

# Monterey Pine Bonsai Care Guide



**Please read and follow this Care Guide to grasp an understanding of basic Bonsai Care.**

This is an evergreen, Monterey Pine (botanical name *Pinus radiata*). The pine is a very popular bonsai. This particular species of pine is fast growing, and if cared for properly, develops aged bark and shorter needles in a very short time, making it an ideal bonsai.

**Watering (General): This is where many people make the mistake with the first bonsai; either lack of, or too much water. Pines do not like to be too wet (root rot), but they also do not like to dry out (never let it dry out), moist is just right.**

To water, use a shower or mist setting on the hose; you want to sprinkle rather than blast it. If using a watering can (kid's ones are good), make sure it has a rose head; this safeguards washing away soil from the pot's edge, exposing your tree's roots and damaging its needles. For proper saturation, you need to make sure the water is getting right through to the bottom of the pot, and not just bouncing off the top. If the water starts to flood and run over the edge of the pot whilst you are watering, pause, let the water soak in, and water again until you are certain the water has gone right through (running out of the drainage hole/s).

The media contained in the soil are made of many different kinds, most of which aid in free drainage (course pumice, fine pumice, washed sand, propagation sand and zeolite, but the majority of this mix is mainly fine pumice and propagation sand). The rest is potting mix. So although it is in free draining medium and pot, you can still overwater. The roots do not like to be continuously wet and it will eventually cause them to rot.

Watering in the evening is best. Or early morning and evening if watering twice a day.

**DEATH = Over or under watering!**

**Watering (summer):** During the hottest part of summer, you will need to water every day. If there has been a day of cloud cover, check with your finger to see if the soil is still moist. If it is, you can skip a day of watering and mist the foliage instead. If you are not sure, water it a little anyway. **Pines love to be misted.**

If your bonsai is in a small pot, and/or has poor soil, it will dry out much quicker than if in a large pot, so **you will need to water more often**. Intense heat and wind may possibly mean watering twice a day, plus some trees even of the same species will need more water than others. It will also depend on if your tree needs repotting, as it may not have the soil content to contain the moisture required to support the excess roots that have grown. It's a fine line with watering. The idea is to get into the habit of checking you bonsai every day to see what is required. Don't rely on the weather forecast; if it says it's meant to rain, water it anyway, if you feel it needs it. Keep it moist, not wet and never let it dry out.

**During the hottest part of summer, if you are unable to provide enough water during the day, or you are away on holiday etc. you can use a saucer under your bonsai. However to avoid it swimming in water and assist with air flow, you will need to place some fine gravel/propagation sand in the saucer (humidity tray); you do not want it sitting in water as it will eventually suffocate. Using a saucer is not ideal, as you may come to rely on it and get out of the habit of your daily checks, but it is better than your tree drying out. **Do not use a saucer during the cooler months or when you have the ability to water your tree.****

As the weather turns cooler coming into autumn, water less.

**Watering (winter):** As required. You might find you only need to water once or twice a week, depending on the size of your pot, how much rain, wind and sun there has been, however, continuously check the moisture levels in the soil.

**Increase watering as you come into spring. Spring can catch you out by sneaking up on you, hence the importance of daily checks.**

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**Best Position:** Outside in full sun and sheltered from strong winds.

Sometimes this will mean sacrificing the best viewing spot.

Pines like full sun but can handle part shade, as long as it is for very short periods, otherwise your tree will get spindly, and its needles will grow too long, which is not ideal for bonsai.

**Wind:** Protect your tree as best as you can from the wind. If you get severe gusts, temporarily place it in a protected area, even if it means keeping it in the shade (not continuous darkness) or even inside (**as a last resort and no more than 2 days, and never in the window in full sun**). Whether it is wired or not, its roots and foliage will not tolerate constant bashing from the wind.

**Feeding your Tree: Fertiliser: Recommend Fish, Blood and Bone-Organic if possible - (Never use on very dry soil, always moisten first, do not fertilise a tree that looks unwell and do not use after root trimming for approx 4-6 weeks)**

**Shake well** and apply the lowest range of suggested rate as per the individual product's instructions during the growing seasons (e.g. If product suggestion states using 40-80mls of FBB use 40mls to 9 litres of water or approx. 3mls per 750mls of water.

Always apply to moist soil, **once every 2 weeks in the growing seasons from:**

**Early March – late May** (early to late autumn). Then take a break over the winter starting again from:

**Mid August – early January** (early spring - early summer). The idea is to fertilise proactively, not reactively to it growing. Gently pour on your Bonsai tree. Alternatively you can feed slow release fertiliser, but you have less control.

**Be sure to store this product out of the heat** (either directly or indirectly as it will go off). Dogs and cats will want to drink it, so don't leave it lying around and wash away any run-off. It shouldn't be poisonous, but just to be on the safe side.

**Seaweed Tonic (Organic) (This is a tonic not a fertiliser; store out of heat also)**

Always use the **Organic** seaweed tonic as this promotes Mycorrhiza. This is the white, stringy growth you may have seen in soil that looks like white mould/fungus (healthy, beneficial, symbiotic fungus essential to healthy roots that act like a root extension). Do not be alarmed if you see this; this is the

good stuff. If you feed **inorganic**, it tells the Mycorrhizae they are not welcome and **pinus need it to survive**. Have a look on the internet so you know what it looks like.

**Shake well** and apply as per the product's instructions, every week, but not the week you feed FBB, or every week during those periods when you are not feeding FBB.

**Wiring and Unwiring:** If the tree is wired for shaping, you will need to keep an eye on the wire. Usually 4-6 months is long enough for the wire to take effect (depending on the individual tree's thickness of trunk/branch). If you get caught out and leave the wire on too long, it will bite into the tree as it grows and cause ugly, semi/permanent scarring. Remove the branch wires first before the trunk wire. Wire any time of the year.

The tree may also have an anchorage wire securing the base of the tree into the pot for stability. If it has, you will see the wire has been threaded through the bottom drainage or wire holes and secured near the trunk base.

**To avoid damage to its bark, do not wire or unwire your tree when it is wet.**

When wiring, always support the tree with your thumb and forefinger as you work your way along the tree's trunk and its branches.

**Wiring is something you will need to visually watch and can take some time to master**, so look at some videos on Google (Eastern Leaf, Bonsai Mirai, Mikbonsai or Herons Bonsai a just a few good ones).

**Remove the thin branch wire before removing the trunk wire.** Cut the wire off as best as you can, squarely and using suitable wire cutters, however if the wire is too thin to cut and you feel you can unwind the wire successfully without harming the tree, do so carefully, but remember to support the tree.

**NOTE:** Do not play around with the branches too much after wiring; wire them, then place them into shape after you have wired all of the branches. Do not be too rough or keep changing the angle, do it slowly, possibly over a few days. Have a plan in your head before you wire. Too much bending will damage and weaken the branches and possibly kill off branches.

Do not wire the tree to shape it after repotting, this is too stressful for the tree and you risk killing branches or the tree itself. Don't be tempted. You may

watch videos of people repotting, pruning and wiring all in one day, but from experience, the tree takes an enormous hit to its health.

After repotting, leave it for at least 1 month before you wire the tree and visa versa. Perhaps wire the trunk first, then leave it a few weeks before you wire a few branches, etc. The tree will be much happier doing it this way. Any severe bends should be done slowly over time. **Less is more.**

The necessity to wire the tree is basically endless, but it depends on what shape you want it to take on. Over time the tree may try and straighten up after you remove the wire. Give it a break for a while, then rewire if necessary, but if the tree has been 'wire bitten,' when you go to rewire the tree, wind the wire in the opposite direction so as to not re-place the wire back into the same grooves where the wire bite is.

**General Care:** The foundation of any plant care is healthy roots. This is obtained by adequate routine watering, nutrition, pruning, sunlight and air flow. Healthy roots means a healthy tree.

As mentioned, get into the habit of looking at your Bonsai every day, as it may have been knocked over or it may need attention in some way.

Trim off any dead bits and pull out all weeds; some moss is fine.

Know in advance what the wind is doing so you can protect it before leaving for the day.

If it does grow cones (unlikely), remove them, as this can draw too much energy from the tree.

Remove any bugs that may make a home in the foliage of your pine, as it will eventually kill off that part of the foliage. Pine Bark Adelgids/aphid (white cottony looking fluff) can be treated with appropriate insecticides.

Constantly check the wire to make sure it's not biting in. Do not leave the wire on longer than 4-6 months. Possibly shorter during the spring and autumn.

Make sure the roots have not become exposed on the top, and replace some soil around them to cover them if they have (if it is out of repotting season).

Unless it's for your tree, do not use other sprays near it.

Keep a log book of when you last repotted and wired your tree, as well as a fertilising/seaweed tonic calendar. Take a photo of your tree now so you can compare in a few years time; you will be amazed how much it grows.

**Repotting: Never repot on a hot day or in direct sunlight and do not be tempted to repot out of season (spring).**

The instructions below may sound daunting so watch videos on Google before attempting. Everyone is nervous on their first attempt.

To freshen soil and trim roots, you will need to repot this tree every 2 years whilst it is still young, or annually if in a **very** small pot (12 cm or less). When older, you can repot every 3-5 years. Repot during the **spring**. **Do not remove all of the old soil when you repot to avoid root shock and keep in as much Mycorrhizae as possible.**

If you are not sure if your tree needs repotting, you can lift one side out to see if the roots have wound around the bottom of the pot before you decide, **but remember to loosen any wire holding the tree in.**

To repot, have your new soil ready to go before you remove the tree from its pot, and if you are changing to a new pot, have this ready too, as well as the tools you will need. Feel free to place your tree into a larger training pot when repotting to enable it to grow quicker and give it a break from the small pot, but you will still need to keep the roots trimmed, otherwise it makes it tricky when you want to put it back in its bonsai pot.

This is to ensure roots are not exposed for too long.

If you just have the one tree, it might be easier to buy some Bonsai Soil Mix from California Home & Garden, otherwise use about 40% potting mix/compost (of which is made up of 70% potting mix and 30% compost) and 60% drainage mix which is a mixture of coarse pumice, fine pumice, washed sand, propagation sand and zeolite (zeolite is natural, supermarket kitty litter), but again, but the majority of this mix should be mainly fine pumice and propagation sand. Do **not** use soil/clay from your garden. You will want to place a thin layer of the drainage mix in the base of the pot (approx. 1cm), propagation sand will suffice.

Remember the tree may be wired in and secured at the base of the trunk; you will need to unwind this before you do anything else; **lightly dig around the base and you will find the ends of the wire.**

After loosening the wires, carefully dig around the edges of the pot with a knife or suitable tool and lever the tree out of the pot. Untangle the roots by combing down from the top edge with a bent, silver fork/mini rake (California Home and Garden stock these). Carefully comb the roots out as best you can and try to leave some of the old soil in. If you haven't left it too long before repotting, this should be easy enough.

Reduce the roots by about 10-20% and slowly reduce the hard fibrous roots over time. Pines do **not** like too much of their roots disturbed or cut away. If any roots get ripped or damaged, cut them clean. **Try and train the roots to grow out radially rather than downwards, so it will sit better in the pot and to get better root flair (Nebari).**

Always make sure you have sharp shears to do this, but do not use your trimming scissors as the gritty soil will eventually make them blunt, so have one for roots and one for the foliage.

You do **not** want your tree to be bare rooted for too long whilst you are repotting it. This is another good way to harm a tree, so if it is taking longer than expected, you can keep them misted and covered with soil/wet cloth.

If the root ball has a hollow underside, mound the soil up a bit and place the tree directly over this mound so it fills up that hollow. You can also place a small amount of sphagnum moss around roots for better root health.

When you are working out the best angle for the tree, make sure the tree will sit in the pot without being too high; you may need to flatten the roots off a bit more so it sits flat. **Then sprinkle a mixture of old soils and new soil around the top side of the roots** and **gently** use a chopstick to press the soil down which aids in placing the soil around the roots and remove any air pockets. Once you have the tree semi secured, replace the anchorage wire around the roots/base of the tree (not the trunk), making sure it's not too tight but enough to keep it steady. Cut off any excess wire if necessary, and poke and hide away the end of the wire.

Fill the pot with the remaining soils and keep going with the chopstick until you are happy with the firmness of the soil. Don't overdo this and damage the roots. The action is, gently poke with chopstick with one hand and poke finger with other hand to fill in the gap you have made with the chopstick so it is firm but not super packed so it can't breathe.

Don't fill the pot right up to the brim with soil, this will make watering difficult, as water will run straight off and take the precious soil with it.

Water thoroughly with a light shower/mist setting to get the soil to fill into any air pockets you may have missed. Add extra soil if necessary to cover the roots, then give it seaweed tonic and mist the foliage. Each time you repot you will gradually remove the old soil more and more. **Do not fertilise for at least 4-6 weeks, otherwise you will burn the newly cut roots. Leave it out of direct sunlight for 2-3 weeks and just use seaweed tonic weekly.**

**Pruning and Pinching:** As it can take a bit to get your head around trimming pines, the best way to grasp an understanding is to watch the Herons Bonsai YouTube video called: **How to deal with Pine candles.**

A good way to think of trimming pines (or any tree for that matter) is to think of the concept of trimming a hedge. If you leave a hedge to grow for too long it will get leggy and unkempt. And if you trimmed it before the new growth has hardened off, you may damage or kill off the new growth. If you wait until the timing is right, you will get a thick healthy hedge. So with pines, when the timing is right, you rely on the sacrificial candles (pinching or removal) and needles (plucking) to encourage back budding that will enable you to develop, thick, healthy pads (foliage on the branches) where you desire them, as well as shorter needles that gives off the impression of miniaturised, which is desired in bonsai. The ramification and development of branches can be a fairly slow process. **Do not trim the needles to shorten them**, they will turn brown; thin them by plucking them out at the base of the needle as instructed in the video. The new needles and buds that grow will be shorter over time, providing the tree is not over fertilised, not kept in the shade, and candles are pinched and/or pruned adequately.

### **Candle pinching:**



### **Decandling**



Pinus radiata will develop candles in both spring and autumn (two flush pine).



You also want to expose the trunk's movement as much as possible without making the tree look flat or two dimensional. To be pleasing to the eye, a bonsai needs to have good **flow, depth, movement, character, nebari, trunk thickness, and taper**. There may be some branches on this tree that are superfluous. They have been left on as the tree is still young, and the more foliage they have, the more energy the tree can produce and the healthier it will be (the more 'solar panels' to capture the sunlight, the better for growth, health and promotes thickening within that area it is located). Try to keep the foliage even on each branch or pad. If too much foliage is at the top (the Apex), the energy will be pushed into the top; so keeping it even means the tree should get equal shares of energy. Do not remove too much foliage. The majority of the pruning should be done in autumn with some in spring. Thinning needles can be done any time of the year.

If you have left it too long from the last trim and it has got a bit out of hand, try **not** to take off any more than 30%. If there is still more to be taken off, leave it for 2-3 weeks to give the tree a chance to recover, then take a bit more (it's easy to get carried away). Best to keep your tree out of the harsh sun for a week or so after pruning/heavy pinching. You can use a tree sealer on any pruning wounds if you want to cover up any scarring, but pines will naturally seal themselves with pine gum.

Prune off any bits hanging down, sticking up or ones that directly come out at you; keep everything lateral. There are certain rules in Bonsai around incorrect branches, but really it is up to you what you think looks good. See image on Page 10.

There is a lot to learn about Bonsai, so take it slow and learn as much as you can. Keep reading over this document to get a better understanding. It's too easy to rush in and do too much on your tree, this is another very good way of harming it. Give it time to recover and grow. Spend more time thinking, looking and planning than doing and regretting, but at the same time be confident in your decisions 😊

Bonsai is ideal for people of all ages.

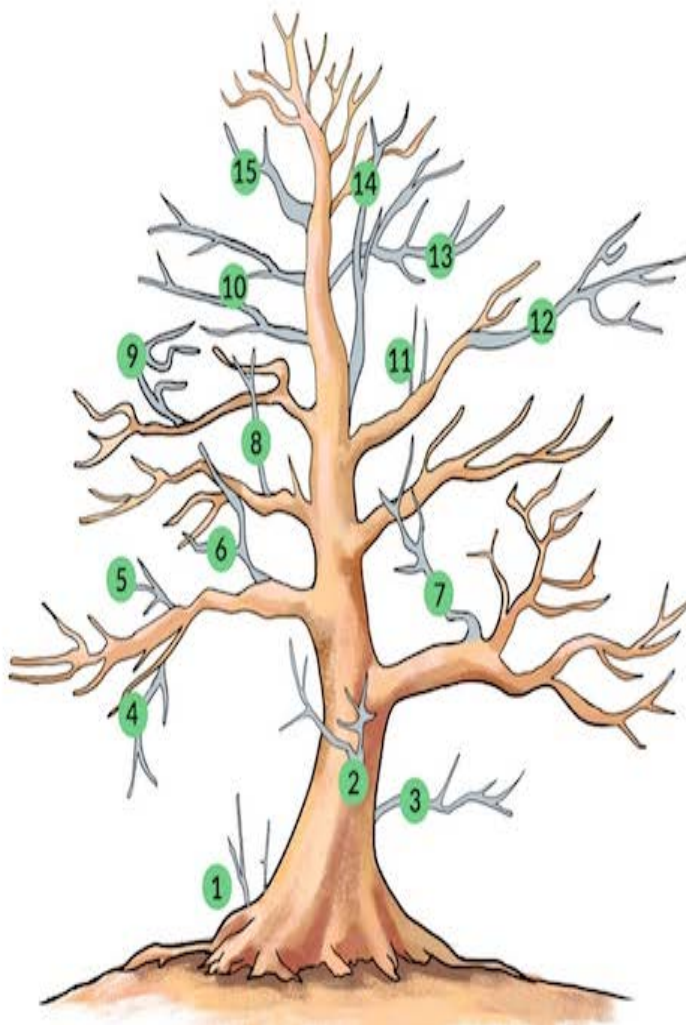
Bonsai teaches a person that less is more, and requires a person to be patient, responsible, and think about good decisions.

Bonsai is therapeutic and allows a person to lose themselves in a creation.

**Bonsai is a form of art; living art. You will never look at trees the same again. Look after it, and it will give you a lifetime of satisfaction** 🌳

**Happy Bonsai-ing** 😊

## Undesirable Branches



1. Suckers that grow from the base of the trunk
2. Branches blocking view on the trunk
3. Limbs that grow close to the ground
4. Hanging branches
5. Dead branches
6. Crossing branches
7. Branches returning to the center of the tree
8. Upward growing interior branches
9. Branches with unnatural twists and turns
10. Parallel growing branches
11. Suckers higher on the trunk (water sprouts)
12. Branches extending beyond the tree profile
13. Branches growing from the same height on trunk
14. Branches that compete with the trunkline
15. Disproportionately thick branches at the top