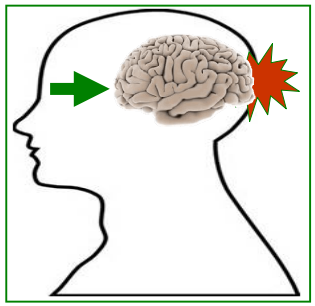
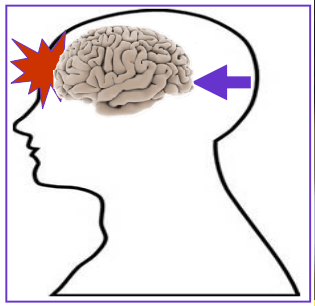
Rotational & Acceleration Concussion Hits

Linear Acceleration Hit: Hit to **front/back** of head/body

Impact to **front** of head/body, causes brain to cascade to rear of skull, hitting it. Brain then rebounds to front of skull, striking it.



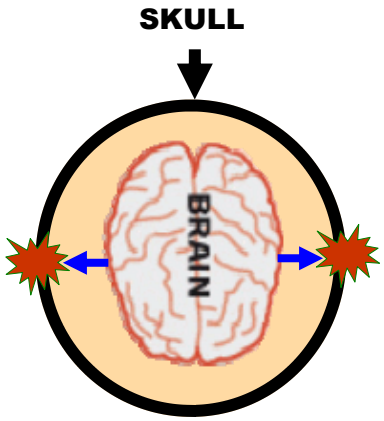


Impact to **rear** of head/body causes brain to cascade to front of skull, hitting it. Brain then rebounds to rear of skull, striking it.

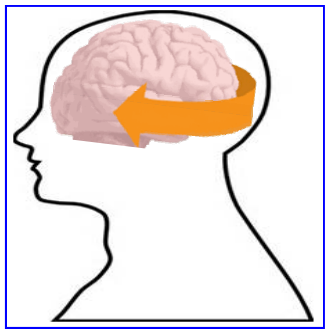
A linear acceleration hit can occur from a hit to the body, from front or back, causing the head to 'whiplash'.

Due to the shearing and tearing reactions of rotational (angular) acceleration hits, this form of hit typically results in more internal brain damage. This hit has also been documented to have caused the most loss of consciousness, when hard hits occur.

Rotational Acceleration Hit: Hit to **side** of head/body, (angular)



Impact to **side** of head/body causes brain to cascade to opposite side of skull, hitting it. Brain then rebounds to opposite side of skull, striking it.



Impact to **side** of head/body causes brain to twist inside of skull, resulting in shearing/tearing motions.

Rotational Acceleration can occur from a hit to the body, causing the head to react to the hit.

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