Why a door may not latch even when the lock still turns

If your lock cylinder turns freely but the door won't latch, the problem is almost never the lock itself. A working keyway and a smooth-turning cylinder can fool you into thinking the lock is fine, yet the latch bolt fails to engage the strike plate. That points to a mechanical misalignment somewhere in the door assembly rather than a broken lock mechanism.

Understanding what makes a latch bolt move in and out helps narrow down the cause. The lock cylinder turns a cam or a tailpiece that pushes or pulls the latch bolt. When that movement happens correctly but the bolt doesn't seat into the strike plate hole, something else is interfering. The fix often involves adjusting the door, the frame, or the strike plate - not the lock itself.

How the latch bolt and strike plate work together

The latch bolt is the sloping metal piece that extends from the edge of the door. When you close the door, the angled face hits the curved lip of the strike plate, pushing the bolt inward against spring pressure. Once the door is fully closed, the bolt snaps into the strike plate hole, holding the door shut. The lock cylinder simply retracts that bolt when you turn the key or knob.

For this to work, the bolt must line up precisely with the hole in the strike plate. Even a small shift in the door's position can make the bolt hit the plate's face instead of sliding into the opening. The lock may still turn because the cylinder and its internal mechanism are fine, but the bolt has nowhere to go.

Common reasons the latch misses the strike plate

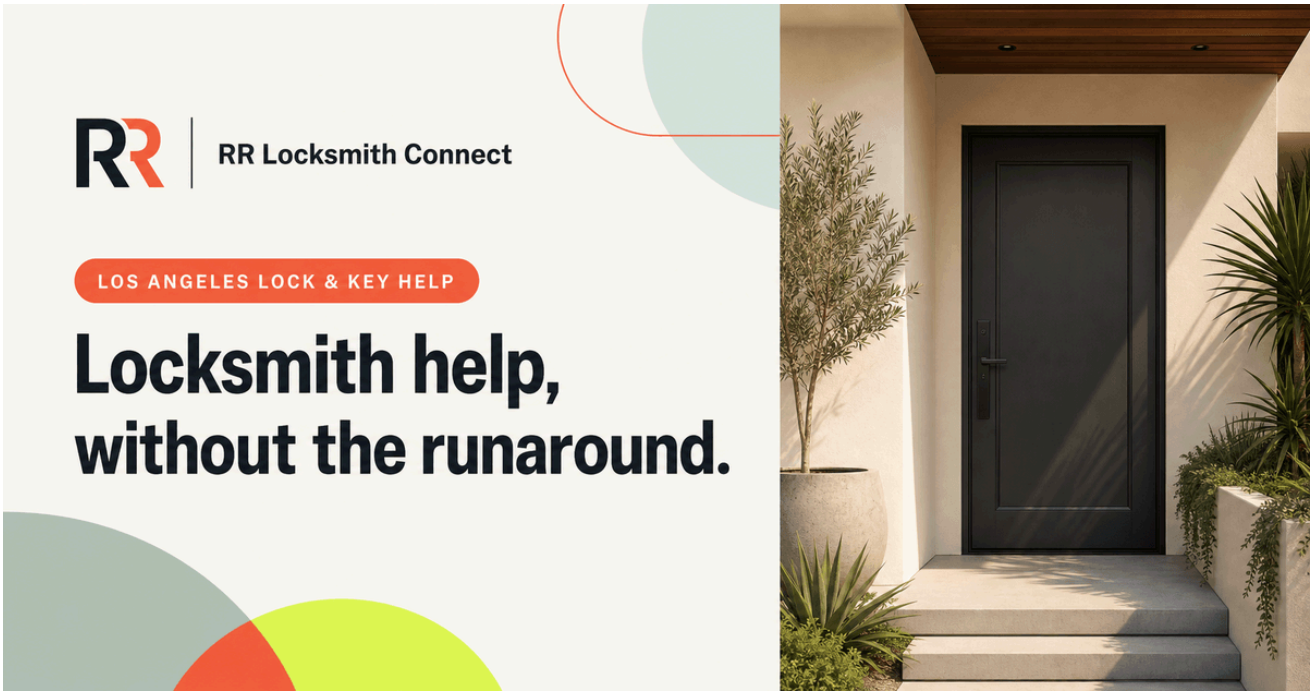
Several conditions can cause this misalignment, and most are straightforward to check.

- **Settling or shifting of the door frame:** Over time, a house settles, or the door frame can warp due to humidity or temperature changes. This movement changes the gap between the door and the frame, throwing off the alignment.
- **Loose or worn hinges:** If the screws holding the hinges to the door or frame loosen, the door can sag. A sagging door tilts the latch bolt downward, making it hit the strike plate below the hole.
- **Strike plate position:** The strike plate may have been installed slightly too high, too low, or too far inward. This is common after a door replacement or if the strike plate was moved during a previous lock change.

- **Swollen or expanded door:** Wood doors can absorb moisture and swell, especially in humid seasons. The door becomes thicker or wider, causing the latch bolt to rub against the strike plate rather than entering the hole cleanly.
- **Bent or damaged latch bolt:** A latch bolt that has been forced or struck can bend slightly. Even a small bend changes the angle at which the bolt meets the strike plate, preventing proper engagement.

Checking the alignment yourself

Before calling for help, you can perform a few simple checks. Start by looking at the gap between the door and the frame when the door is closed. The gap should be even along the top and sides. If it is wider at the top than the bottom, the hinges are likely the issue.



Next, close the door slowly and watch where the latch bolt contacts the strike plate. You might see a rub mark on the plate's face or a shiny spot where the bolt has been hitting. That tells you the direction of the misalignment. If the bolt hits above the hole, the door is hanging too low. If it hits below, the door is too high.

Also check the latch bolt itself. Extend it fully and look for any curve or twist. A bent bolt should be replaced rather than straightened, because metal that has been bent once is weaker and may break.

Simple adjustments that often solve the problem

Many alignment issues can be corrected without any special tools. Tightening hinge screws is a good first step. If the screw holes are stripped, use longer screws that reach into the framing behind the door jamb. That can pull the door back into position.

If the door has swollen, light sanding on the edge where the latch bolt sits can restore the clearance. Work carefully and test the fit often. Removing too much wood can create a gap that lets the door rattle.

For a strike plate that is slightly out of position, you can enlarge the hole with a metal file or a Dremel tool. File in the direction of the misalignment - upward if the bolt hits below, downward if it hits above. This is a permanent fix only if the misalignment is small; a large offset may require moving the strike plate entirely.

When the problem is inside the lock

Although most latch failures are alignment problems, the lock itself can sometimes be the culprit. A worn or broken spring inside the lock assembly can prevent the latch bolt from extending fully. The lock cylinder still turns because the spring is separate from the turning mechanism. But the bolt may not push out far enough to reach the strike plate hole.

Another internal issue is a broken cam or tailpiece. These are the parts that connect the cylinder to the latch. If they shear off, turning the key or knob does nothing to the bolt. The cylinder spins freely, but the bolt stays put. This is a true lock failure that requires a full lock repair or replacement.

If you have checked alignment and the bolt still won't engage, it is worth removing the lock from the door and inspecting the spring and cam. A visual check often reveals a snapped spring or a worn plastic cam. Replacing these parts is usually cheaper than replacing the whole lock, but it does require some familiarity with the lock mechanism.

Deadbolt versus standard latch

A deadbolt works differently from a standard latch bolt. The deadbolt has a square or rectangular shape and is moved directly by the lock cylinder. It does not have a spring-loaded sloping face. When a deadbolt refuses to engage, the cause is almost always alignment. The deadbolt is thicker and less forgiving of misalignment than a standard latch bolt.



If your deadbolt turns but the bolt does not slide into the strike plate, check the same alignment points: hinges, frame settling, and strike plate position. A deadbolt that is even a few millimetres off will bind against the strike plate.

Door frame issues that go unnoticed

The door frame itself can be the hidden cause. Over time, the wood around the strike plate can split or rot, especially in older homes. The strike plate screws lose their grip, and the plate shifts slightly. This can happen gradually, so you might not notice until the latch stops working.

Check the frame around the strike plate for cracks or soft spots. If the wood is damaged, the strike plate needs to be remounted with longer screws that anchor into the stud behind the frame. For severe rot, the frame section may need to be cut out and replaced.

Another frame issue is a gap that has widened between the door and the frame. If the gap is too large, the latch bolt may not reach the strike plate at all. This can happen if the frame has pulled away from the wall or if the hinges have moved. Shimming the hinges or adjusting the strike plate with a wrap-around plate can close the gap.

Seasonal effects on door operation

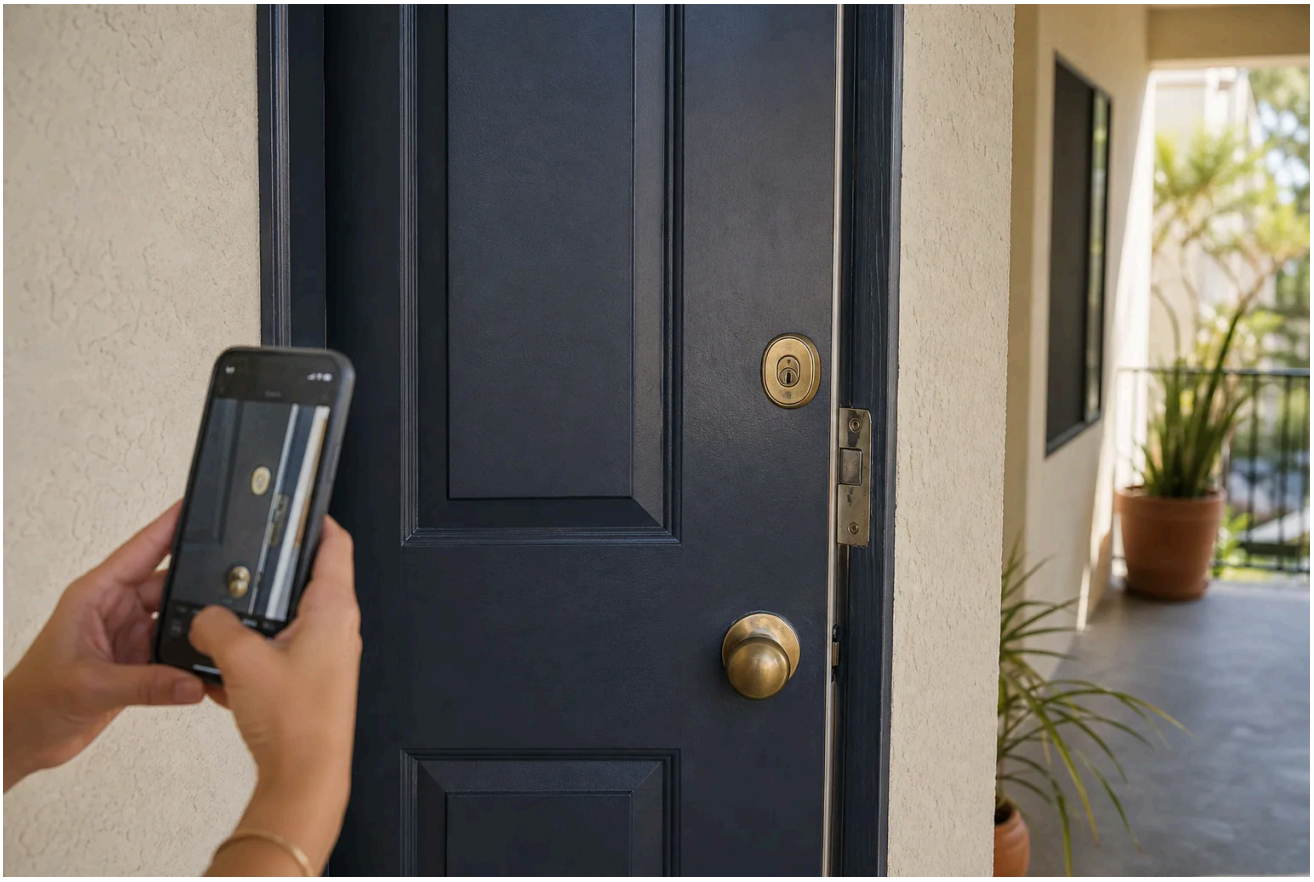
Wood doors and frames expand and contract with changes in humidity. A door that latches perfectly in dry winter weather may stick or fail to latch in humid summer months. This is normal and often temporary. If the problem comes and goes with the seasons, the fix is usually a small adjustment to the strike plate or the hinges rather than a major **lock repair**.

Rather than replacing the lock, you can install a longer latch bolt that extends further into the strike plate. Some replacement latches offer adjustable depth to compensate for seasonal movement. This keeps the door working year-round without constant tweaking.

When to call a professional

If simple checks and adjustments do not solve the problem, it may be time to involve a locksmith or a handyman. A persistent misalignment that you cannot correct with a screwdriver or a file could indicate a structural issue with the door frame or the wall. Trying to force the misalignment by bending the strike plate or shaving the door can make things worse.

A professional can measure the door and frame precisely, identify the root cause, and perform a **lock repair** or adjustment that lasts. They also have tools to fix stripped screw holes, replace damaged hinges, and realign the strike plate without damaging the door or frame.



Sometimes the best solution is to replace the entire lockset, especially if the lock is old or the internal parts are worn. A new lockset that matches the existing bore hole and backset can restore smooth operation quickly.

Preventing the problem from returning

Once the latch engages again, a little preventive care helps keep it working. Tighten hinge screws every few months. Lubricate the lock cylinder and latch bolt with a graphite powder or a silicone spray - never oil, which attracts dust and gums up over time. Keep the strike plate clean and free of paint buildup that can reduce the opening size.

If you live in an area with high humidity, consider a dehumidifier for the room or a weather seal on the door that reduces moisture absorption. Small efforts like these can prevent the seasonal swelling that throws the latch out of alignment.

A door that fails to latch is frustrating, but the solution is usually straightforward. By checking alignment first and looking at the lock mechanism second, you can often fix the problem yourself. When that does not work, a professional can get the door closing securely again without replacing parts that are still in good shape.