

A close-up photograph of a mushroom with a bright red cap and white, irregular spots. The mushroom is growing on a bed of dry, brown pine needles. The text "The Gut" is overlaid in the center of the mushroom cap in a bold, yellow font.

The Gut

A photograph of a red mushroom with white spots, likely a fly agaric, growing on a bed of pine needles. The mushroom is the central focus, with its bright red cap and white spots contrasting against the dark, textured background of the pine needles. The lighting is somewhat dim, creating a moody atmosphere.

by the end of this lecture

- **you should be able to formulate a treatment plan for gut disorders**

what would you do?



- 8yr old
- hip lameness
- on NSAIDs for 2 wks
- now off food & miserable

common problems

A large, red, spotted mushroom with a thick, white, fuzzy stem, growing on a bed of dry pine needles. The mushroom is the central focus of the image, with its cap showing a vibrant red color and white spots. The stem is thick and covered in a white, fuzzy texture. The background is a dense layer of dry, brown pine needles.

- vomiting
- diarrhoea
- ulcers
- ileus
- colic
- constipation
- bloat

vomiting

- fluids
- (anti-emetics)



diarrhoea

A large, bright red mushroom with white spots on its cap, growing on a bed of dry pine needles. The mushroom is the central focus of the image, with its cap showing a vibrant red color and several white, irregular spots. The background is a dense layer of dry, brown pine needles, creating a textured and natural setting for the mushroom.

- **fluids**
- **motility reducers**
- **(antibiotics)**
- **(anti-inflammatories)**
- **(wormers)**

ulcers

A large, red, mushroom-shaped mushroom with white spots on its cap, growing on a bed of dry pine needles. The mushroom is the central focus of the image, with its cap showing a gradient from red to orange and yellow. The background is a dense layer of dry, brown pine needles.

- **proton pump inhibitors**
- **H2 antagonists**
- **coating agents**

A large, red, spotted mushroom with a white stem, growing in a field of dry grass. The mushroom has a bright red cap with numerous white spots. The stem is thick and white. The background is a dense field of dry, yellowish-brown grass.

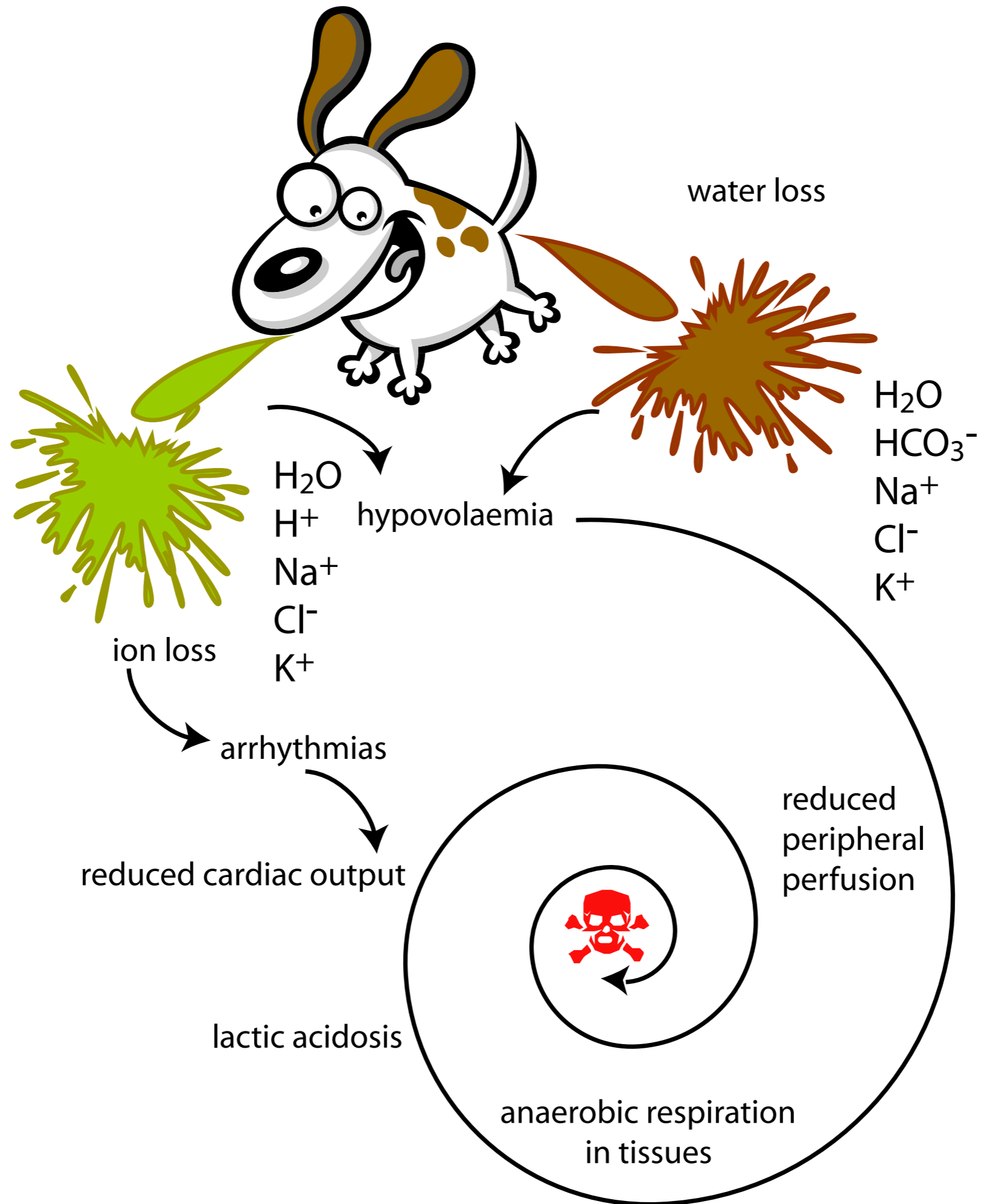
colic

- **analgesics**
- **fluids**
- **motility reducers**

constipation

- laxatives
- (prokinetics)





fluids

- **oral best**
- **iv if necessary**
- **other routes**
 - **sc not much use**
 - **im no use**
 - **ip can be dangerous**
 - **intraosseous painful**

oral fluids

A large, red, umbrella-shaped mushroom with white spots on its cap, growing on a bed of dry pine needles. The mushroom is the central focus of the image, with its cap spread wide and its stem visible. The background is a dense layer of dry, brown pine needles.

- tap water
- salt
- glucose / glycine
- (starch)

iv fluids

- **sodium lactate infusion (= Hartmann's solution ~ lactated Ringer's)**
- **lots of others**

iv additives

- KCl
- NaHCO₃



my approach

examine animal

↓
is it in shock? → *yes* → give iv fluids (any sort) up to 90mL/kg/hr dog
60ml/kg/hr cat

↓ *no*
is it more than 10% dehydrated? → *yes* → give iv Hartmann's solution

oral fluids
adjust diet
wait & observe

↓ *no*
is the faeces bloody?

↓ *no*
no improvement in 2 days → continue fluids, opioids culture and sensitivity

↓ *no*
no improvement in 2 days → reassess diagnosis, culture and sensitivity

↓ *no*
still no improvement → assess fitness for anaesthesia

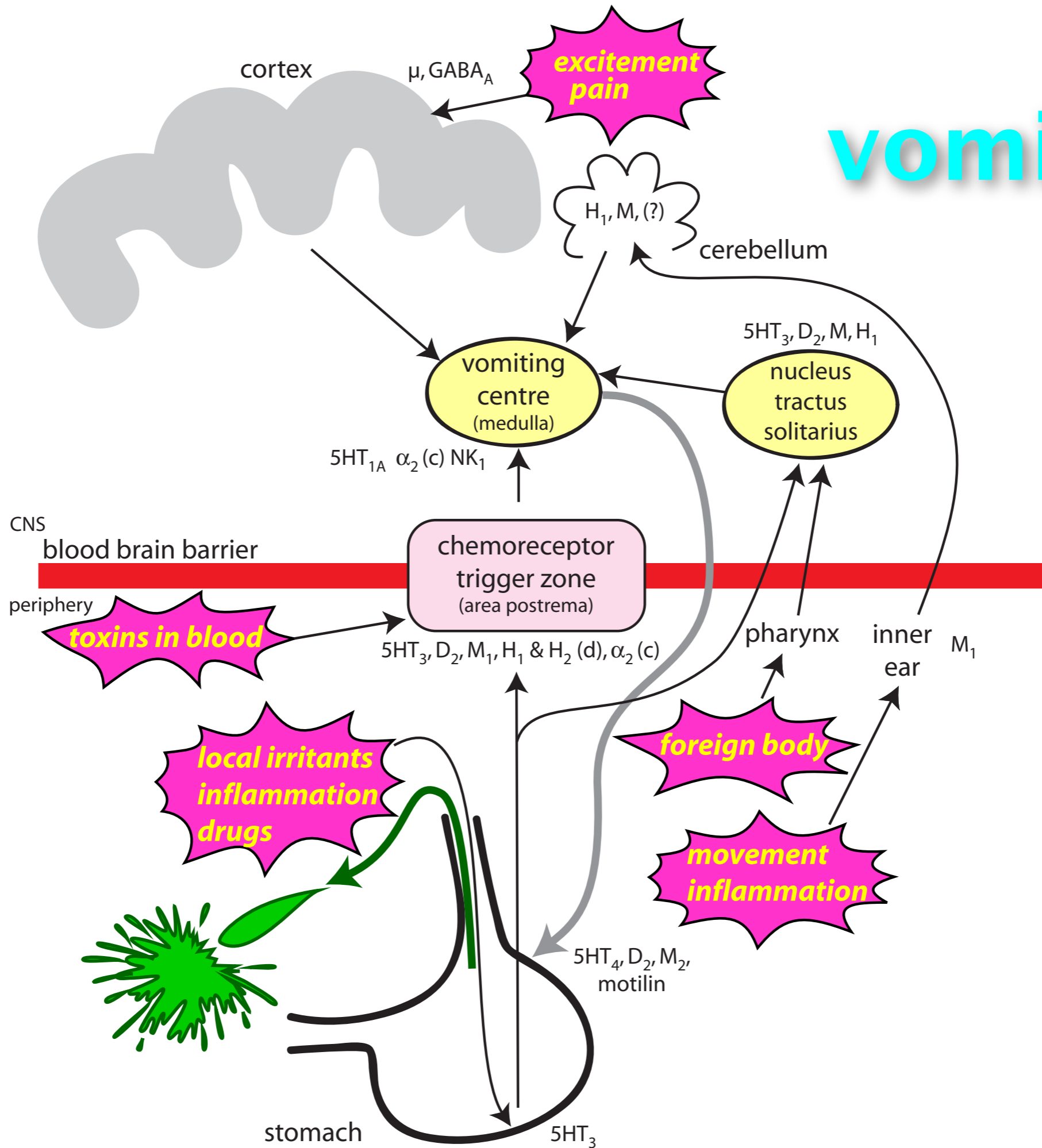
↓ *no*
consider special diagnostic procedures → gut biopsy
endoscopy
ultrasound
X rays, etc, etc

**consider
antibiotics**

yes

no

vomiting



anti-emetics

- **phenothiazines**
 - **perchlorphenazine**
- **dopamine antagonists**
 - **metaclopramide**
 - **droperidol**
- **5HT3 antagonists**
 - **ondansetron**
- **NK1 antagonists**
 - **maropitant**
- **(antihistamines)**
- **(anticholinergics)**

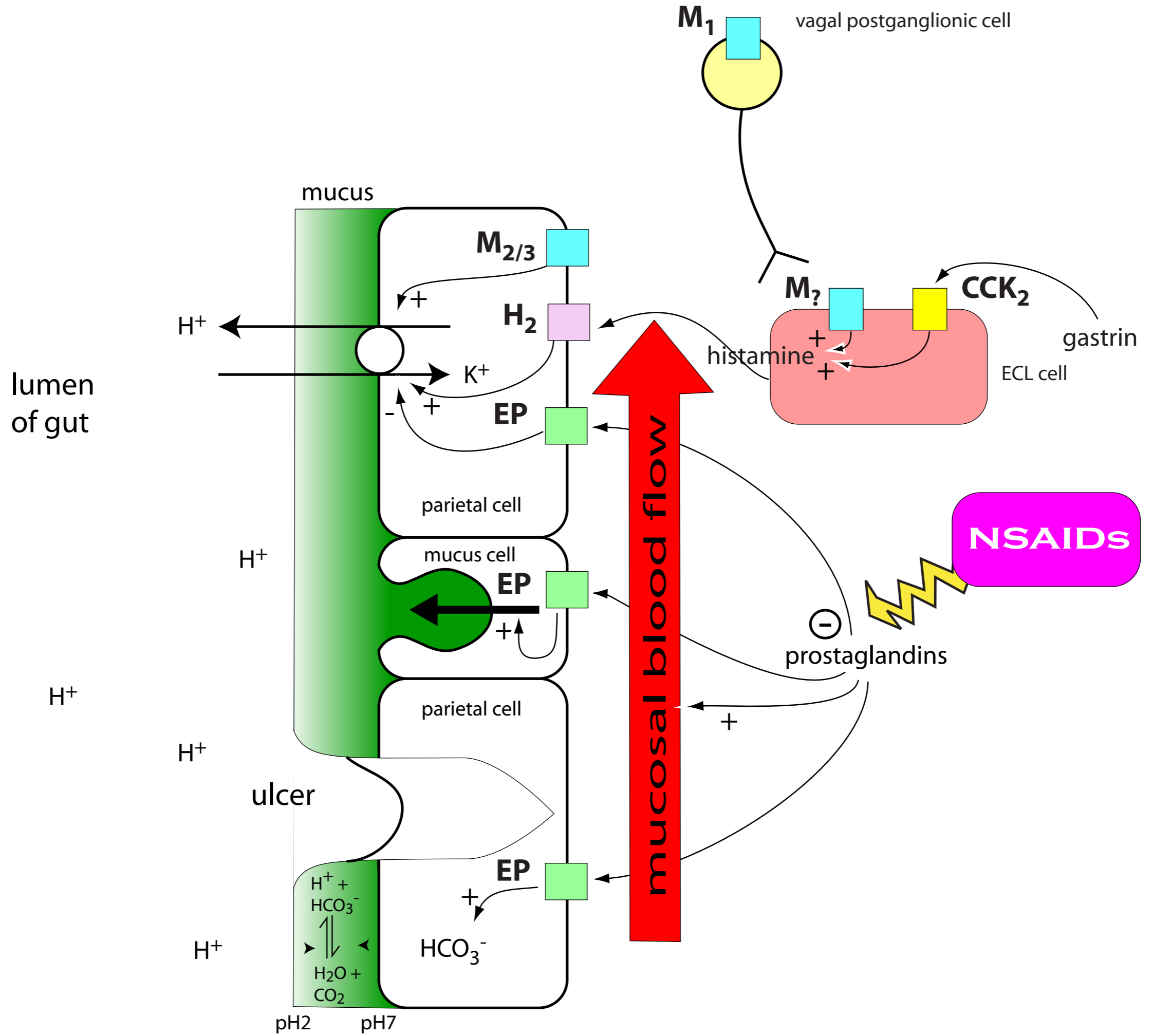


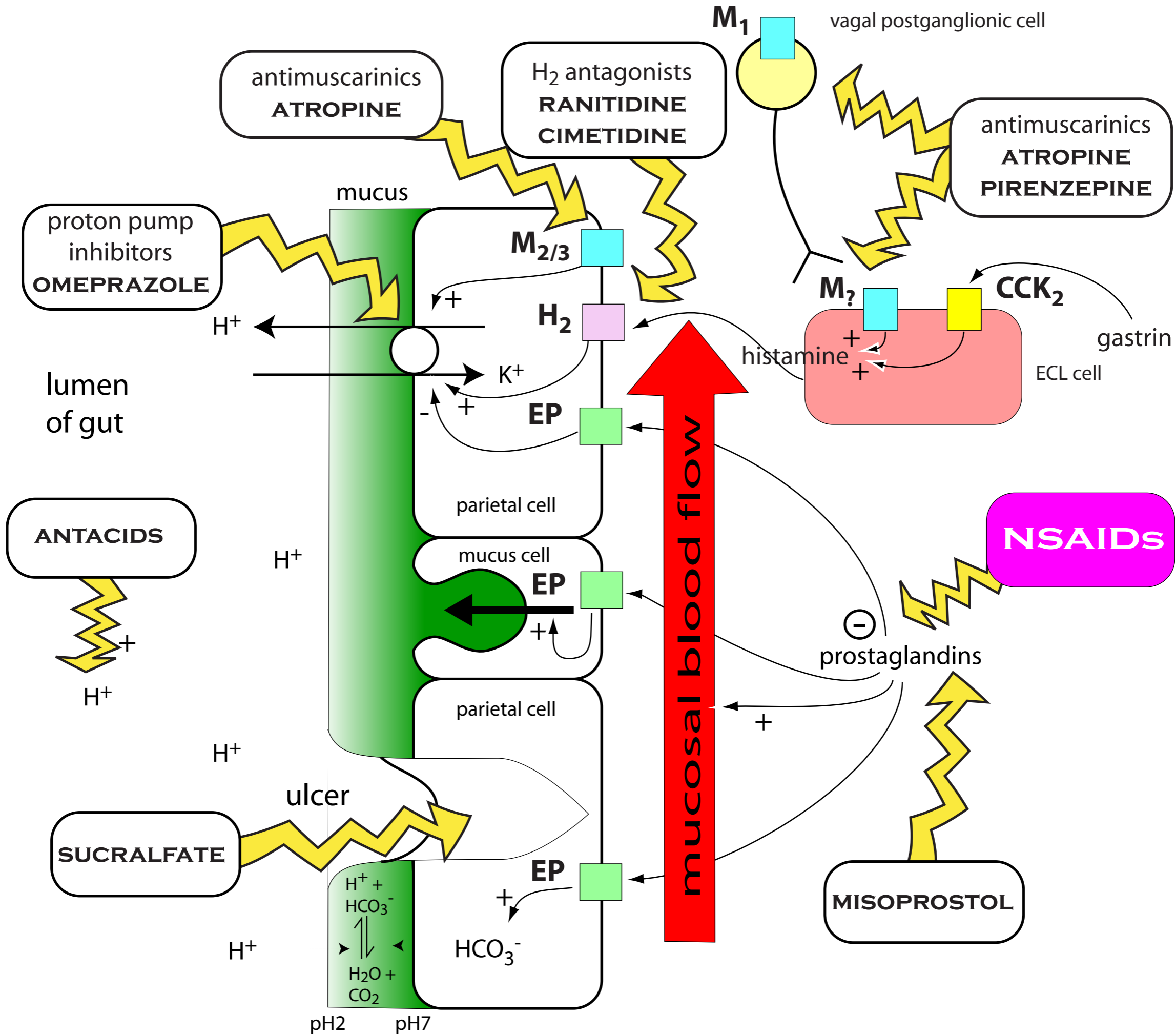
emetics

- **apomorphine**
 - **not cats**
- **xylazine**
- **mustard**
- **saturated salt solutions**

ulcer drugs

- anticholinergics
- prostaglandins
- H₂ antagonists
- proton pump inhibitors
- antacids
- local protectants
- antibiotics





anticholinergics

A large, red mushroom with white spots on its cap, growing on a bed of pine needles. The mushroom is the central focus of the image, with its stem visible at the bottom. The background is a dense layer of dry, brown pine needles.

- **M₁ antagonists**
 - **pirenzepine**
- **not atropine**

prostaglandins

- PGE analogues
 - misoprostol



antihistamines

A large, red, spotted mushroom with a white stem, growing on a bed of dry pine needles. The mushroom has a bright red cap with numerous white spots. The stem is thick and white. The background is a dense layer of dry, brown pine needles.

- **H₂ antagonists**
 - **cimetidine**
 - **ranitidine**
 - **famotidine**

proton pump inhibitors

A large, red, gilled mushroom with white spots on its cap, growing on a bed of dry pine needles. The mushroom is the central focus of the image, with its cap showing a vibrant red color and numerous white, irregular spots. The gills are a lighter, yellowish-orange color. The background is a dense layer of dry, brown pine needles, creating a textured, natural setting.

- omeprazole
- pantoprazole
- lansoprazole



antacids

- **aluminium**
 - **hydroxide**
- **magnesium**
 - **hydroxide**
 - **carbonate**
 - **oxide**
 - **trisilicate**
- **not much use - rebound secretion**

protectants

A large, bright red mushroom with white spots on its cap, growing on a bed of dry pine needles. The mushroom is the central focus of the image, with its cap showing a gradient from red to orange and yellow. The background is a dense layer of dry, brown pine needles.

- **sucralfate**
- **colloidal bismuth**
- **(kaolin)**
- **(pectin)**

gut motility

A large, bright red mushroom with white spots on its cap, growing on a bed of dry pine needles. The mushroom is the central focus of the image, with its cap showing a vibrant red color and several white, irregular spots. The stem is thick and appears to be a pale, yellowish-brown color. The background is a dense layer of dry, brown pine needles, creating a textured and natural setting for the mushroom.

- **prokinetics**
 - metoclopramide
 - erythromycin
- **spasmolytics**
 - anticholinergics
 - opioids

opioids

A large, bright red mushroom with white spots, growing on a bed of dry pine needles. The mushroom has a convex, slightly flattened cap with numerous small, irregular white patches scattered across its surface. The stem is thick and appears to be a pale, almost white color. The background is a dense layer of dry, brown pine needles, creating a textured, natural setting.

- **loperamide**
- **diphenoxylate**
- **(morphine)**

antibiotics

- **not usually indicated**
- **give if**
 - **there is evidence of invasion**
 - **a specific pathogen has been cultured**

pre & probiotics

- the future???



anti-inflammatories

- **inflammatory bowel disease**
 - **sulphasalazine**
 - **olsalazine**
 - **mesalazine**
- **not usually NSAIDs or steroids**

laxatives

- **enemas**
 - **soapy water**
- **bulk forming laxatives**
- **osmotic laxatives**
- **lubricant laxatives**
- **irritant laxatives**

bulk forming laxatives

- psyllium
- bran



osmotic laxatives

- lactulose
- MgSO_4



lubricant laxatives

- **liquid paraffin (= mineral oil)**
- **white soft paraffin (= petrolatum, Vaseline)**
- **do NOT use**
 - **paraffin oil (= kerosene)**
 - **paraffin wax (= paraffin)**

irritant laxatives

- **rhubarb**
- **senna**



fat pills

- **dirlotapide**
- **etc, etc**



what would you do?



- 8yr old
- hip lameness
- on NSAIDs for 2 wks
- now off food & miserable

endoscopy



A photograph of a large, red mushroom with white spots, likely a fly agaric, growing on a bed of dry pine needles. The mushroom has a convex, slightly flattened cap with numerous white, irregular spots scattered across its red surface. The stem is thick and appears to be covered in a fine, white, fuzzy texture. The background is a dense layer of dry, brown pine needles.

problem

- **ulcers**

treatment

A large, red, spotted mushroom with a white stem, growing on a bed of dry pine needles. The mushroom has a bright red cap with numerous white spots and a white stem. The background is a dense layer of dry, brown pine needles.

- **misoprostol?**
- **ranitidine?**
- **omeprazole?**
- **stop NSAIDs?**

the gut

- **treatment of diarrhoea - give fluids - po if possible, iv if not, then possibly opioids**
- **do NOT give antibiotics unless bacteria are invading mucosa - they often cause diarrhoea**
- **vomiting - iv fluids, anti-emetics only for persistent vomiting**
- **ulcers - H2 blockers, proton pump inhibitors or sucralfate - not antacids or NSAIDs**
- **ileus - metaclopramide or erythromycin**
- **colitis - sulphasalazine**