

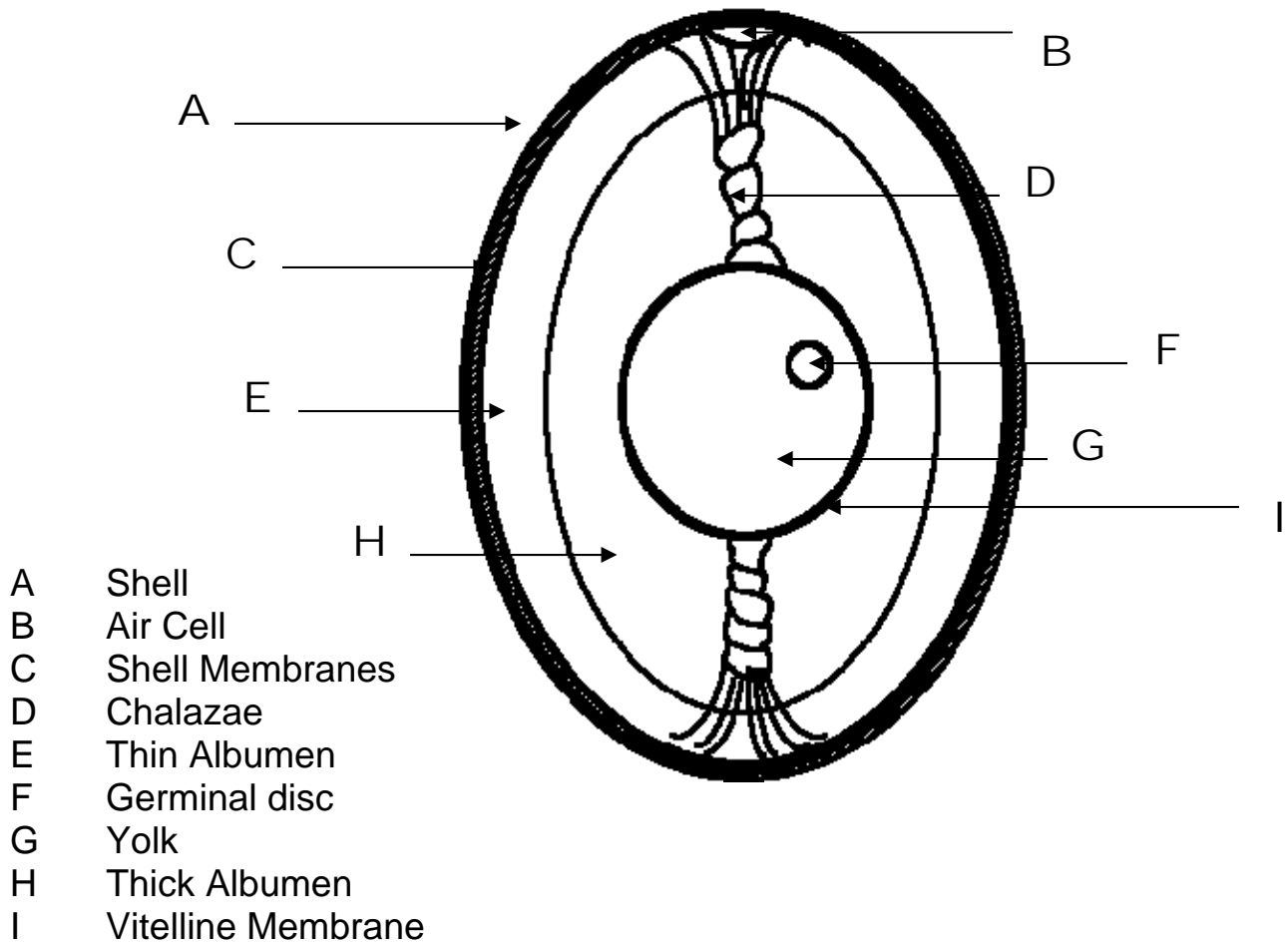
The egg is one of the richest sources of food known to man. This is because an egg contains proteins, vitamins and minerals which are all important for our body.

An average size egg (60g) contains approximately 3.5 grams of protein in the egg white and 2.8 grams in the egg yolk. Protein is used by our bodies to grow, develop muscles and repair cells. It helps to protect our bodies from bacteria and viruses.

Eggs contain all the vitamins our bodies require, except for vitamin C. Vitamin C is found in vegetables and fruit juices. The egg white contains some B group vitamins. The egg yolk contains three times more vitamin B in addition to vitamins A, D and E.

Different vitamins help the body in a variety of ways. Vitamin A is important for our vision. Vitamin B helps to release energy from food as it is being digested. A typical egg contains about .17mg of vitamin B2 (Riboflavin). This is essential for a healthy immune system, nervous system and the brain.

An egg contains a variety of minerals. One of the most important being iron. An average egg contains about .6 mg of iron. Iron is essential for producing energy and for storing and transporting oxygen in the blood and muscles. Other minerals found in eggs include boron; essential for healthy bones and joints, and iodine; essential for normal metabolism, growth and development.

**The parts of an egg.**

The shell is a hard protective covering. It is made mostly of calcium carbonate. It has about 7000 pores. These allow carbon dioxide and moisture to leave the egg.

The shell is usually brown, cream or white. Hens with white ear lobes lay eggs with white shells, while the cream and brown shelled eggs are laid by hens with red lobes. There is no difference between the quality and nutritional value of a white or brown shelled egg. Nutritional differences do exist however. These come about due to the type and quality of feed given to the chickens; therefore it is likely that free range eggs contain slightly higher amounts of some vitamins and minerals due to the fact that they have larger amounts of green feed in their diet.

The air cell forms shortly after the egg is laid. This occurs because the egg is very warm when it is laid. The environment is usually much cooler, therefore the egg cools. As it cools, the contents of the egg contract more than the egg shell. This creates a vacuum and the air is drawn in through the large end of the egg since this end has considerably more pores than the smaller end.

The shell membranes (inner and outer) protect the egg from bacteria. They also slow down the rate of evaporation of liquid from the egg.

The chalazae are made of twisted forms of mucin fibres. These are a special form of protein. They help to hold the yolk in the centre of the egg.

There are two layers of albumen (egg white). The inner most layer is thicker than the outer layer. The albumen protects a chick while it is growing. It also provides it with protein as it develops.

The germinal disc is where the developing chick grows. This must be fertilised by a rooster for this to develop.

The yolk (yellow) is the most nutritious part of an egg. It is used by a developing chick to obtain vitamins and minerals. Calcium is absorbed from the yolk (and the shell) to aid in the development of a chick's skeleton.



1. Why is an egg one of the richest sources of food known to man?

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2. How is protein used by our body? \_\_\_\_\_

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3. What helps to protect our bodies from viruses? \_\_\_\_\_

4. Which part of the egg contains the most B group vitamins?

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5. What vitamin is not found in eggs? \_\_\_\_\_

6. List three vitamins found in eggs and state how they help us.

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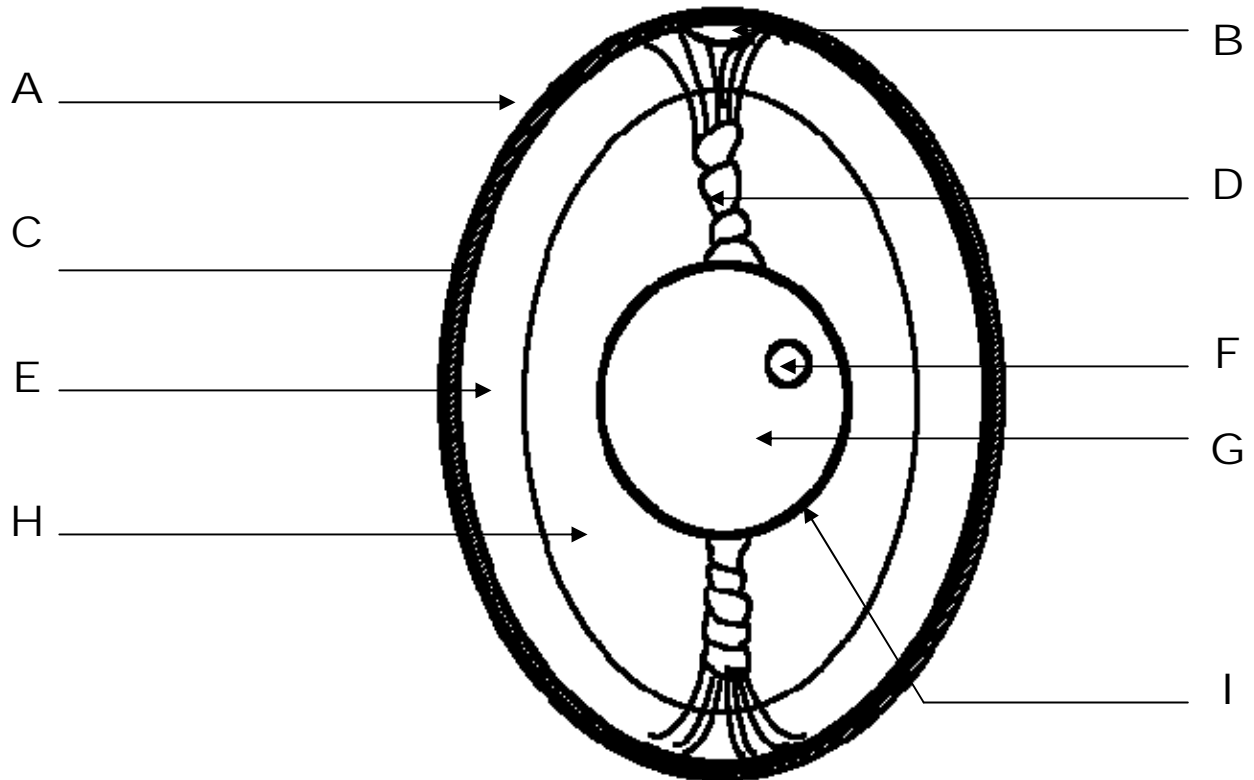
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7. Name one mineral found in egg and state why that mineral is important to the consumer.

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**Label the different parts of an egg.**



Shell	Air cell	Chalazae	Thick and thin albumen
Yolk	Germinal disk	Shell membranes	Vitelline membrane

1. What is the purpose of pores in an egg? \_\_\_\_\_

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2. What can affect the amount of nutritional value found in eggs?

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3. What forms shortly after the egg is laid? Why?

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4. What keeps the yolk in the centre of the egg? \_\_\_\_\_

5. Where does a chick begin to grow? \_\_\_\_\_

6. What must take place first? \_\_\_\_\_