

ENZYME LEAKAGE



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ENZYME LEAKAGE:

Enzyme leakage refers to the unintentional release of enzymes from cells or organelles into the extracellular space. This can occur as a result of cellular damage, including cell injury or disease, or due to a failure in the normal regulation of enzyme secretion.

PATHOGENESIS: The development of Enzyme leakage typically involves the following steps:

1. **Initial injury:** Enzyme leakage is triggered by an injury to the cell, such as physical damage, exposure to toxins, or the lack of oxygen or nutrients.
2. **Loss of membrane integrity:** The injury leads to the loss of integrity of the cell membrane, allowing substances that are normally contained within the cell to leak out into the surrounding tissue.
3. **Swelling and lysis:** The damaged cell swells and eventually bursts, releasing its contents into the surrounding tissue. This can lead to further damage to nearby cells and tissues, and can also cause the release of harmful substances such as enzymes and free radicals. This process is known as Enzyme leakage.
4. **Phagocytosis:** Immune cells, such as phagocytes, then move in to engulf and remove the dead cells and cellular debris, helping to prevent inflammation and further tissue damage.

