

# Edexcel Biology IGCSE

## 2.50: Breathing in Humans Practical Notes

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## Breathing in Humans

### Aim

Investigate breathing in humans, including A. the release of carbon dioxide and B. the effect of exercise.

### Equipment for A

- Limewater
- Straw
- Boiling tube

### Method for A

1. Pour some lime water into a boiling tube.
2. Using a straw, breathe air into the lime water.
3. Note the change in the limewater. Lime water turning cloudy indicates the presence of carbon dioxide.

### Equipment for A

- Stopwatch

### Method for B

1. Measure and record the breathing rate (number of breaths per minute) of the participant at rest.
2. Carry out a specific exercise (eg. running/jumping) for a fixed period of time eg.1 minute.
3. Measure the breathing rate of the participant again.

### Potential Hazards

- Wear eye protection when using limewater.
- Be careful not to ingest the limewater.
- Ensure that the participant is healthy enough to partake in exercise for 'Method B'.

