**Cellular injury and repair**

**Reversible and irreversible cell and tissue injury**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Description | Cause | Mechanism | Health consequence |
| Ischemia (including hypoxia and anoxia) |  |  |  |  |
| Trauma (including membrane damage/ disturbance of membrane function) |  |  |  |  |
| Immunologic and inflammatory response (via histamine, antibodies, proteases) |  |  |  |  |
| Cellular atrophy and necrosis (including chronic diabetes and pressure sores) |  |  |  |  |

**Responses of tissues to injury**

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| --- | --- |
| Response | Description of mechanism |
| Blood clotting and scab formation |  |
| Swelling and bruising |  |
| Burst blood vessels |  |

**Cellular responses and adaptations**

|  |  |
| --- | --- |
| Cellular response/ adaptation | Definition and description |
| Cellular swelling |  |
| Hyperplasia |  |
| Hypertrophy |  |
| Atrophy |  |
| Metaplasia |  |