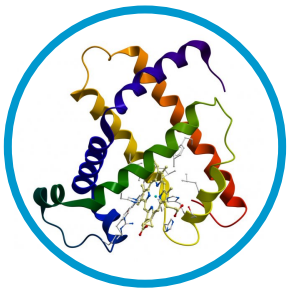
Chemistry of Hamburger Grilling

Myoglobin = protein + heme (iron),
Myoglobin makes the meat red.

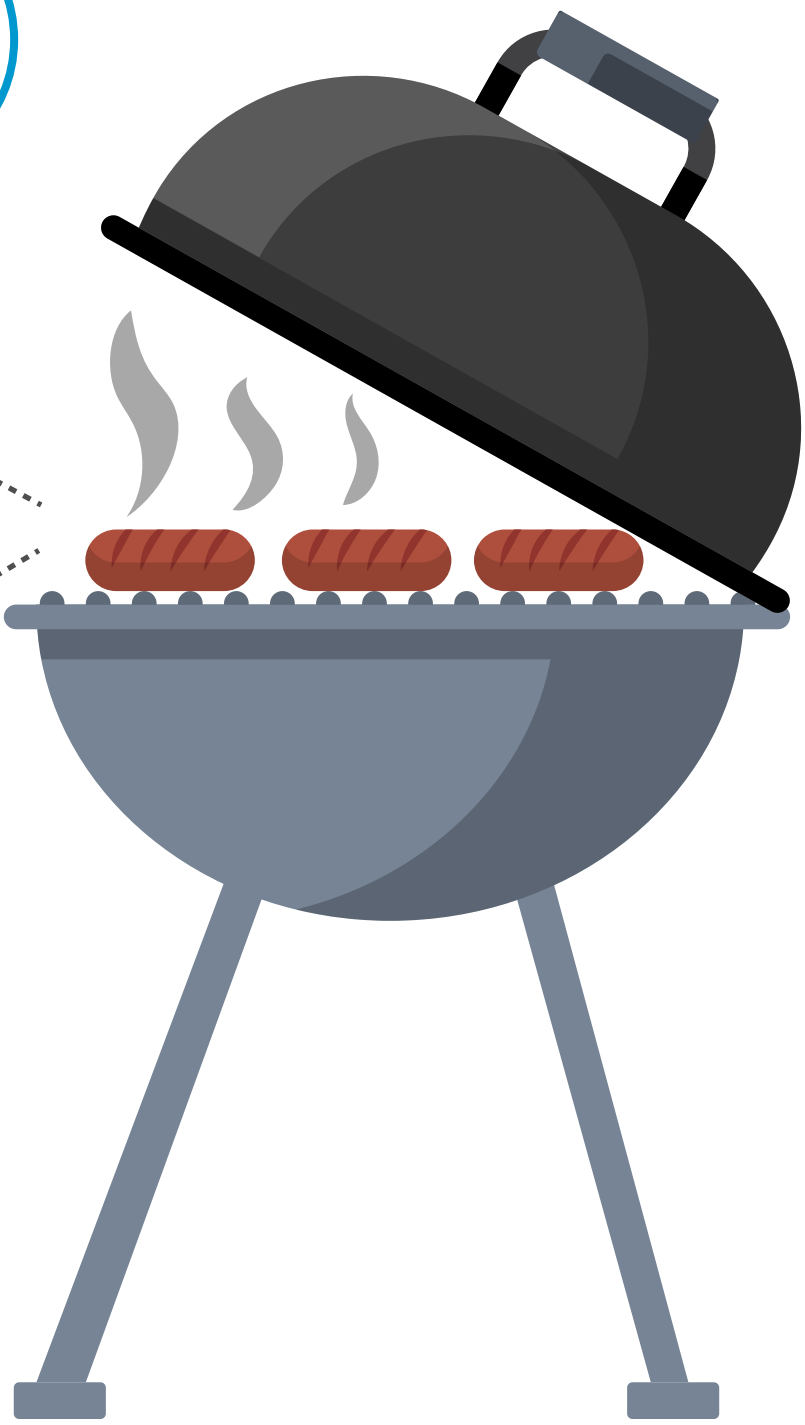


Grilling sizzle is the water molecules burning off.

Myoglobin proteins denature (change shape) during grilling.

Maillard reactions create color and flavor of foods; especially meats. Heating amino acids and carbohydrates (sugars) turns meats a rich brown color and imparts rich flavors.

Browning occurs on grills or pans at about 250 °F.



Temperature for Burgers

- Rare 120 °F to 125 °F
- Medium 130 °F to 150 °F
- Well Done 160 °F or more

Food safety states that bacteria is destroyed at temperatures above 140 °F

Cooking Tips:

1. Cooking ground meat releases water. Add ice cold water to burger meat before cooking to keep moist.
2. Avoid flipping or pressing meat on the grill after the first 30 to 60 seconds to retain moisture and juicy texture.
3. Form burgers with a divot or dimple in the center - cooking causes edges to retract and the divot allows for a flat patty.