

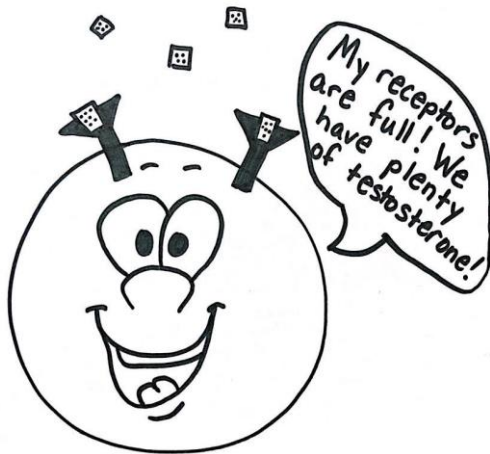
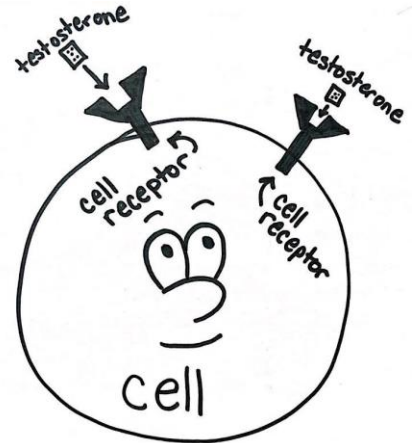
# CLUE #5

## Carlos's Testosterone Levels

You find that Carlos's testosterone levels are *lower* than normal.

Fortunately for Carlos, his use of anabolic steroids 10 years ago is no longer affecting his testosterone levels today. But something must be going on... why aren't his testosterone levels normal?

You take another look at Carlos's medical history. His occupation catches your eye- he is a dental hygienist. You remember reading in your biology class that the plastics used in dental sealants may contribute to BPA exposure. You know that BPA, found in a lot of plastics, is an "endocrine disruptor". This means that it interferes with normal hormone production in the body. You test Carlos's urine and find that there are, in fact, very high levels of BPA. How does this affect Carlos's testosterone production?



Normally, testosterone binds to cell receptors. When this happens, the cell is able to signal to the body that there is enough testosterone present, and the body doesn't need to make more right now.

When there is nothing bound to the cell receptors, the body knows that there is not enough hormone in the body. It tells the body to make more, stat!

