

Pharmacology

Pharmacy Department

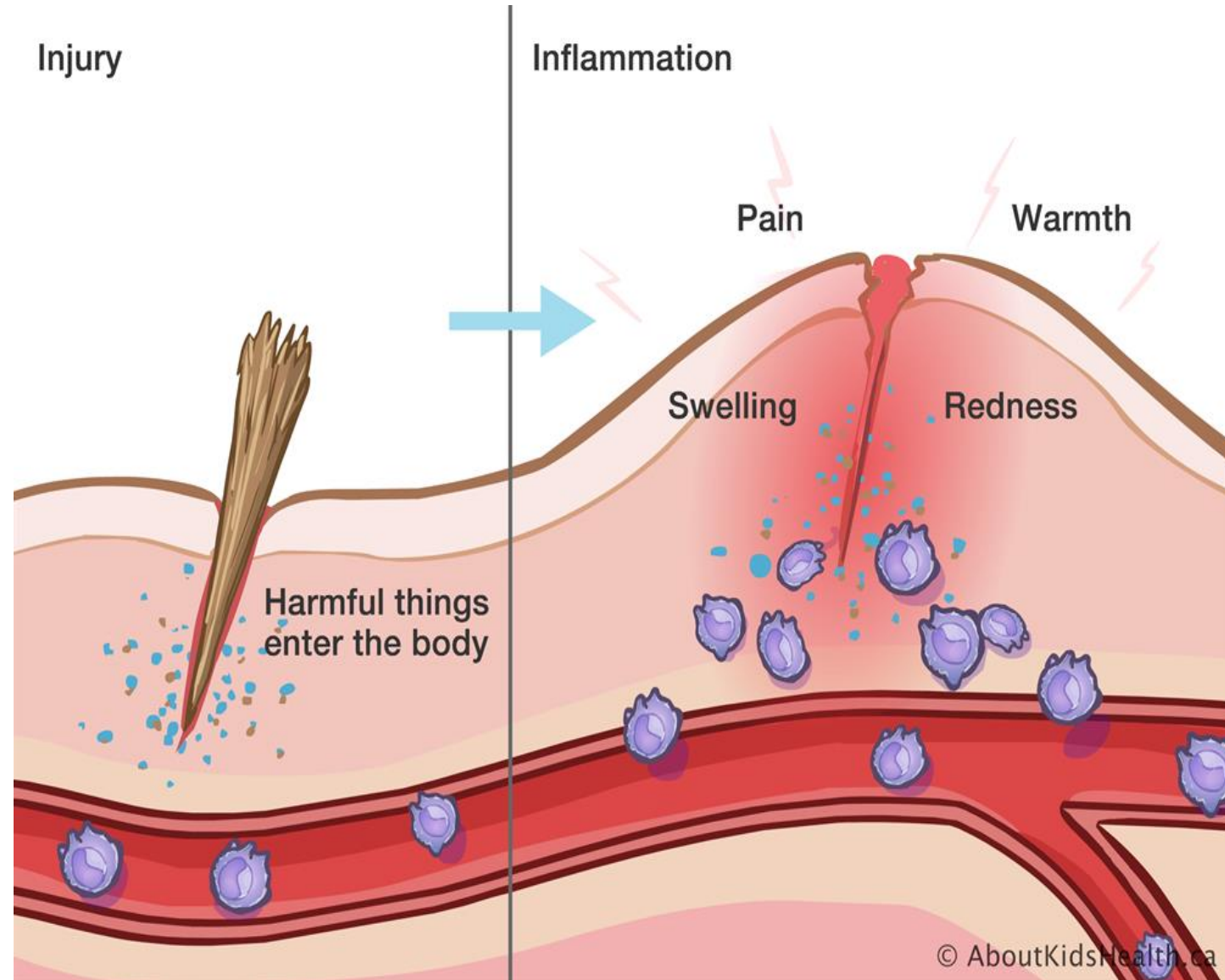
4th Stage

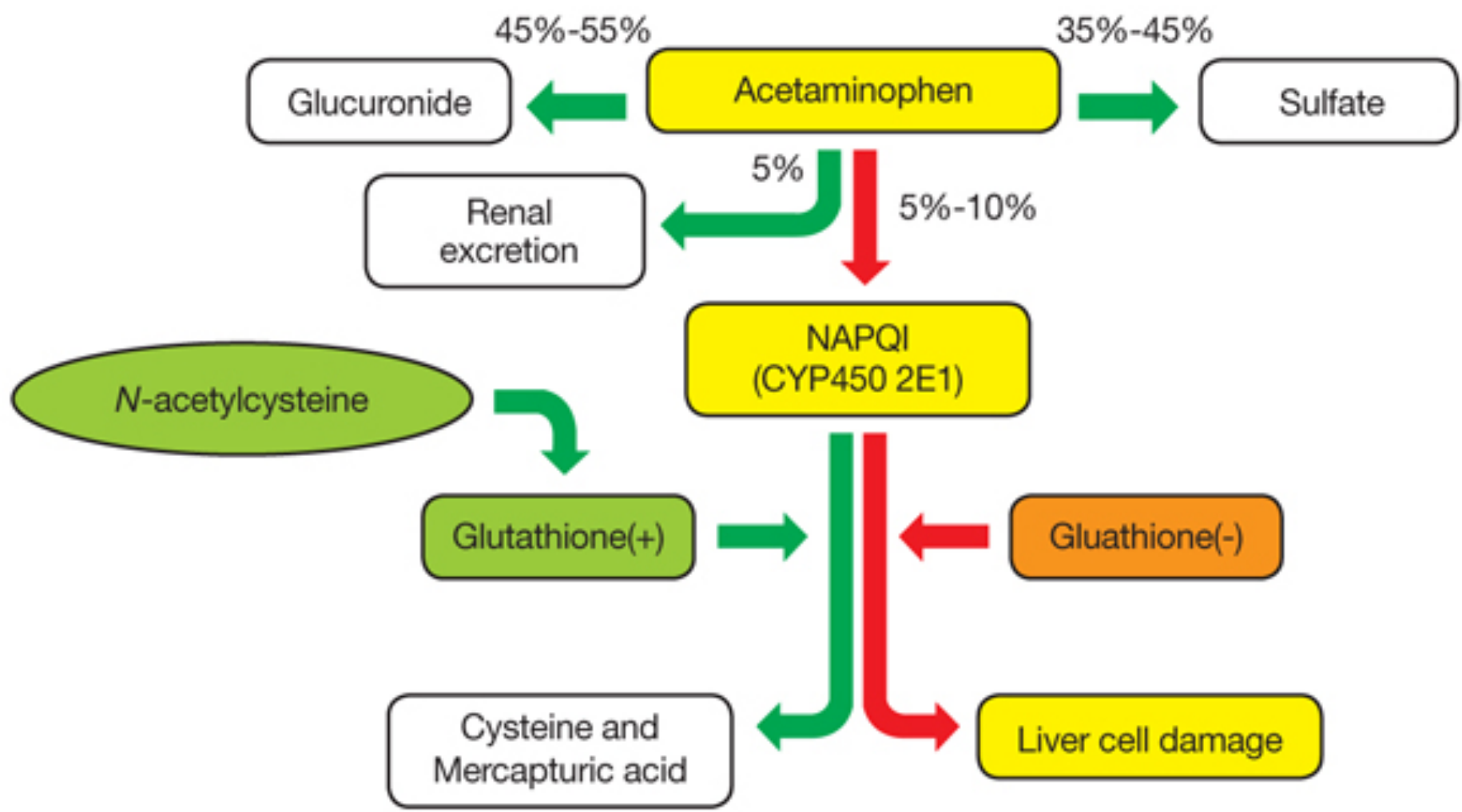
Anti-inflammatory,  
Antipyretic, and  
Analgesic Agents

Dr. Ali Al-Athari

# Inflammation:

- Inflammation is a normal, **protective response to tissue injury** caused by physical trauma, noxious chemicals, or microbiologic agents.
- Inflammation is the body's effort **to inactivate or destroy invading organisms, remove irritants, and set the stage for tissue repair.**
- When **healing is complete**, the **inflammatory process usually subsides.**
- However, **inappropriate activation of the immune system can result in inflammation, leading to immune-mediated diseases such as rheumatoid arthritis (RA)**





## Therapeutic disadvantages of selected NSAIDs\*

Upper GI disturbances are common

No antipyretic effect

Very potent; should be used only after less toxic agents have proven ineffective

CNS disturbances are common

Potential for increasing myocardial infarctions and strokes

### Salicylates:

*Aspirin*  
Salicylate salts  
*Diflunisal*

### Acetic acids:

*Indomethacin*  
*Sulindac*  
*Tolmetin*

### Propionic acids:

*Ibuprofen*  
*Fenoprofen*  
*Flurbiprofen*  
*Ketoprofen*  
*Naproxen*  
*Oxaprozin*

### Oxicams:

*Piroxicam*  
*Meloxicam*

### Fenamates:

*Mefenamic acid*  
*Meclofenamic acid*

### COX-2 inhibitors

*Celecoxib*

## Therapeutic advantages of selected NSAIDs

Low cost; long history of safety

Less GI irritation than *aspirin*

Long half-life permits daily or twice-daily dosing

Lower toxicity and better acceptance in some patients. *Naproxen* is considered by some experts as one of the safest NSAIDs

Less GI irritation than *aspirin*

Thank  
you!