

The ultimate guide to Reinforcing Your Door

How do most burglars enter homes?

The answer may surprise you. They aren't sneaking down the chimney or creeping in through your basement window; most of them simply walk right up to your door and smash their way through it.

It may be hard to believe, but the stats back it up:

- 34% of burglars break in through the front door
- 22% gain entry using the back door
- 9% get in via the garage

In short: 65% of burglaries involve a criminal being able to defeat your front door security.

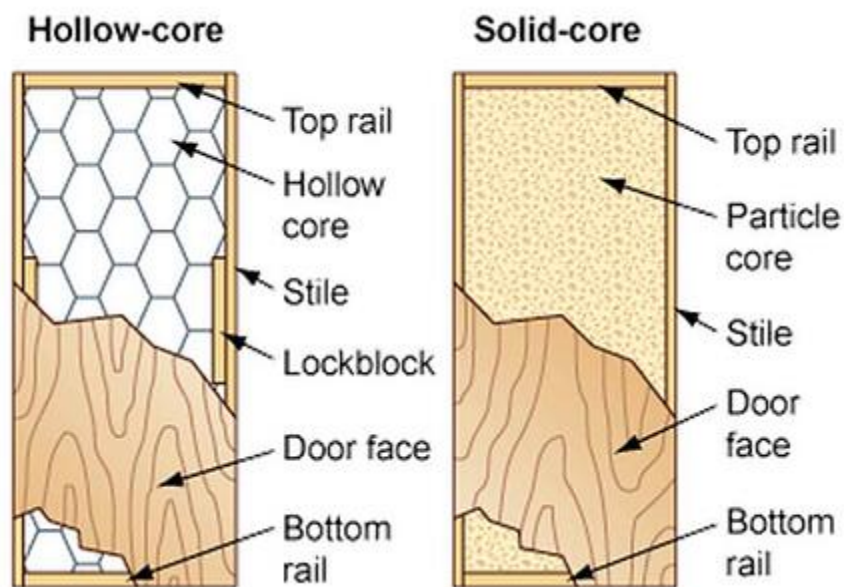
Securing your home with a monitored [home security alarm system](#) is a good place to start, but a layered approach offers even more protection than relying solely on a burglar alarm to call the police.

The best place to start securing your perimeter is by focusing on your first line of defense: exterior doors.

Is Your Door Strong Enough?

An issue we see in many homes is people using an interior door on an exterior entry point.

An interior door is one that you would most likely use for your bedroom or bathroom. These hollow-core doors are usually made of a thin veneer with a hollow center; they're designed for privacy, not security.

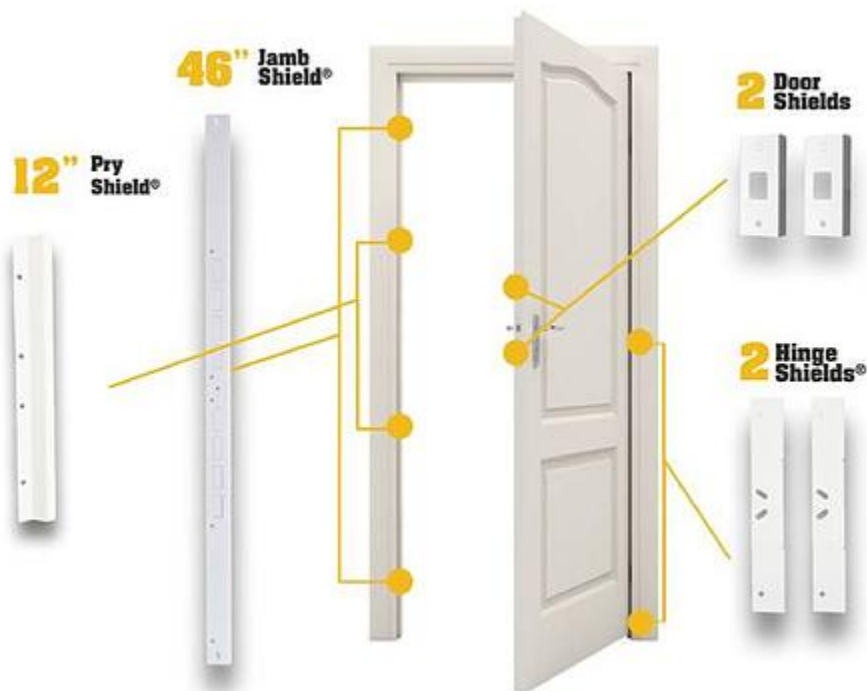


You can put the best locks in the world on a hollow-core door, but it won't do you any good if a 12-year-old can kick through it at the door's weak points.

Replace any hollow-core exterior doors with metal-insulated or solid wood doors. These will be much more resistant to burglar attacks.

Reinforcing Your Door

Armor Concepts make a door reinforcer called **Door Armor** -- essentially, a metal sleeve that bolts around the door in the area of the doorknob and deadbolt to give that part of the door additional strength.



This helps to prevent the door from breaking in the area of the lock from a kicking or prying attack.

Door Armor can also be used to temporarily secure a door that has been recently broken into, giving it some strength until a new door can be installed.

Selecting the Right Locks for Your Door

As surprising as it may sound, many burglaries happen to homes that were left unlocked. The burglar didn't have to break in at all—just turn the doorknob.

Sometimes people make burglars' lives even easier by not closing the door in the first place. Talk about an open invitation!

It's more common to leave garage doors open, but police tell us they frequently encounter cases where apartment doors, dorm doors, and house doors have been left standing open, and a burglar seized the opportunity.

It would seem obvious that the first things to do would be to close your doors and use the locks that you currently have. Any lock is better than no lock.

But some types of locks aren't much better than leaving your door wide open. You need the right type of lock on your door if you want any protection.

Why knob locks aren't good enough

One type of lock is the knob lock. It has a key slot in the doorknob on the outside and a thumb turn or button on the inside doorknob.



If a knob lock is your only protection on the exterior door, your home may be vulnerable. Here's why:

- The locking mechanism is in the doorknob itself, which is vulnerable. All a burglar needs to do is saw off the doorknob, knock it off with a hammer, or twist it off with a pair of pliers. Once that's out of the way, it takes a bit of finesse with needle-nose pliers or a screwdriver to open your door.
- Another problem with the knob lock is that the latch is too short. A burglar can defeat this type of lock by a shim attack, like using a credit card or similar object to push the latch back and open the door. Or the burglar can use a spreading attack, prying the door open with a large screwdriver or wrecking bar.

- Lastly, a door with a knob lock may be possible to kick open because the latch is so short and it doesn't go deep enough into the strike plate to hold solidly when any real force is applied.

Why you should have a single-cylinder deadbolt

If all you've got on your door is a knob lock, you can add a second layer of protection with a deadbolt lock positioned 6–8 inches above or below your doorknob.



A single-cylinder deadbolt has a key slot on the outside and a thumb turn on the inside. When you fully extend the

deadbolt, you can't push the bolt back in, like you may be able to do with a knob lock. This prevents someone from using a knife or other sharp object to pry the bolt back and open the door.

Look for a deadbolt with a bolt that is a minimum of 1 inch when fully extended. Also, look for a lock that has a tapered cylinder guard. The slot you stick the key into is called the cylinder. The piece of metal that goes around the cylinder is the cylinder guard.



This should be tapered, meaning it should be wider around the part that goes up against the door and narrower toward the front where the key goes.

A tapered cylinder guard makes it harder for someone to chisel or drill into the cylinder guard. The cylinder guard should be free spinning, which means you can twist it or

spin it around and around without doing any damage, preventing someone from unscrewing the cylinder guard and removing the lock.

Deadbolt locks offer several security benefits:

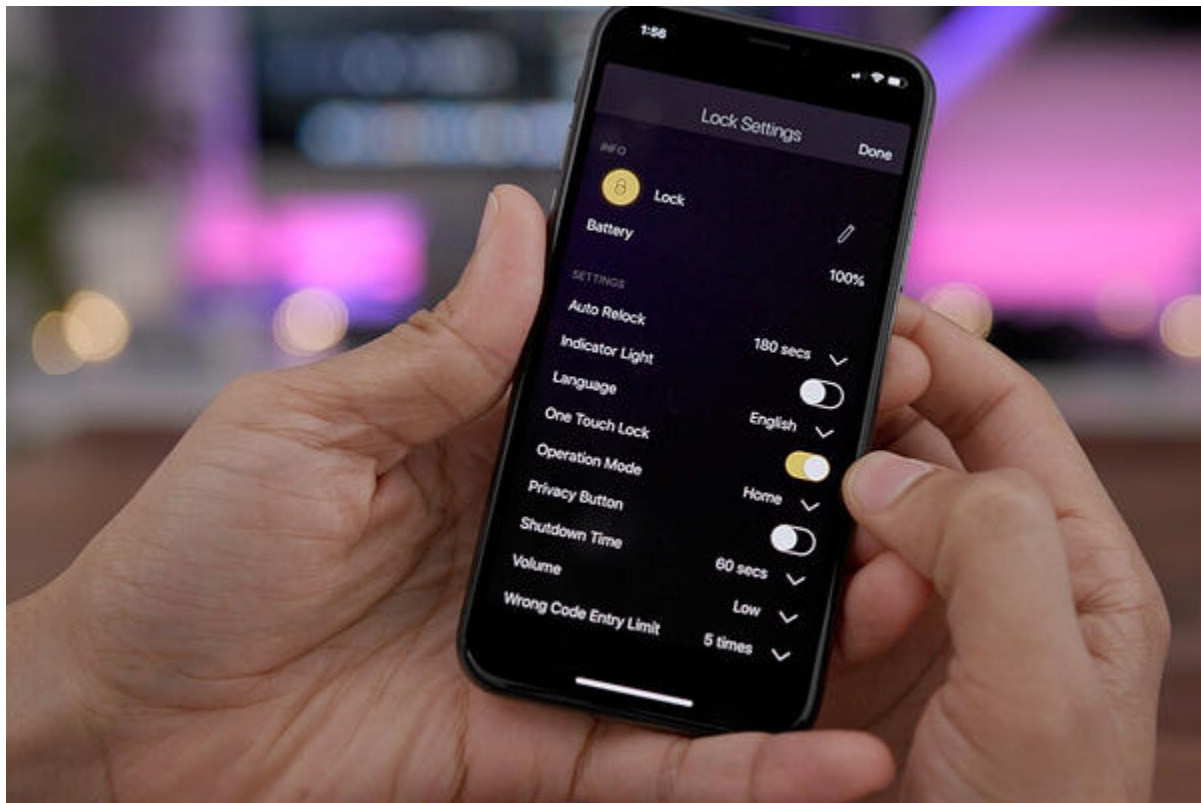
- The locking mechanism is protected because it is inside the door where it can't simply be smashed off.
- The deadbolt can't be pushed back in after it's fully extended, reducing the chance a burglar will be able to open the door with a shimming attack.
- The deadbolt is longer than the latch on a knob lock, so it will be harder for a burglar to "spread" the door and pry it open.
- The deadbolt goes far enough into the doorjamb wood and strike plate to hold when it is kicked (provided the strike plate is properly installed, which we'll discuss later).

How to Choose a Deadbolt Lock

When looking for the best deadbolt lock, it's important to choose quality over price. Sure, there are \$8 deadbolts available at discount stores, but it's important to look for a lock that meets the specifications outlined to adequately protect you.

Do you often forget to lock your deadbolts? Get a smart deadbolt instead.

With the Yale Assure Lock Touchscreen Keypad, you can lock and unlock your doors via your phone. That way, even if you leave for work one morning and forget to lock the door behind you, all you need to do is pull up your app and enable the lock with a single tap.



Plus, your family members can all punch in their unique passcodes that give them keyless entry. Want to let in a housekeeper or rent out your home for Airbnb? Allow guests temporary access with key codes that expire after a set period of time; no more handing out spare keys.

Deadbolts that protect against key bumping

Recently, there has been a lot of buzz on the internet about key bumping to unlock deadbolt locks without damaging them.

Locksmiths have been doing this for decades, but in recent years, lockpicking enthusiasts have produced all sorts of YouTube videos, instructions, and tools enabling anyone to open most ordinary deadbolts with ease.



A set of bumping keys

In a nutshell, a special bump key is inserted into the lock, and it's struck with a plastic hammer. This causes the tumbler pins inside the lock to fly up randomly, and after a couple of whacks, the pins line up correctly and the lock can be opened.

If you really want to protect your family, yourself, and your possessions, it's a good idea to invest in a high-security

deadbolt such as the Medeco Maxum Residential Deadbolt.



Once used primarily for protecting nuclear power plants, laboratories, and government facilities, Medeco high-security deadbolts are now being used in more residential settings to combat the fear of key bumping.

Let's get technical. This Medeco lock exceeds ANSI (American National Standards Institute) grade 1 standards for auxiliary locks. Grade 1 is the highest rating. This lock features a free turning collar, making it resistant to attacks from tools like pipe wrenches or cold chisels, and quarter-inch diameter mounting bolts that resist wrenching, prying, and hammering attacks.

It has a hardened steel bolt that is 1 inch when fully

extended, which makes it resistant to sawing and crowbar attacks. There are also hardened steel inserts and pins that rotate to make it that much harder to pick or drill, in accordance with Underwriters Laboratories UL 437 standard.

The Biaxial design offers a utility patent that provides protection against unauthorized key duplication. In other words, no hardware store will be able to make a duplicate key unless you authorize it.

The Medeco's strike plate makes it highly resistant to kick-in attacks: The strike plate's special box design is anchored directly to the building structure behind the doorframe with 2-inch screws. The steel bolt and bolt throwing mechanism are surrounded by heavy-gauge tubular steel housing, which provides substantial resistance to crowbar attacks. And high-tensile steel mounting bolts hold the lock's solid brass design together, making it strong against prying and hammer attacks.

Medeco's lock has several features that make it so resistant to lock-picking, including false slots on the bottom pins, mushroom top pins, a special rotating and elevating pin tumbler design, and a sidebar mechanism. These features are also what make this lock so resistant to key bumping.

If all this weren't enough, it is very difficult to defeat this lock by drilling because hardened steel inserts are

positioned in crucial areas of the deadbolt cylinder.

The most important thing about a deadbolt: Use it consistently

Before we leave deadbolts, consider this: Having the best lock in the world does no good if you don't use it.

You might have deadbolt locks on your doors right now. You probably lock the deadbolt at night. But did you lock the deadbolt when you left home this morning? Did you put the key in the slot and lock it?

If you did, great! If you didn't, that deadbolt lock wasn't doing you any good at all. You were putting all your faith in your old knob lock, and we've already discussed how unreliable that can be.

Locks should be locked when you are away from home and when you are home. We've seen cases where unlocked homes have been entered while the resident was outside working in the backyard, painting, or sunbathing.

We've also seen cases where unlocked homes have been entered while the occupants were asleep, in the shower, or in another part of the home. That's why—while it sounds so simple—it's so important to keep your doors (and deadbolts) locked at all times.

The Hidden Dangers of Windows Too Close to Your Door

If you've got a window in your door or very close to it, you've got a potential problem. If you have glass within 40 inches of your lock's thumb turn, you've got to do something. Here's why.

If a burglar breaks the glass in your door, all they have to do is reach in and turn the thumb turn to open your door.



The best thing to do is to replace that door with one that doesn't have a window. And, while you may lose some of the aesthetic value of having a window around the door, your door will provide more protection for you and your

home. If you're not willing or able to ditch the windows for a more secure door style, though, consider these other options.

Window bars or grates

A more extreme option is to put bars or grates over your windows near your door. In fact, in areas with higher crime rates, you'll see bars or grates over all the windows.

Before you install window bars, however, consult your state's fire code to be sure it's legal. In some areas of the country, you may be prohibited from putting bars over bedroom windows.

This is so that if there is a fire, the firefighters will be able to rescue you, and if the firefighters are in your house battling a blaze, they know they'll be able to get out through a bedroom window.

Double-Cylinder Deadbolt

Some people will install a double-cylinder deadbolt if there is glass within 40 inches of the door lock. A double-cylinder deadbolt has a key slot on the outside and a key slot on the inside instead of a thumb turn.



Here's the theory: You leave the house. You put the key in the slot from the outside and lock your door. Along comes a burglar, who breaks your window and reaches in, but can't get in because there is no thumb turn to open on the inside.

While double-cylinder deadbolts are a powerful security measure, they also put you in danger in an emergency because of their design.

Imagine this: You get ready to go to bed. You go over to the door to lock it. There is no thumb turn on the inside, so

you have to insert your key into the slot to lock the door. You go to bed.

Three hours later, you wake up in a smoke-filled house with your smoke detector going off. You manage to stumble your way to the front door, but you can't get the door unlocked because there is no thumb turn and you have to now find the key, put it in the slot, and unlock the door. When you're in an emergency situation, every second counts.

Polycarbonate resin windows

A final solution to windows too close to your door lock is to replace the window glass with a piece of polycarbonate resin.

Polycarbonate resin is available from a glass installer and is about 300 times more resistant to breakage than a standard glass windowpane. The downside? It's more expensive, scratches easier, and may yellow with age.

These windows must be properly installed because even though it is almost impossible to break, if polycarbonate resin isn't installed properly, it is possible to knock the whole piece out of the frame to gain entry.

Once you understand the potential issues presented by using bars, grates, double-cylinder locks, and polycarbonate resin to bolster security if you have a

window on or near your door, you can see why replacing the entire door may be the easiest and safest option.

Strike Plates

A critical part of securing your door is examining the strike plate.

The strike plate is the piece of metal that is mounted to the doorjamb. It's the piece that the deadbolt goes into when the lock is locked.



Here's the problem with many strike plates: Builders installed the plate with the half-inch screws that came with the strike plate.

When a burglar comes along and kicks your door, even if you've got a deadbolt lock, because the strike plate screws are too short, the doorjamb splinters. The door comes open as one piece of the jamb goes flying across the room.

Luckily, this strike plate problem is easy to fix. Here's what you'll need to do:

- Check the length of your strike plate screws.
- Replace the tiny little ones with screws that are 2.5–3 inches long. Now the screws not only go into the doorjamb, but they go clear into the door stud, deep enough to hold when the door is kicked.
- Consider replacing your strike plate with a heavy-duty strike plate such as the Prime-Line U 9539 Armored Security Strike Plate. It's made of heavier material and will be larger than the standard strike.



Security Chains Versus Peepholes

Does your door have a security chain? You know, one of those little chains that you can latch and open your door a couple inches, presumably to look out the open crack and still be safe?

If you have a security chain, don't count on it to protect you.



The problem with the security chain is that it is a vulnerability in disguise. If you unlock your door, an intruder can easily shove their shoulder up against the door, snapping the chain to gain entry. Police have to do this all the time to gain entrance to homes in emergency police calls.

If you've got a security chain, get rid of it and install a peephole instead. Now instead of opening your door a

crack to see who is out there, you can look through the peephole, keeping your door locked. Peepholes come in several styles now, but the traditional style will give you almost a 180-degree field of view.

National Hardware N162-362 805 Door Viewer is a standard fish-eye peephole. It's cheap, effective, and easy to install.



One disadvantage is that to look out of it, you have to put your eye right up to it. Someone on the outside can see the viewer get dark when this happens, which will indicate

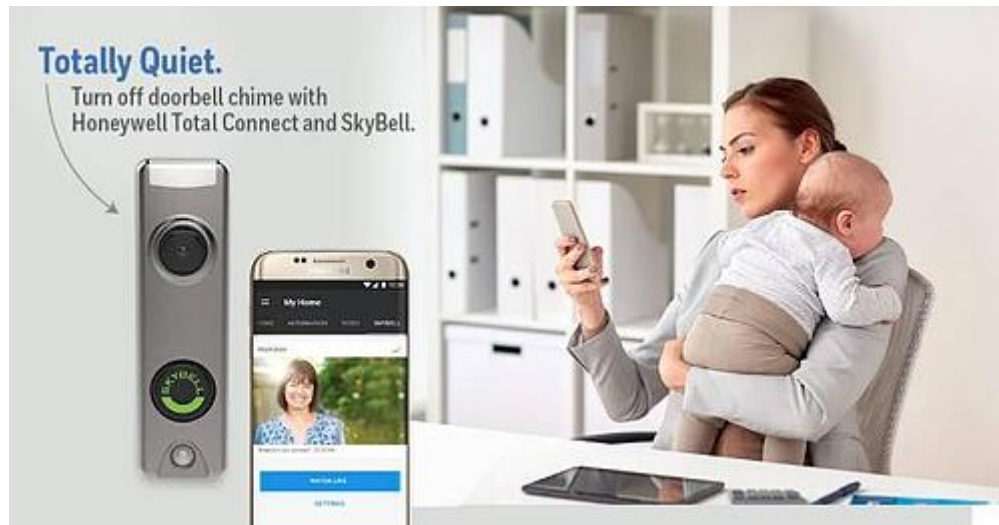
that someone is home.

But there are other high-tech options when it comes to peepholes. VW Optics Wide Angle Peephole Door Viewer Doorscope is designed so you don't have to put your face right up to the door to look out.



It works best at about three to four feet away. This wide-angle viewer will give you a 132-degree viewing area. You're still going to need adequate outdoor lighting to see who is outside your door clearly at night.

If you want the combined functionality of a peephole and a doorbell, the SkyBell Trim Plus Video Doorbell will turn your doorbell into a smartphone-integrated video camera.



You can easily see who is at your door on any device without letting them know you are home, ensuring your family's safety. Plus, the SkyBell integrates into some top-rated security systems so you can control multiple devices from a single app.

The viewer compensates for lower light levels, and the image is easy for anyone of any height to see. The SkyBell Trim Plus Video Doorbell also features zoom so you can get a closer look, and there is no fish-eye distortion like you would find on a traditional peephole.

For more information on doorbell cameras and which one might be right for your home, contact your local [alarm company](#).

Door Jammer

A door jammer is another option for additional door security. It is functionally similar to jamming a chair under the doorknob, but it's more secure and sturdier than a chair.



The Buddybar Door Jammer

The Buddybar Door Jammer is a popular door jammer that provides your dwelling with an added measure of safety by reinforcing doors from intruders.

You can set the Buddybar up quickly and without tools. The powder-coated steel 16-gauge bar weighs 8.2 pounds and extends from 36 inches to 51 inches. Its 2-by-4-inch foot is rubber-coated steel and non-marring, which gives it a solid grip that works on wood floors, concrete, tile, or carpet.

The Buddybar is ideal for your home, apartment, dorm room, office, or hotel room, and it's the stoutest home security bar currently on the market.

GE Personal Security Door Stop Alarm

Another door jammer option is the GE Personal Security Door Stop Alarm. Weighing only four ounces, it looks like a standard doorstop but has a built-in 120-decibel alarm. This door jammer does not just help keep intruders out; the alarm will alert you to their presence, giving you more time to react.



The GE Personal Security Door Stop Alarm is easy to use: You don't need wires, and it runs off one 9-volt battery. (A battery indicator light lets you know when it's time to change the battery.) To install the device, position it at the base of a door. If the door is opened, the Door Stop Alarm's 120-decibel alarm will sound.

The Door Stop Alarm's rubber foot works on carpet, tile,

vinyl, and wood. With its gripping ability, the device functions as a doorstop that prevents a door from being opened.

This doorstop alarm is small enough to be easy to take anywhere. With this little device, you'll be able to secure your apartment, dorm room, hotel room, or any room in your home.

Conclusion

Properly securing your doors is an investment of time, money, and energy. But the protection it provides is essential to keeping your home safe.

Consider this: What is the potential cost of not securing your door?

Just remember: when a burglar can't get in through your door, they'll try your windows next.

Most burglars enter through doors. About 65% of them break in through either the front door, back door, or garage.

The second favorite way for a burglar to enter is by climbing or breaking through your windows, especially those on the ground floor.

That's why knowing how to protect your windows is essential to making your home safe.

Types of Windows and How to Secure Them

Double-Hung Windows

Double-hung windows, often found on older homes, tend to be most vulnerable to break-ins.

A double-hung window has two panes of glass, one above the other, and are often secured with a crescent latch.



The latch is generally not designed to be extremely secure; it just keeps the window closed. The problem is that the crescent latch is easily jimmied open by inserting a knife or other flat tool.

Another problem can occur when the windows swell due to hot weather because the crescent latch might not close properly. In older homes, it's common to see that the latches have been painted over so many times that they can no longer effectively secure the window.

But there is a solution.

Drilling and "pinning" is an inexpensive and effective way to secure double-hung windows. To pin your double-hung windows, you'll need a drill and some nails, rods, bolts or other pinning material.

All ground floor windows should be pinned. The exception would be if there are small children in the home. In that case, one window should be designated for fire emergency exit, and not pinned.

Casement Windows

There are basically two types of casement windows:



Type A: hinged on the side, and cranks or swings outward



Type B: hinged at the top and swings outward

If you've got a Type A window, it may be possible for a burglar to break out the window in the area of the crank, reach in and crank open the window. Or if the window is partially open, he may be able to cut or remove the screen and again reach in and crank the window open far enough to get in.

You'll want to inspect your window hardware. If your push bar or operator is worn out, it should be replaced. It should be sturdy enough that, if your window is cranked open a few inches, a burglar won't be able to simply force the window open to gain entry --at least not without breaking the window or the window frame.

Statistically few burglars force open casement windows if it means breaking the glass.

Why? Because burglars *hate* making loud noises. Breaking windows will alert the whole neighborhood to their presence.

Securing casement windows is difficult, especially thin gauge aluminum casement windows commonly found on cheaply constructed homes and apartments. To secure these windows, you may have to replace them.

Jalousie (Louvered) Windows

This type of window is often found in bathrooms or kitchens on older homes. The vulnerability with this type of window is that the individual panes can be easily broken

or, in some cases, simply removed by sliding them out of the frame. The panels can also be forced open easily.



To prevent someone from removing the panes of glass, you can glue them in. That's not going to stop someone from breaking them however. If ventilation is not critical, you can bolster security by putting up a storm window, or replacing it with a double-hung window.

Additional Ways to Secure Your Windows

Bars, Grates, Wire Mesh

You can add security to any window by putting up security bars, grates or wire mesh.

Caution note: Before you put up bars, grates or wire mesh over your windows consult your fire code! Putting

bars, grates, or wire mesh may cause a serious, life threatening situation in the event of a fire.

While we're on the subject of bars and grates, there is the question of whether to put them on the inside or the outside.



Putting bars on the outside where they are more visible can act as a deterrent to the burglar and discourage them from attempting to break-in.

If you are going to protect your windows with bars or grates, many recommend putting them on the inside. While they might not be as visible to the burglar, and he might break a window before he figures out you've got bars, it will likely deter him. A broken window is a small price to pay to keep burglars out.

If you are installing bars, they should be installed in such a way that with one simple motion, like pushing a quick-release lever, the whole assembly falls out or swings out of the way, allowing you to easily escape during a fire.



This quick-release mechanism should be far enough away from the window so a burglar wouldn't be able to break the glass, and reach in to activate the release to gain entry.

Below are some guidelines to help you determine whether or not the bars you have or are planning to install will provide you with a safe method of escape in case of an emergency.

Unsafe Bars:

- Can not be opened
- Require:

- A key
- Special knowledge
- A separate tool
- Extra physical effort

Safer Bars:

- Can be easily opened from the inside
- Have approved quick release mechanisms

When burglar bars are installed on exit doors or windows of sleeping rooms they must be equipped with an approved quick release device which allows them to be opened from the inside *without the use* of a key, separate tool or any special knowledge or effort.

Note: There may be laws requiring quick release devices to be approved in writing by your local building or fire officials.

There may also be laws requiring your home to be equipped with an approved smoke detector if burglar bars are installed.

Glass for Security and Safety

Another problem homeowners often face when protecting their windows is how to let light and ventilation into a room while keeping burglars out.

The most cost-effective method of making your windows tougher to defeat is by using window film such as BDF S8MC Window Film. Adding an additional layer on your windows helps make them more resistant to impacts, further delaying the burglar.

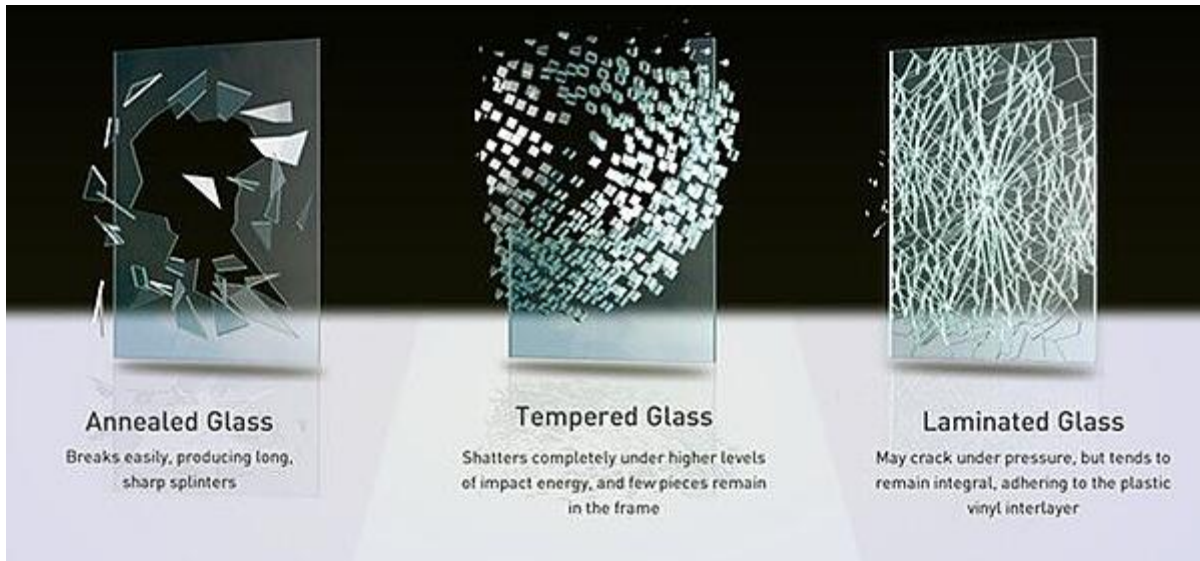
A more long-term but expensive solution is to install panes of glass specifically designed for security and safety purposes.

Tempered Glass

Ordinary glass can be shattered relatively easily on contact. Tempered glass is treated to resist breakage and so can be utilized for both safety and security purposes. It is not as tough, however, as some other types of glass discussed below.



Thermally-tempered glass is made by placing a piece of regular glass in an oven, bringing it almost to the melting point and then chilling it rapidly. When shattered, the glass breaks into relatively harmless chunks resembling rock salt, free of sharp edges.



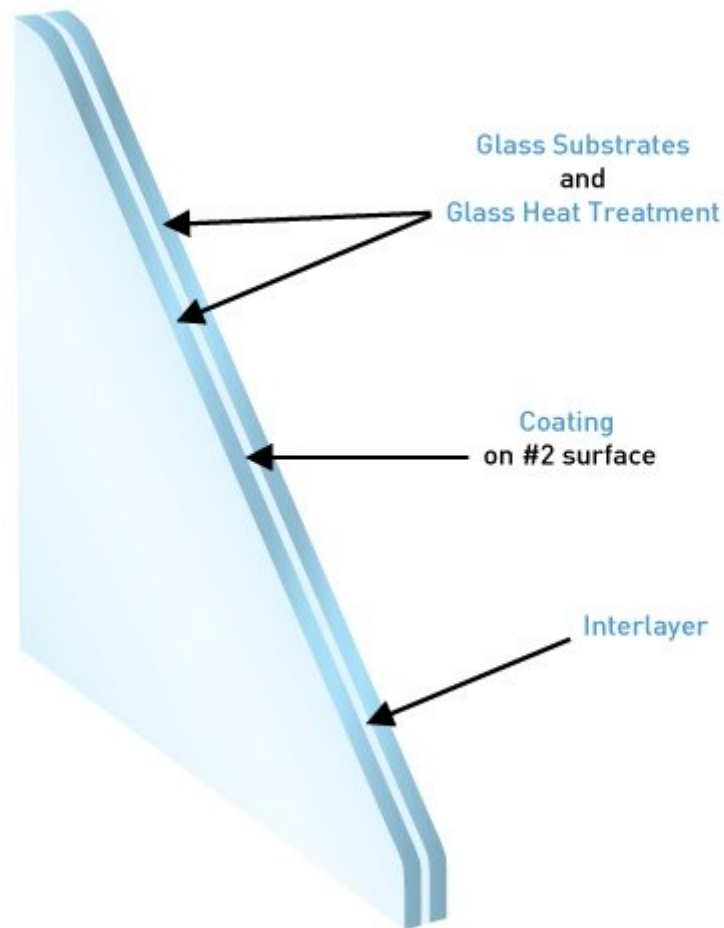
Fully tempered glass is three to five times stronger than glass that has not been tempered and is five times as resistant to heat. Once the glass has been tempered, it cannot be cut or processed further. Tempered glass can be any thickness, and almost any type or color glass may be tempered except wired glass or glass with a deep patterned surface.

Tempered glass is a logical choice for installation along passageways, in entrance doors and adjacent panels. Building codes in many jurisdictions now require this type of glass in areas or locations where individuals are likely to bump into it.

Laminated Glass

Laminated glass is well-suited for installation in street-level windows or displays, doorways, and other access areas where security is necessary. It is composed of two sheets

of ordinary glass bonded to an intervening layer or layers of resilient plastic material, typically PVB (polyvinylbutyral).



When laminated glass is broken, it may crack and break, but the pieces of glass tend to adhere to the plastic material. If a hole is produced, the edges are likely to be jagged, as with ordinary glass.

Laminated glass helps protect against the "smash and grab" criminal. A criminal who encounters this type of glass cannot simply hammer his way through it within a few seconds and will be inclined to move to an easier

target. However, given enough time, a burglar will be able to defeat laminated glass.

Bullet-Resistant Glass

For extreme situations where you need serious protection, you can install bullet-resistant glass. However, the cost is high as this is one of the most expensive window protective measures available.



Bullet-resistant glass is laminated, consisting of multiple plies of glass and plastic stacked up to a variety of thicknesses, from 3/4 inch to 3 inches. The thicker the glass, the more protection. The various thicknesses can be certified under Underwriters Laboratories, Inc. specifications for indoor and outdoor installations.

Plastics

Plastic glazing material can be divided into two general categories - **acrylic** and **polycarbonate**. Both are available in a variety of patterns and in a wide range of transparent, translucent, and opaque tints, as well as in clear form. Acrylic is more transparent than polycarbonate, while polycarbonate possesses outstanding strength against impact.

Due to the way acrylic and polycarbonate expand and contract in changing temperatures, both must be installed by a professional. Both are prone to scratching, so exercise extreme care when cleaning these surfaces.

Acrylic

A sheet of acrylic material (Plexiglas) is less than 50% as heavy as glass, about 43% as heavy as aluminum. A one-square-foot, 1/8-inch-thick sheet weighs about 3/4 of a pound. It is available in varying thicknesses and it has much more impact resistance than double-strength window glass.



For example, in thicknesses from 1/8 inch to 1/4 inch sheets, it is 17 times more resistant to breakage than comparable window or plate glass and so it is an approved safety glazing material.

It is not only safer than glass due to its breakage resistance but, when it is broken, it does not shatter into small slivers with sharp edges, but breaks into comparatively large, dull-edged pieces.

Polycarbonate

Polycarbonate is almost unbreakable. It has 300 times the impact resistance of glass and 20 to 30 times the impact strength of acrylic. It is expensive -- about four times the

price of standard glass. But if your property is repeatedly being vandalized or broken into, it may well be worth the additional cost.



Polycarbonate is an ideal choice for small windows like those found in doors. Storefronts that are frequent targets of “smash and grab” burglaries may also be good candidates for this type of protection.

Polycarbonate should be professionally installed. If you hit it with a sledge hammer it probably won't break, but if it's not installed properly, the whole window is likely to get knocked right out of the window frame.

Polycarbonate sheets, like acrylic sheets, weigh 50% to 60% less than glass. It has a slight blue or gray tint, and

so it is less clear than other types of glazing and shows some distortion. This type of material is reported to be less weather resistant than glass or acrylic, but can be expected to remain serviceable and attractive for seven years or more in outside installations.

For burglary-resisting applications, a 1/8-inch thick polycarbonate sheet meets the Underwriters Laboratories Standard 972, "Burglary-Resisting Glazing Material." A laminated polycarbonate sheet one inch thick (nominal) meets UL standard, U.L. 752, "Bullet-Resisting Equipment", for medium power weapons.

Check your local fire code before installing polycarbonate in your bedroom windows to be sure you are not in violation.

Secure Your Windows with a Home Security System

While there are many steps you can take to reinforce your windows and keep them well-protected from intruders, the methods above are primarily delay tactics to buy time for police to arrive. The best way to get help from the police when you're in trouble is to self-install a home security alarm system in your residence or find a security system company to install and monitor it 24/7.