Medical science & Aerospace

Linking words – reference chains

Caroline Rickards (2004) conducted a multidisciplinary research project to investigate certain medical impacts of gravitational force on jet fighter pilots. She needs to explain gravitational acceleration principles before identifying the medical impacts of this acceleration.

Rickards links ideas through **repetition** and by using connectors and subordinators that emphasise the relationship between ideas in each sentence or clause.

### Activity

1. Highlight the **human** and **object** words and note their relationship to **gravitational physics**. Draw lines between the human/object words and between the gravitational force words. Notice how the ideas ‘dance’ together throughout the two paragraphs.

2. Circle at least **seven** linking words.

### Text

1.2 The physics of G acceleration

By virtue of living on earth, humans are constantly exposed to varying gravitational environments in performing simple acts such as standing, travelling in a motorcar, jostling through a crowded shopping centre or riding in an elevator. However some humans are routinely exposed to the extremes of this gravity spectrum, such as flying in high performance fighter jets and travelling into space. Regardless of the gravitational stimulus, a number of important physical principles dictate the way that all objects act, react and interact on Earth.

In 1686 Sir Isaac Newton proposed his three Laws of Motion, which define the relationships between the motion and force of all objects on earth (83). These provide a theoretical basis for understanding the physiological consequences of orthostasis and G acceleration. Newton’s First Law of Motion states that every object at rest or in uniform motion will remain in that state unless acted upon by an external force (83). So, if an object is moving in a straight line, it will continue to do so unless an external force acts on the object to change either its speed or direction, or both, hence eliciting a change in velocity, or acceleration.

### Answer key

1.2 The physics of G acceleration

By virtue of living on earth, **humans** are constantly exposed to varying **gravitational environments** in performing simple **acts** such as standing, travelling in a motorcar, jostling through a crowded shopping centre or riding in an elevator. However **some humans** are routinely exposed to the **extremes of this gravity spectrum**, such as flying in high performance fighter jets and travelling into space. Regardless of the **gravitational stimulus**, a number of important **physical principles** dictate the way that all **objects** act, react and interact on Earth.

In 1686 Sir Isaac Newton proposed his three Laws of Motion, which define the relationships between the **motion and force** of all **objects** on earth (83). These provide a theoretical basis for understanding the **physiological consequences** of **orthostasis** and **G acceleration**. Newton’s First Law of Motion states that every **object** at rest or in uniform motion will remain in that state unless acted upon by an **external force** (83). So[[1]](#footnote-1), if an **object** is moving in a straight line, it will continue to do so unless an **external force** acts on **the object** to change either its speed or direction, or both, hence eliciting a change in velocity, or acceleration.

**NOTE:**

I’ve been very loose with my definition of linking words here:

I’ve included such prepositions as **between…and…** and  **either… or…**because they signal relationship between key ideas in a sentence. I’ve also included **if…** because it too indicates a condition for a key statement that follows.

1. Editorial note: In formal grammar, it is not acceptable to begin a sentence with ‘so’. It can only be used as a subordinator connecting two clauses together. [↑](#footnote-ref-1)