Key Point (Solution) - As name Indicate NSAIDs are those agents which are used to get relief from pain, inflammation and fever. And as per the COX pathway we understand that COX-1 and COX-2 ultimately form prostaglandin which initiates perception of pain and inflammation. So anyhow if we block or inhibit the synthesis of PG we may reduce pain and inflammation. Although COX-1 is constitutive in nature thus it always get secreted without induction of injury and called as a house keeper so it’s better to inhibit COX-2 rather than COX-1.

* Tissue Injury (Applicable for COX-2)

Breakdown of Membrane Phospholipids

Arachidonic acid

**Mechanism of Action**

Cyclooxygenase Pathway

*Rough Idea - Lippincott

COX-2 gene transcription

Induced by Oxidative Stress, Injury, Ischemia, Seizures

Glucocorticoids

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Inhibit

mRNA

Non-Selective COX Inhibitor

Inhibit

mRNA

Selective COX2Inhibitor

Celecoxib, Etoricoxib, Parecoxib

Inhibit

Non-Selective COX Inhibitor

Inhibit

**PROSTAGLANDIN**

*Diagrams and explanations are made by solution-pharmacy

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