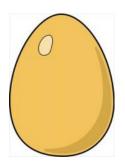
# Eggs!

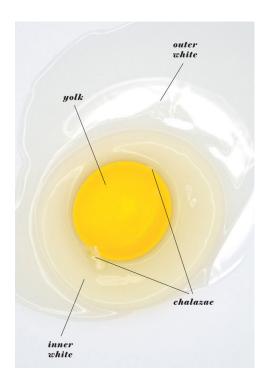
I. Egg Biology/Chemistry



II. The Yolk



## III. The White



### COMPOSITION OF AN EGG

## Shell - Outer covering of egg, composed largely of calcium carbonate May be white or brown depending on breed of chicken. Color does not effect egg quality, cooking characteristics, nutritive value or shell thickness Yolk - Yellow portion of egg. Color varies with feed of the hen, but doesn't indicate nutritive content Major source of egg vitamins, minerals, and fat Germinal Disc -Vitelline (Yolk) Membrane Holds yolk contents Chalazae- Twisted, cordlike strands of egg white Anchor yolk in center of egg.

Prominent chalazae

indicated freshness

Air Cell

- Pocket of air formed at the large end of egg
   Caused by contraction
- Caused by contraction of the contents during cooling after laying
- Increases in size as egg ages

#### Shell Membranes

- Two membranes-inner and outer shell membranes surround the albumen
- Provide protective barrier against bacterial penetration
- Air cell forms between these two membranes

#### Thin Albumen (White)

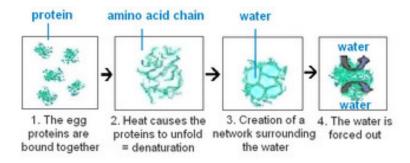
- Nearest to the shell.
- Spreads around thick white of high-quality egg

#### Thick Albumen (White)

- Major source of egg riboflavin and protein.
- Stands higher and spreads less in highergrade eggs
- Thins and becomes indistinguishable from thin white in lowergrade eggs

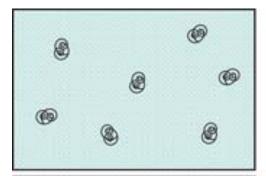
### IV.

Egg Chemistry
a. Protein coagulation



b. Added ingredients

c. Egg flavor

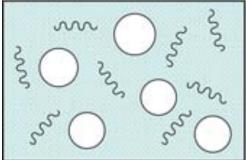


V.

Foams

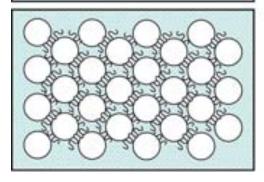
#### RAW EGG WHITE:

90% water and almost 10% protein



#### WHEN WHIPPED A LITTLE:

large air bubbles are mixed into the egg white and the proteins are denatured



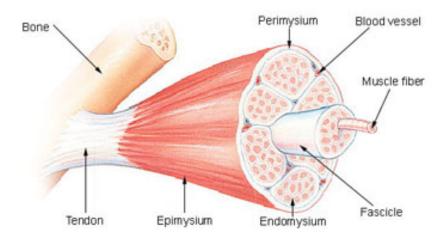
#### WHEN FOAM IS COMPLETE:

denatured proteins are oriented around smaller air bubbles

A Dash of Science.com

## Meat!!

## I. Muscle



## Structure and Qualities of Meat a. Muscle tissue and fibers II.

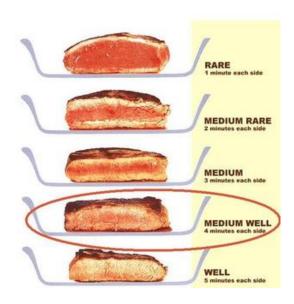
Slow Twitch	Fast Twitch
Thin motor nerve fibers	Thick motor nerve fibers
Multiply innervated (en grappe)	Singly innervated (en plaque)
Large, poorly delineated muscle fibrils (Felderstruktur)	Small, well-delineated muscle fibrils (Fibrillenstruktur)
No conduction of action potential	Conduction of action potential
Slow, sustained contraction (tonic)	Fast contraction (phasic)
Predominantly in orbital layer	Predominantly in central (bulbar) layer

b. Connective tissue

- Cooking meat with heat a. Heat and flavor III.

b. Heat and color

## c. Heat and texture



- Cooking meat methods a. Modifications IV.

b. Types of cooking