

TIP SHEET - Subterranean Termites – WHAT YOU NEED TO KNOW

SUBTERRANEAN TERMITES — WHAT YOU NEED TO KNOW

Subterranean termites are the most common type of termite in the United States. They live in colonies underground and build mud tubes to reach food sources, such as wood. Termites can cause significant damage to homes and other structures, so it is important to take steps to prevent infestation.

How subterranean termites live and consume wood

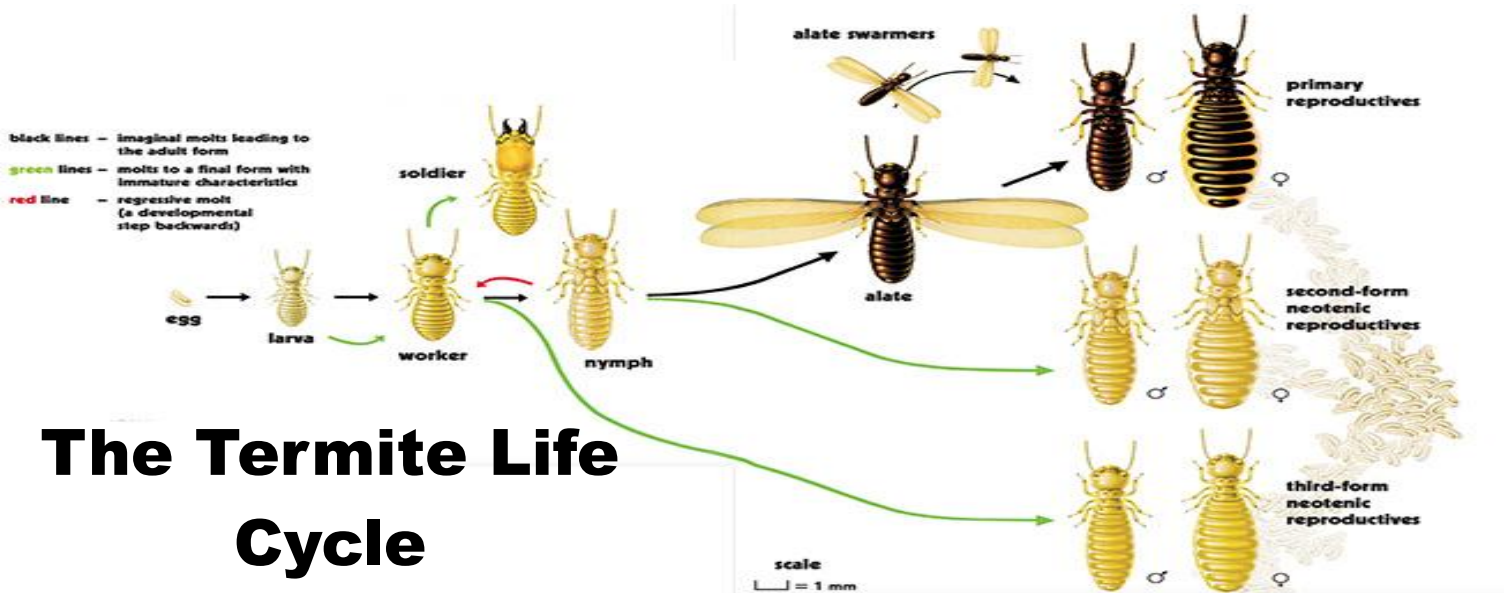
Subterranean termites are social insects that live in colonies. A colony can contain anywhere from a few hundred to several thousand termites. The colony is divided into three castes: reproductives, workers, and soldiers. First let's take a look at the different types of termites:

•**Reproductives** are the queen and king termites. The queen is the largest termite in the colony and can lay up to 30,000 eggs per day. The king mates with the queen and helps to care for the eggs.

•**Workers** are the most numerous termites in the colony. They are responsible for building the nest, foraging for food, and caring for the eggs and young. These are typically white.

•**Soldiers** defend the colony from predators. They have large heads and strong jaws that they use to attack enemies. These have dark heads and white bodies.

•**Swarmers** Termite swarmers, also known as alates, are winged, adult, reproductive members of a termite colony. They leave their current colony to find mates and establish new colonies. Swarmers are attracted to light and are often found on the inside of windows in a structure that has an active infestation.



The Termite Life Cycle

Termites eat wood by chewing it into small pieces. They then digest the wood using enzymes in their saliva. Termites prefer moist wood, but they can also eat dry wood.

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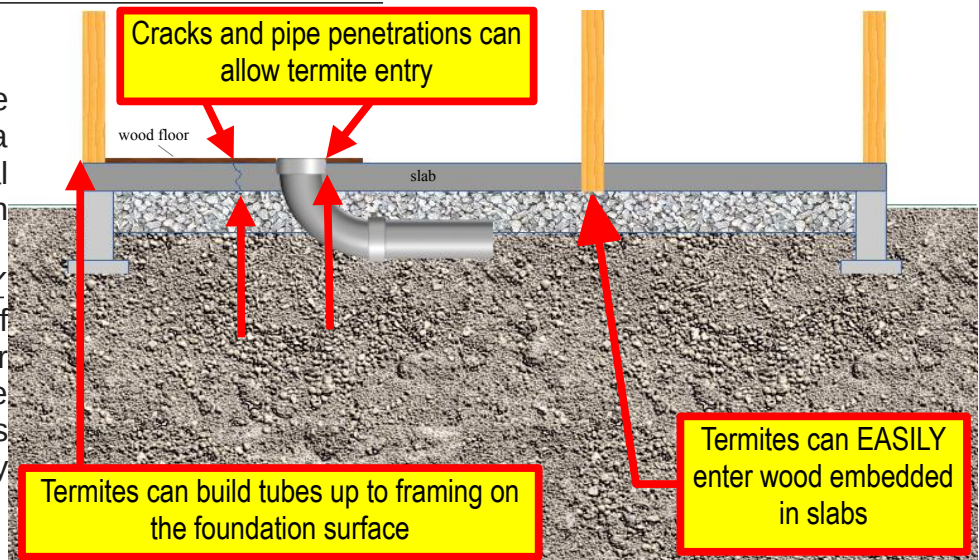
What types of construction have greater risks?

Subterranean termites are attracted to moist, warm environments. They are also attracted to wood that is in contact with the ground. As a result, homes with the following features are at greater risk of termite infestation:

•**Wood-to-ground or masonry contact:** This includes wood that is touching the soil, such as foundation posts, sill plates, wood skirts, any wood embedded in masonry, and porch supports. *There is one golden rule in good construction: **DON'T PUT WOOD IN THE GROUND!***

•**Slab constructed homes:** Any home built on a slab (instead of over a basement) has a much higher potential for subterranean Termite infestation and damage.

THIS IS ESPECIALLY TRUE IF ANY WOOD IS BUILT IN THE SLAB, or if cracks, pipe penetrations or other openings exist in the slab – as these can allow the termites entry (Termites have entered building through very small cracks/seams).



•**Hollow block and Stone foundations:** Any foundation with hollow voids inside the foundation can provide access to the wood in your home. Termites can enter the home through the interior of the foundation undetected.

•**Stucco and Veneer covered Foundations:** These foundations can allow termites to enter the building undetected through the minor gaps which form between the veneer/stucco and the foundation.



•**Cracks and Open Joints in foundations:** Any cracks or open foundation joints/seams can also allow termites to enter. The termites will build "Mud Tubes" from the crack and up into the tasty wood.

•**Moisture problems:** This includes homes with leaky pipes, wet basements, or poorly ventilated crawlspaces. *HIGH LEVELS OF MOISTURE CAN EVEN ALLOW SUBTERRANEAN TERMITES TO LIVE IN THE HOME INSTEAD OF THE GROUND.*

•**Damaged wood:** This includes wood that has been damaged by water, fire, or insects. Rot can attract woodboring insects from distances – *they can smell it.*

•**Older homes:** Older homes are more likely to have termite damage, as they may have been built with untreated wood and/or have more wood in soil/ground contact. These homes also often have rot and wood deterioration which can attract termites.

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Things you can do that can help prevent termite infestation and damage:

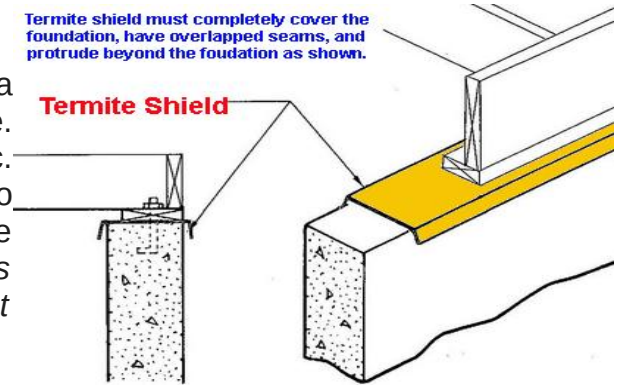
There are a number of things that can be done to help prevent termite infestation and damage, including:

•**Use treated wood:** Treated wood is wood that has been impregnated with chemicals that repel termites. Treated wood can be used for foundation posts, sill plates, and other areas that are at risk of termite infestation. *Note: Treated wood CAN still be attacked by insects when it is old enough or in grade contact for too long. Termites can also simply build (and often DO) mud tubes AROUND the treated wood to attack non-treated wood beyond it.*

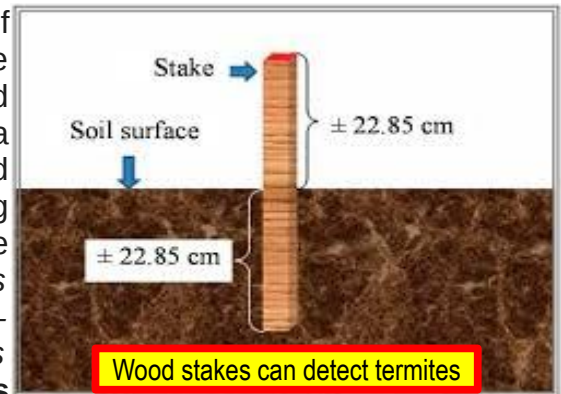
•**Install a termite barrier:** A termite barrier (or shield) is a physical barrier that prevents termites from entering the home. Termite barriers can be made of concrete, metal, or plastic. These are typically added during construction (They have to cover the whole top of the foundation to be effective) and are more difficult to add after. *Note: Termites CAN still bypass these by building mud tubes on and around the barrier – but these tubes will be visible on the termite barrier.*

Termite shield must completely cover the foundation, have overlapped seams, and protrude beyond the foundation as shown.

Termite Shield



•**Inspect your home regularly:** Inspect your home for signs of termite damage on a regular basis. Look for mud tubes, which are the tunnels that termites build to travel between their nest and food sources. Hire a professional company to (typically once or twice a year) probe all exposed wood and place termite detecting wood stakes in the soil around the building (pulling them up and checking them for termite damage during inspections) to detect any termite activity. *Note: There are plastic can detection/treatment systems used by many Termite Treatment companies – and they do work – but a wood stake in the soil is just as effective and often quite less costly for detecting termites. If you see termite swarmers (typically – you likely have a termite infestation. (Subterranean termites are most likely to swarm during the spring and summer months, usually on warm days with calm winds after a rainfall. They often swarm in the late afternoon when temperatures are around 70-90 degrees and the humidity level is high.)*



Below are areas typically prone to hidden termite damage – See arrows



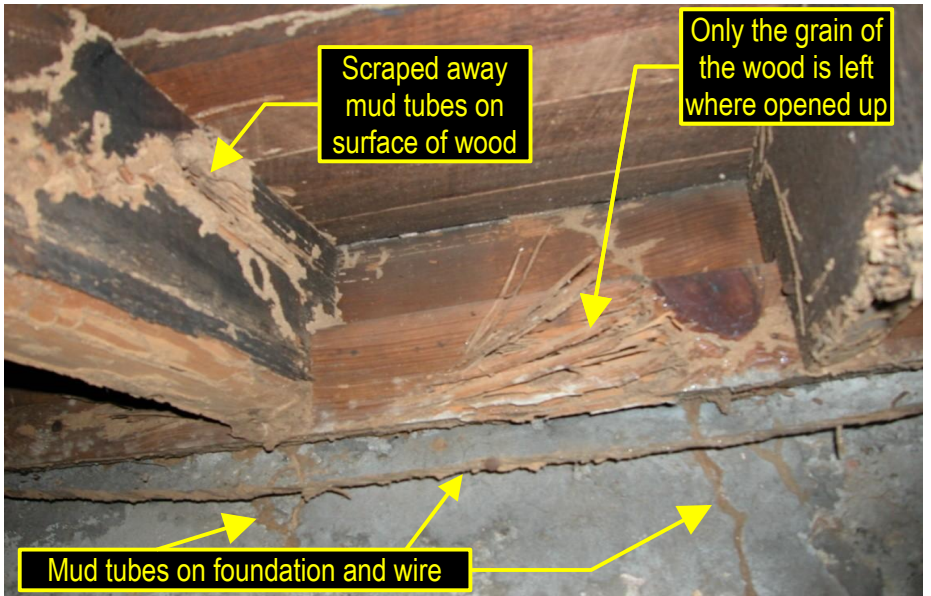
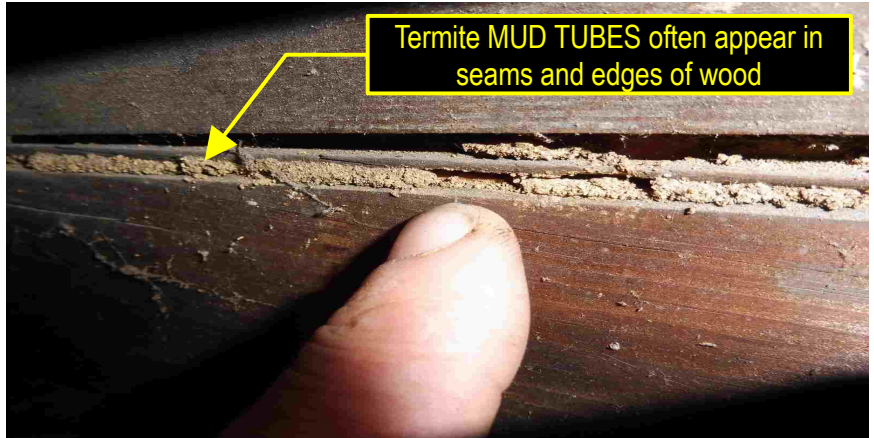
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•**Have your home treated by a professional pest control company:** If you suspect that you have a termite infestation, it is important to have your home inspected – and if necessary - treated by a professional pest control company. A good termite inspection will include placing/checking wood stakes (or plastic “bait stations”), visually checking all potential termite entry points for mud tubes/termite damage, and probing all exposed accessible wood framing members for damage.

•**Watch for swarmers:** Swarmers (*the reproductives that “swarm” out of the nest and fly up out of the ground in massive numbers*) will tend to fly out of a mature termite nest in the spring or early summer. Swarmers in large numbers INSIDE your house is a sure sign you have active termites in your home (*They are flying out of the damaged wood and the mud tubes*). If you see this, call a termite professional immediately and have a full inspection – and if needed – full treatment.



•**Watch for Mud Tubes:** Mud tubes are a sure sign of termite activity. Here are what the tubes look like:



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Types of Subterranean Termite Treatment:

• **Termiticide (Poison) Barriers:**

These are poisons injected into the soil at regular intervals and depth, which form a barrier of poison which builds a “cloud of poison” in the soil that will help prevent termites from coming up into your home (*and it's tasty wood*). When termites eat treated materials – they die. The poisons often can be carried from one termite to the other and could potentially eventually kill a termite colony.

PROS:

- **The barrier can prevent re-infestation for the life of the poison.** When fully applied to all potential termite entry points (Including interior and exterior areas) a full chemical shield protects the whole home.
- **Treatment is below the surface**, and has less potential for human/pet exposure to the poisons. This is why ALL treatment holes must be sealed fully after holes are drilled to inject poisons.

CONS:

- **CANNOT be used when there is a high water table.** These poisons cannot be injected into soils where they may either “wash out” (become diluted and ineffective) or could potentially contaminate water-tables.
- **Limited Lifespan** – Termite poisons have a limited lifespan, and have to be re-applied to maintain protection.
- **It's all or nothing** – an effective termite poison barrier must be installed by protecting ALL POTENTIAL TERMITE ENTRY POINTS with the chemical barrier. Any gaps or unprotected areas in the termite treatment can allow termites to bypass the treatment (and get back to that “tasty wood”).

For example: a concrete block and slab foundation home will typically need poison injected **into the hollow block cores** of the foundation, **and** around the **exterior perimeter**, **and** on the slab area (and basement) along all interior walls which contact the slab in order to be *fully effective*.

- **Basement Interior Drain Systems** – This type of treatment should not typically be used where basement interior drain systems are installed – as water tables are typically high when such a drain system is installed, and the drain (and pump) can allow for poison migration – and a potential for contaminated water being pumped out by a sump pump.
- **Air Ducts embedded in slabs** - Slab constructed homes with air ducts embedded in the slab could accidentally have poisons injected into or migrate into the ducts – potentially contaminating the air in the ducts and home.
- **Radiant Heat or other pipes embedded in slabs** – drilling the poison through such slabs can potentially damage hidden pipes.

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Types of Subterranean Termite Treatment (continued):

- **Direct Chemicals:** Direct chemical “spraying” of visible termites is useless (other than killing *that termite*). Termites live in the ground and inside the wood in your home. ***This method is NOT EFFECTIVE.***
- **Termite Bait Stations:** Termite baits are a time proven method. These baits, installed at regular intervals around the perimeter of your home’s foundation, attract foraging termites to the poison within. The slow-acting poison will eventually kill the termite, but because of the toxin’s delayed action, infected termites will usually bring the poison back to the colony and eventually help kill other termites.

PROS:

- **Can be used in High Water Tables** – This style treatment can be used in areas where the water table is high. Since the poison is *IN* the bait station – there is less risk or washout of the chemical or contamination of water tables.
- **Doubles as Termite Detection** – When the bait is being eaten, termites will be inside the bait station. This makes termite activity detection easier. Some systems use a non-poison bait for detection alone.
- **No poisons in soils** – This reduces the risks of poison exposure when excavating foundation area soils in the future.

CONS:

- **Termites have to take the bait** – Termites are not affected by the poison until they eat it and take it back to their nest. This can take time, and meanwhile termites may be enjoying some of that tasty wood in your home. Termite nests which don’t “take the bait” won’t be affected at all.
- **Proper amount of Bait Stations** – Many termite treatments I’ve seen use minimal (and sometimes MUCH less than minimal) or incomplete installations of bait stations. This type of treatment NEEDS bait stations spaced close enough together AND completely surrounding the property.
- **Bait stations are accessible on the surface** - While the bait stations are slightly difficult to open by children and pets, they *have been known to get them open – potentially exposing them to the poison.*
- **Beneficial Nematodes:** These microscopic, segmented roundworms are natural parasites to many garden pests—including termites. They burrow into their host (the termite) and release a symbiotic gut bacteria that kills them within a matter of days. This is the best option for those who do not want any form of poison used to treat subterranean termites – and it does work when professionally applied.

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Don't Forget The DAMAGE!

When termites are detected in your home, there are 2 things to do: **Treat the termites** to stop them from attacking your house, and **OPEN UP AND FIND AND REPAIR/REPLACE ANY TERMITE DAMAGED WOOD FRAMING**. Many times, we find homes where the termites were treated, and nobody opened up areas to find and repair/replace the damaged wood (*opening up, finding, repairing, and re-finishing termite damage can be costly*). Termite damage not only weakens and compromises the structure, but any un-repaired damage can attract and allow other pests and insects a foothold in your home. Areas should be opened up to expose all of the damaged wood framing so full repairs can be made. Exposed framing members can simply be probed to check for termite damage.

Areas to open up/check:

- **Any areas in direct soil/grade/asphalt/masonry contact:** These areas should be fully opened starting at the low framing areas.
- **Low interior walls/framing built on slabs:** These areas can be attacked through any hidden cracks or penetrations in the slab and the low wall areas can be opened and checked on one side for damage. (*when refinishing - replacing opened up low walls with screwed in removable "over-sized baseboards" one side can make inspecting the walls again in the future less costly and is a good idea*)
- **Finished basement walls:** Termites often enter a home through cracks or gaps in the foundation. Besides opening up the base of these walls (*they are built on slab*), any areas where foundation seams or cracks are present has a potential for hidden termite damage behind the basement finish – and should be opened and checked. (*when refinishing - replacing removed finished basement walls with removable "basement finish system" panels can make inspecting the walls again in the future less costly and is a good idea*)
- **Opposite any exterior wood in masonry/soil contact:** Ceiling and wall areas opposite any masonry or soil contact (*or that show damage/mud tubes on exterior areas*) should also be opened up (*enough to expose floor joists, subfloors and sills*) to check for hidden damage.

Nobody wants to hear that they have termites, but DON'T PANIC if you do. Be sure to consult a **Termite Treatment Professional** as well as a **Licensed Contractor** (*preferably experienced in opening/checking for/repairing termite damage*) and take it from there.