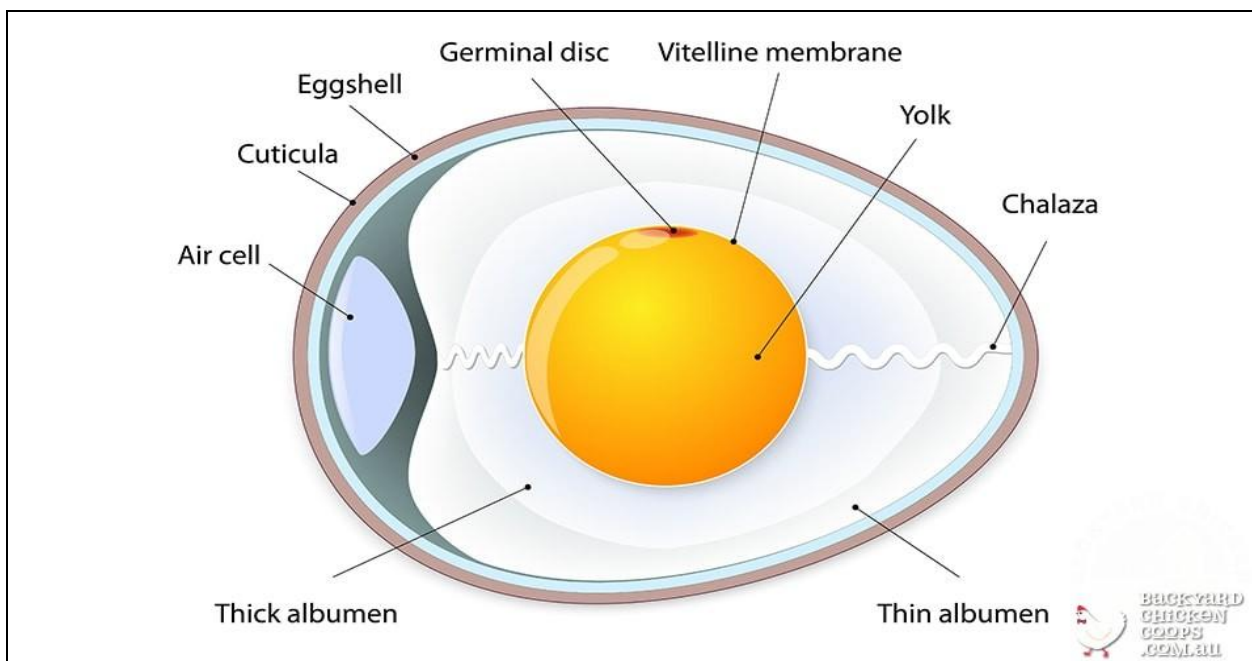


EGGS: THE FOUNDATION OF A KITCHEN

Eggs are indispensable to the modern professional kitchen, and much more than a great way to “start one’s day”. Eggs can be prepared deliciously on their own in a variety of classical ways (pan fried, scrambled, poached, hard boiled, etc.) and play an important supporting role in numerous forms, from the lecithin found in the yolks which aids in emulsification, or the meringue principle of the white; the coagulation (thickening) or leavening (aeration) principles are a trick card in the back pocket of all professional chefs.

If someone applies to work in my kitchen and I feel the need to test their culinary aptitudes (versus what is listed on their resume) I will ask them to perform one task in terms of a “working interview”; and that is “cook me an egg”. From this simple task I can survey a lot about an individual; how they “take in” a kitchen – ie nervousness or confidence, set up their station, ease of use with ingredients and equipment, concern of my preference as a taster or evaluator, technical ability and aptitude, time management, etc. Do they have a game plan, do they over think it? It is just cooking an egg after all... right?

Let’s break down what an egg is:



SHELL: protects the shell from exposure to elements/oxygen. Made of calcium carbonate, this forms a permeable porous surface which interacts through a bloom and cuticle; which is washed away in most commercial manufacturing processes (which is why we refrigerate eggs).

- come in different sizes (and grades accordingly – from pee-wee to extra-large)
- and colours (note there is no health difference between white/brown eggs)

AIR CELL: provides oxygen to potentially fertilized chicken; when unfertilized this will increase in size as the porous egg loses some of its essence which is replaced in the form of air. If your egg's air cell is large enough that your egg will float in water it's time to get new eggs.

ALBUMEN / EGG WHITES – make up approx. 60% of the mass of the egg.

- The more opaque an egg's albumen, the younger it is. This is because carbon dioxide creates a murkier or filmier appearance to egg whites, inside or once cracked. As an egg matures, carbon dioxide gets released, giving egg whites their clear sheen and making older eggs translucent.
- An egg white consists of approximately 90% water 10% protein
- There are three sub-varieties of Albumen – which work like shock absorbing scaffolding.
 1. **Chalaziferous White.** It rests around an egg's yolk, helping stabilize the yolk's movements so it remains in the center of the egg. It is also rather concentrated and capsule-like, engineered to hold the richer and denser yolk and the connected chalazae.
 2. **Thick Albumen.** This layer of the albumen comes after the chalaziferous white as the next yolk-protecting capsule. It is much larger and more pronounced, pooling more liquid and containing a healthy amount of those 40-plus egg white proteins.
 3. **Outer Thin Albumen.** The final and furthest layer from the central yolk, the thin outer white holds further protein-based nutrients and compounds that would aid in overall embryo growth if the egg was fertilized.
- All layers of egg whites are susceptible to thinning as the egg ages. This is why fresh fried eggs tend to hold their shape better when first cracked in a pan while older eggs spread out.

CHALAZAE

- Chalazae are entirely edible and harmless. Though they initially might offset the aesthetic, clean look you were going for with your just-cracked egg, they actually signal you have a fresh, undamaged, and structurally intact egg on hand.
 - Chalazae work alongside albumen layers to keep the egg yolk intact.

VITELLINE MEMBRANE

- It's the final layer directly casing an egg yolk, with a pearly and polished sheen.
 - Like other membranes, the vitelline layer stands to protect the yolk from cracking and seeping fluid everywhere, whether inside the shell or out.
 - The older an egg is, the weaker its vitelline membrane will be.

EGG YOLK

- The rich, runny, colourful, tasty, nutritional heart of the egg
 - The role of the egg yolk is simple — to provide nutrients for a developing embryo.
 - Like seeds, they are self-sufficient suppliers of a tremendous amount of vitamins, minerals, and healthy fats — everything needed for the optimal development of new life or the sustenance of those who cook and consume them.
 - **Vitamins A, D, E:** Necessary for cell, muscle, bone, organ, and immune system health
 - **Vitamins B6 and B12:** Aid brain function, hormone regulation, nerve & blood-cell health.
 - **Iron:** Allows the blood to carry and circulate healthy oxygen levels.
 - **Calcium:** Critical for bone and muscle health.
 - **Phosphorus:** metabolize energy, fortify bones and muscles.

- **Lutein and Zeaxanthin:** Promote eye health; contain free-radical fighting antioxidants.
- **Choline:** Enhances brain, liver, and nerve functions as well as maintains healthy metabolic and energy levels.
- **Protein:** One large egg yolk contains six to seven grams of protein, a little less than half the total protein of an egg.
 - **As this protein network coagulates it can thicken sauces/soups (ie a liaison)**

EGG YOLK and LECITHIN

- In combination with the flavour, fat, colour and nutrients provided from the egg yolk we also see the addition of lecithin; which works as a phospholipid and or a natural emulsifier.
 - We use it to aid in the emulsification of mayonnaise, hollandaise, etc.