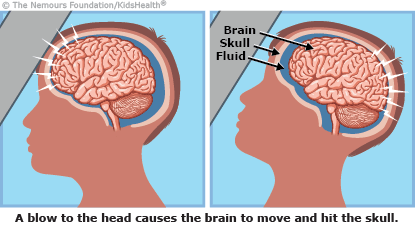
**INJURY**

**Fractures -** broken bone.

Sorted into two major classes: simple and compound fractures.



**Concussion -** a temporary injury to the brain caused by a bump, blow or jolt to the head. An impact to the head causes the brain to hit the inside of the cranium.



**Dislocation -** where the bones of a joint come apart from their normal position.

Caused by an awkward twist or fall which forces the bones of a joint to separate.

**Sprain – a joint injury**

A **sprain** is an injury that occurs when you twist or turn your joint in an awkward way. This can stretch or tear the ligaments that help hold the bones of the joint together.

A sprained ankle is the most common.

**Strain – a muscle injury (pulled muscle)**

A pulled muscle usually caused by overstretching a muscle or an inadequate warm-up

**Torn cartilage**

Cartilage is the soft, spongey substance that covers the end of the bones. It acts as a shock absorber and prevents the bones rubbing directly against each other.

Torn cartilage usually occurs during an awkward twist or movement. This can cause a piece of the cartilage to come lose or brake away.

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| **Injury prevention**   1. correct application of the principles of training to avoid overuse injuries; 2. correct use and enforcement of the rules of the game (e.g. with referee) 3. use of appropriate protective clothing and equipment; 4. checking of equipment and facilities before use 5. Effective warm-up – cool down does NOT prevent injury as done AFTER training |

**Performance Enhancing Drugs:**

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| **Anabolic steroids POWER** | Benefits   * Training drug (train harder for longer) * Increase muscle mass * Leading to muscle hypertrophy * Therefore increase in power | Negative Side-effects   * Testicular atrophy (fertility problems) * Acne * Aggression * “Male” features e.g. facial hair * Heart Attack * Infection e.g. HIV |
| **Peptide Hormones** (**EPO**)  **ENDURANCE** | Benefits   * Red blood cells, increase oxygen transportation, improved endurance | Negative Side-effects   * Increased thickness of blood * Therefore thrombosis/blood clots * stroke/heart attack |
| **Peptide Hormones**  **(GH)** –  **GROWTH & REPAIR OF MUSCLE** | Benefits   * Improved growth/repair of muscle * Used to shred/burn fat (unlikely to be asked this) | Negative Side-effects   * Abnormal growth of hands/feet |
| **Blood doping** – **ENDURANCE** (MIMICS THE EFFECTS OF EPO) | Benefits   * Mimics the effects of EPO but avoids drug testers * Increases number of red blood cells to aid oxygen delivery | Negative Side-effects   * Blood clots/thrombosis * stroke/heart attack * Blood therefore risk of infection e.g. HIV |
| **Beta Blockers** - **Calm/reduce anxiety** | Benefits   * Slows heart rate * Blocks adrenaline * Increases concentration * Target sports e.g. archery | Negative Side-effects   * Not beneficial in most sports (only those requiring concentration) |
| **Diuretics**  **Weight loss, mask traces of other drugs** | Benefits   * Increases urination to dehydrate body * Leading to temporary weight loss to “make weight” | Negative Side-effects   * Dehydration - therefore nausea/sickness, kidney damage, reduced thermoregulation |
| **Narcotic Analgesics** **Mask pain** | Benefits   * Mask pain of an injury * Allows athletes to “play hurt” | Negative Side-effects   * Addictive, loss of coordination * Risk permanent injury * Moral/ethical arguments appropriate here (e.g. is it morally right to ask a player to risk health?) |
| **Stimulants** -  **alertness** | Benefits   * increase alertness, reduce fatigue | Negative Side-effects   * Insomnia * Heart palpitations |
| **Moral & Ethical Arguments**   * Risks to athletes health * Risk shame in the media * Against the “spirit of the game” * Because athletes want to compete on a “level playing field” * But cheating gives an “unfair advantage” * Pressure on others to take drugs to keep up | | |