

COOP HOME  
GOODS  
PREMIUM  
ADJUSTABLE  
LOFT  
\$60

84

OVERALL  
SCORE



TEMPUR-  
PEDIC  
BREEZE DUAL  
COOLING  
\$170

72

OVERALL  
SCORE



SEALY  
MEMORY  
FOAM GEL  
\$65

71

OVERALL  
SCORE

## The Precise and Peculiar Science of How We Test Pillows

For the first time ever, Consumer Reports is testing pillows—by poking, pounding, and prodding them in a series of rigorous machine-based tests, plus a number of tests with human subjects. We employ several machines and three sensors—including an X-sensor pressure mat, humidity sensors, temperature sensors, a C-frame material testing machine, angle gauges, and an environmental chamber for maintaining temperature and humidity. Our human subjects give us subjective impressions the machines can't, to get at whether a pillow makes you say "ahhhh" when you rest your

head on it; that's just one of the tests for a pillow's use-and-preference rating. We devote around 200 hours of testing per pillow, resulting in hundreds of data points for each one.

Arguably the most important factor is proper support; that can make the difference between restorative sleep and a stiff neck. To gauge whether a pillow will keep your head and neck aligned with your spine—thereby eliminating strain—we use gauges and graph the angle at which our test subjects' heads are positioned on each pillow. Pillows that minimize the angle between the head and the torso score better. We also analyze the data to see how well a pillow supports people of all sizes—petite, average, and large or tall—whether they sleep on their side or their back. A pillow may offer different support depending on factors such as how wide your shoulders are and how much your spine curves at the back of your neck.

We also have our human subjects lie down on a medium-firm queen mattress with each pillow covered by an approximately 20x20-inch rectangular area of an X-sensor pressure mat. Then we analyze roughly 1,600 pressure points

within that area. The sensors on the mat transmit data to our computer screen. Where the pressure is lowest, we see a deep blue color; where pressure increases, the colors range from yellow to red and the numerical value of the pressure changes. We grade each pillow on the peak pressure point recorded.


In addition to our support tests, we assess how well a pillow holds up over time. We place a 225-pound evenly distributed load on each pillow placed in an environmental chamber with a temperature set to 98.6° F to mimic body heat, at 80 percent humidity, and we leave it for 96 hours. This allows us to simulate use over time. We measure the thickness and firmness of the pillow after we take it out of the chamber and again after hand-fluffing it. The closer a pillow goes back to its original height and firmness, the higher its resilience score and the more likely it is to maintain its support over time.

But a supportive pillow isn't any good if it traps heat and makes you sweaty. To test how well a pillow dissipates heat, we measure how insulating it is. We also use a humidity sensor to evaluate how breathable it is. —H.R.

### Staying in Shape

To see how well a pillow keeps its height, we use a stress strain machine in our resiliency tests. (Shown here: the Coop.)



Brand + Model	Overall Score	Test Results					Testing Highlights	
		Price	Side support	Back support	Resilience	Use and preference		Breathability
 Coop Home Goods Premium Adjustable Loft	84	\$60	↑	↑	↑	↑	↑	Our top-performing pillow is made of shredded memory foam and polyester fiberfill, and comes with a kit of additional fill that allows you to adjust its firmness to your liking—you can add more fill or remove some. Another bonus: You get a 100-night sleep trial; if you don't like it, you can return it for a full refund.
Tempur-Pedic Breeze Dual Cooling	72	\$170	↑	↓	↑	↑	↓	Made of a molded memory-foam slab, this pillow offers great support for side sleepers and maintains its shape very well. But if you sleep warm, you may want to check out other options here; in our tests, this pillow has a cooling gel top that feels cool initially but slowly retains heat more than it dissipates it. So it could make your head sweaty.
Sealy Memory Foam Gel	71	\$65	↑	↓	↑	↑	↓	This Sealy's gel layer is cool to the touch at first, but like the Tempur-Pedic above, it grows warmer as you lie on it—trapping heat and moisture under your head. It holds its shape, though, because it's made of a single slab of polyurethane foam.
MyPillow Premium	68	\$80	↑	↓	↓	↓	↑	The shredded polyurethane foam in this pillow may help to keep sleepers cooler. But the pieces of foam can also move around and shift out of place, which is what happened in our tests. Some of our testers found sleeping on it to be annoying because the foam tended to bunch up around the head and neck.
Beckham Luxury Linens Hotel Collection	67	\$35	↑	↑	↓	↓	↑	This polyester fiberfill pillow is a bargain buy for side and back sleepers because it earns our top ratings for supporting both. However, we found that it doesn't hold its shape over time as well as other pillows here.
Casper The Pillow	63	\$65	↑	↓	↓	↑	↑	This polyester pillow didn't earn our top ratings for back or side sleepers. We found it to be average. It excels only in our breathability test—it doesn't trap heat, so you'll sleep cooler. Casper offers a 100-night sleep trial for its pillows, so you can always return it if you want to give it a try.
Mainstays Huge (Walmart)	59	\$4	↑	↑	↓	↓	↑	Made with polyester fiber, this fill pillow costs less than most deli sandwiches, so it might be surprising that it gets anyone through even one night. It earned an Excellent score for back support, but in our resilience test that simulates long-term use, this pillow did not return to its original shape or thickness. Still, for four bucks, this might be just the thing to have on hand in bulk for occasional houseguests.
MyPillow Classic	58	\$40	↑	↑	↓	↓	↑	The Classic is made with the same shredded polyurethane foam fill as the MyPillow Premium—but it has slightly less fill. Like the Premium, our testers found that the foam pieces inside tended to bunch up, making it hard for it to maintain its shape.
Made by Design Down Alternative Pillow (Target)	57	\$10	↑	↓	↓	↑	↑	This pillow is stuffed with a polyester fiberfill and has a cotton-blend exterior. It offers great support for side sleepers, but it's unlikely to be able to offer that support over the long term, because it earns a Poor rating for resilience.
Member's Mark Hotel Premier Collection (Sam's Club)	54	\$17	↑	↓	↓	↑	↑	Our lowest-scoring pillow is made of polyester fiberfill with a 100 percent cotton cover. It performs similarly to the Made by Design above but costs \$7 more.

**HOW WE TEST:** We calculate the **Overall Score** by evaluating pillows for how well they support back and side sleepers, whether they maintain their shape over time, how comfortable they are, and whether they allow moisture to dissipate. **Side support** is the ability of a pillow to keep the head and neck at a neutral angle relative to the tester's

spine. **Back support** is the same: We're looking for its ability to support head and neck at a neutral angle relative to the tester's spine. In our support tests, for a petite sleeper, we use a woman 4 feet, 11½ inches to 5 feet, 1½ inches tall and 110 to 127.5 pounds, and for a large/tall sleeper, we use a man 6 feet, 2 inches to 6 feet, 4 inches

tall and 220 to 242 pounds. **Resilience** is scored by how well a pillow bounces back after being exposed to extreme weight and simulated body heat for an extended period of time. **Use and preference** is calculated from a subjective questionnaire issued to testers in combination with a pressure mat mapping 1,600 pressure points

to measure the contact area between the head and the pillow and look for how the head sinks into the pillow. To evaluate **Breathability**, we take humidity readings and assess whether the pillow traps heat or moisture. **Price** is approximate retail for a queen-size pillow.