Why a key turns but won’t unlock the door and what to do about it

When you insert your key into a lock and it turns freely but the door stays shut, the mechanism has failed to engage. This usually means the cylinder is spinning without retracting the latch or deadbolt. The problem is rarely the key itself. It is almost always a worn or misaligned part inside the lock or in the door assembly.

Before calling a technician, it helps to understand what is actually happening inside the lock. A typical pin-tumbler cylinder works by aligning a set of spring-loaded pins along a shear line. When the correct key is inserted, the pins lift to just the right height, allowing the cylinder plug to rotate. That rotation moves a cam or tailpiece, which retracts the bolt. If the plug turns but the bolt does not move, something in that chain has broken or slipped.

Worn or broken cylinder components

The most common cause is a worn cylinder. Over years of use, the pins inside a lock can develop flat spots or become chipped. The springs can lose tension. When that happens, a key might still turn the plug because the worn pins no longer bind, but the plug does not engage the cam properly. The result is a full rotation with no movement of the bolt.

Another frequent issue is a broken tailpiece. The tailpiece is the small metal tab at the back of the cylinder that connects to the bolt mechanism. If it snaps or bends, turning the key does nothing to the latch. This is especially common on older exterior doors where the lock has been forced or the door has sagged over time.

A worn keyway can also cause trouble. If the key has been used for years, the teeth may have worn down enough that they no longer lift the pins to the correct height. The key might still enter and turn, but the plug fails to transfer motion to the bolt. Trying a spare key can confirm whether the key itself is the problem.

Misaligned strike plate or door frame

A lock that turns but will not open may actually be working correctly. The bolt may be retracting, but the door is stuck against the strike plate or the frame. This happens when the door shifts due to seasonal changes, settling of the building, or loose hinges. The bolt clears the strike plate opening when the lock is engaged, but when you turn the key, the bolt does not fully retract because the door is pressing against the edge of the plate.

You can test this by gently pushing or pulling the door while turning the key. If the lock suddenly works with a bit of pressure, the alignment is off. The fix involves adjusting the strike

plate position or deepening the mortise in the door frame. That is a job best left to a professional, as it requires precise routing or chiseling.

Broken or disconnected linkage in the lock set

On many residential locksets, especially those with a separate deadbolt and handle, a connecting bar or screw can come loose. If this linkage breaks, the key may turn the cylinder but the bar no longer reaches the bolt. This is common on cheaper locks where the internal components are made of softer metals. Over time, the bar can shear off inside the lock body.

You might notice that the key feels unusually loose or that the cylinder rotates with no resistance at all. If you can pull the cylinder partway out of the door after turning the key, the retaining clip or set screw has likely failed. A locksmith can replace the broken parts or install a new lock cylinder, often without replacing the entire lockset.

Frozen or gummed-up lock mechanism

In cold weather, moisture inside the lock can freeze, preventing the pins from moving. The key may still turn because the ice allows the plug to rotate, but the tailpiece cannot overcome the frozen bolt. A similar thing happens when dirt, dust, or dried lubricant builds up inside the cylinder. The plug turns, but the internal parts stick and fail to engage the bolt.

If you suspect debris or ice, try applying a dry lubricant such as graphite powder. Avoid oil-based sprays, as they attract dust and make the problem worse over time. If the lock remains stubborn after lubrication, the internal components may need disassembly and cleaning. That is a task for a professional, as modern locks have small springs and pins that are easy to lose.



When a new lock installation is the right solution

If the cylinder is badly worn, the tailpiece is broken, or the lock has been forced at some point, repair may be temporary. A new lock installation provides a fresh set of pins, springs, and a solid tailpiece that will work reliably for years. This is especially relevant for exterior doors, where security matters. A lock that turns but does not engage leaves your home vulnerable. Replacing the entire lockset ensures that the key and bolt work together as designed.

For tenants moving into a new apartment or homeowners after a break-in, a new lock installation also allows you to control who has keys. Even if the old lock seems to work, the previous owner or tenant might still have a copy. A fresh lock eliminates that risk. Many people choose a new lock installation when they buy a house, for the same reason. It is a straightforward upgrade that improves both security and peace of mind.

If you live in Philadelphia and need a reliable solution, rrlocksmithphiladelphia.com offers professional lock services for residential and commercial properties. Their team handles everything from simple rekeying to full lock replacements, and they respond to emergency calls around the clock. Whether you are dealing with a worn cylinder or a misaligned door frame, having an expert assess the situation can save time and prevent further damage.

Rekeying as an alternative

If the lock itself is in good shape but you want to change who can access the door, rekeying is a less expensive option than a full replacement. A locksmith removes the cylinder, changes the pin configuration, and supplies new keys that work with the new pins. The old keys will no longer turn the lock. This is common after a tenant change or when a key is lost.

Rekeying does not fix a broken tailpiece or a worn cylinder that turns freely without engaging the bolt. If the problem is mechanical wear or damage, rekeying will not solve it. A technician can tell you whether rekeying or a new lock installation is the better choice after inspecting the lock.

What to do if your key turns but the door won’t open

Start by checking the simple things. Try your spare key. If that works, your original key is worn and you need a duplicate cut from the spare. If neither key works, the problem is in the lock itself.

Look at the edge of the door where the bolt comes out. With the key turned to the unlock position, try to push the bolt in with your finger. If it moves freely, the lock is likely fine and the door is binding against the frame. If the bolt does not move at all, the internal mechanism is broken.

Do not force the key or use tools to pry the door open. You can damage the lock further or break the key off inside the cylinder. Instead, contact a locksmith. They can diagnose the exact cause and perform the necessary repair or replacement. For Philadelphia residents, rrlocksmithphiladelphia.com provides fast, professional service for exactly this kind of lock issue. Their technicians carry the tools and parts needed to handle most problems on the first visit.

A key that turns but will not unlock is frustrating, but it is almost always fixable. Understanding the common causes helps you describe the problem accurately to a professional, which speeds up the repair. Whether it is a simple lubrication issue or a need for a new lock installation, the right solution gets your door working securely again.