

# Energy Systems

## Carbohydrates

- Stored in the muscle and cells
- Should make up 50-60% of your daily diet
- Stored as glycogen before being broken down into glucose

## Fats

- Stored as adipose tissue (below the skin)
- Should make up 30-35% of your daily diet.
- Used for insulation and energy

## Protein

- Used for growth and repair
- Broken down into amino acids
- Leftover proteins stored as fat
- Should make up 10-15% of your daily diet

## Phosphocreatine System

- High intensity and short duration exercise
- Can last up to 15 seconds
- Anaerobic (system does not need oxygen)
- For example – used when changing direction in Netball

## Lactic Acid System

- Lasts for 30-40 seconds
- High intensity, slightly longer duration exercise
- Anaerobic (system does not need oxygen)
- Energy is supplied by glycogen

## Aerobic System

- Low to moderate intensity exercise
- Lasts 90 seconds or more
- Aerobic (system needs oxygen)
- Energy is supplied by glycogen and fat (and protein in extreme circumstances)

Preview from [Notesale.co.uk](http://Notesale.co.uk)  
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## Correct Food to Eat When Using the Different Systems

Phosphocreatine System – When using this system (playing netball or football), it is important to eat carbohydrates prior to playing as these can be broken down in the body and used as the primary energy source. Fats and proteins will not be used for energy but stored as fat in the body causing the athlete to possibly gain weight.

Lactic Acid System – Again, carbohydrates are what should be eaten when playing a sport or exercising using this system.

Aerobic System – Carbohydrates, fats and proteins should all be eaten prior to using the aerobic system. For example, leading up to running a marathon, the athlete must consume all three of these food groups as once they have used all the carbohydrates for their energy, their body then relies on fat and protein for energy.