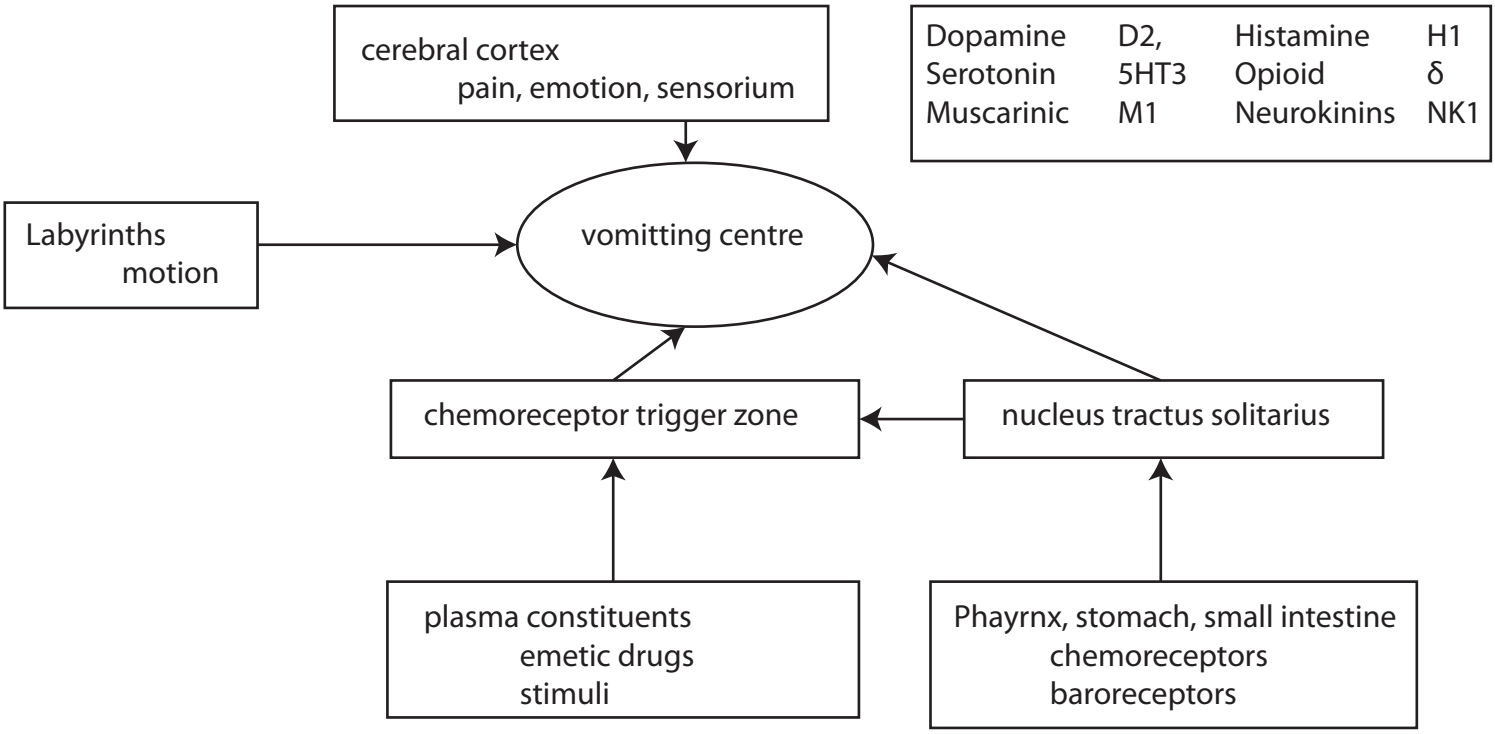
Sept 2009
QUESTION 14

Classify antiemetic drugs and describe their mechanism of action



Dopamine2 antagonists

act on the CTZ and NTS (and possibly peripherally)

prochlorperizine	acts on multiple neurtransitters, and can have extrapyramidal side effects
metoclopramide	acts mainly on D2 but does have some 5HT3 action at higher doses also increases gastric emptying which reduces baroreceptor input
domperidone	acts on D2, improves gastric emptying, less extrapyramidal side effects, but can cause cardiac arrhytmias at high doses

5HT3 receptor antagonists

receptors are preripherally in the stomach, small intestine and centrally

5HT is released by opioids which makes these effective in PONV

ondansetron	potent and selective, large volume of distribution, short terminal half life (3hrs)

Acetylcholine antagonists (antimuscarininc)

much of the action likely from inhibiting input from the labyrinths to the vomitting centre

hyoscine	causes sedation, dry mouth

Histamine antagonists

mechanism within the vomitting processes is uncertain although H1 antagonism reduces n + v

promethazine	causes sedation and some slight antianalgesic

Neurokinin1 antagonists

Fosaprepitant

Opioid receptor blockers

Naltrexone

Others

steroids	dexamethasone
GABA drugs	propofol, benzodiazepines
Canniboids	