

# UNDERSTANDING PATHOPHYSIOLOGY

## Connecting Pathophysiology to Clinical Practice

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Applying pathophysiology to clinical practice is needed by the nurse to develop clinical judgment skills. Use this worksheet to practice connecting essential knowledge of pathophysiology of a primary diagnosed medical problem of a patient to nursing clinical practice to include patient education, nursing assessments, expected lab values, and pharmacology.

Primary medical problem: Eye Trauma

1. In your own words, define and describe the pathophysiology of the primary medical problem of your patient. How would you teach your patient about the pathophysiology of this medical problem using non-medical terminology?

Pathophysiology of Primary Medical Problem	What would you teach the patient/family?
<ul style="list-style-type: none"><li>• Blunt – More common, when they eye is struck with a solid object suddenly (ex: finger, ball, fist, etc)</li><li>• Penetrating – When they eye is pierced a sharp object (ex: a knife or high velocity object like a bee pellet)</li><li>• 5 different kinds of eye trauma (TABLE 46.16)</li><li>• TABLE 46.15</li></ul>	<ul style="list-style-type: none"><li>○ Trauma may not appear suddenly</li><li>○ Teach about most common risk factors like the male gender, participating in sports, working in a manufacturing environment, age group 18-45, and drink alcohol</li><li>○ Teach about safety precautions</li><li>○ Eye care follow u with regular eye exams, post procedure, pot op, activity restrictions, and all medication instructions</li></ul>

2. What body system or systems are directly impacted by this medical problem, and how?

Body System(s)	How is each body system affected?
<ul style="list-style-type: none"><li>• Neuro</li><li>• Neuro - musculoskeletal</li></ul>	<ul style="list-style-type: none"><li>○ Affects vision by making it blurry, dark, double vision</li><li>○ Affects the mobility of the eye itself and can affect the mobility of the patient overall if they cannot see correctly</li></ul>

3. What are the priority nursing assessments with this medical problem? Refer to the body systems listed above that are most affected. What assessment findings may be abnormal as a result of this problem?

Priority Assessments	What are the expected abnormal findings?
<ul style="list-style-type: none"> <li>• Eyesight</li> <li>• Cranial nerves</li> <li>• Issues with overall eye</li> <li>• Ocular pressure</li> </ul>	<ul style="list-style-type: none"> <li>○ Blurry vision, no vision, double vision</li> <li>○ Affect movement of eye</li> <li>○ Eye can be swollen shut, orbital socket fractured, eye can be penetrated</li> <li>○ An increase in pressure can cause an increase in vital signs, such as bp, respirations</li> </ul>

4. What lab tests are altered by this medical problem? How are those lab tests affected? Does the altered lab test affect any physical assessment findings?

Abnormal Labs	How Affected (high or low)	How are assessment findings affected?
<ul style="list-style-type: none"> <li>• Eye Exam</li> <li>• X-rays</li> <li>• Picture of eye</li> </ul>	<ul style="list-style-type: none"> <li>○ Scoring low means difficulties with vision</li> <li>○ Fractures or breaks in sockets</li> <li>○ Abnormalities in eye itself</li> </ul>	<ul style="list-style-type: none"> <li>○ Eye exam can indicate vision troubles</li> <li>○ X-rays can indicate fractures</li> <li>○ Abnormalities can indicate different issues</li> </ul>

5. What medications are most commonly prescribed to manage this medical problem?

Medications (generic)	What is the mechanism of action (in your own words)?
<ul style="list-style-type: none"> <li>• Tetracaine and proparacaine</li> </ul>	<ul style="list-style-type: none"> <li>○ Blocks nerve endings from transferring pain to brain</li> </ul>