Mythbusting

In his book "Meathead: The Science of Great Barbecue and Grilling" the Chicago author enlisted several scientists and physicists (Greg Blonder, Ph.D., of Boston University is also credited) to test (and retest) dozens of methods, techniques and common conventions. Showing his work with a blend of charts, graphs and photography, Meathead gives all the grilling basics.

"People are no longer interested in simply the how, but the why," said Meathead. "I want to explain the concepts and theories of good grilling, of how things work."

We now have the tools to test these theories and rules." Here, and in his textbook, he busts common myths.

- Myth 1: You can test a meat's doneness by poking it......WRONG

 Does everyone's hand have the same firmness?
 p. 98
- Myth 2: Let the meat come to room temperature......WRONG
 It will warm much faster than on the counter and cool meat attracts
 more smoke.
 p. 29
- Myth 3: Soak your wood chips for the most smoke......WRONG
 Water on the wet wood is steam.
 p. 22
- Myth 4: Flip your meat as little as possible......WRONG
 You get better flavor, more even color, doneness in the interior,
 better even colored crust, shorter cooking time when you flip more
 often.
 p. 60
- Myth 5: Marinating penetrates deep into meat......WRONG.
 Meat is 70 % water and oil and water don't mix.
 p. 41

Myth 6: Grill marks are good
Myth 7: Beer can chicken is the best way to cook a birdWRONG Can blocks sideways movement of beer; never gets hot enough to steam out of the top. p. 296
Myth 8: Searing meat seals in the juicesWRONG The crust that forms around the meat is not waterproof, but searing produces browning and flavor. p. 32
Myth 9: The more smoke you see, the betterWRONG The barely visible wisp of blue smoke is the key to low and slow. p.15 & pp.19-20
Myth 10: Cook chicken until the juices run clearWRONG When it's 165 degrees F, it's safe. Learn about myoglobin. p.54
Myth 11: Meat needs to rest after cookingWRONG Water is not trapped in fibers or spaces between them. Also, resting makes crust or skin soft, fat waxy, causes overcooking. p. 7
Myth 12: The fat cap will melt, making the meat juicierWRONG The muscle groups together forms an anatomical barrier between muscle and fat. The fat drips into the fire, flares, deposits soot on meat. p. 45
For more information about these myths: See the pages listed: Meathead Goldwyn, <i>The Science of Great Barbecue and Grilling</i> , New York: Houghton Mifflin Harcourt, 2016.