



## House Plants

*Tips and Advice*

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# House Plants

## Your Indoor Garden

Adding houseplants to your home's interior provides color and life. Many species help 'scrub' the air while adding the benefit of a living thing to the home. The sight of a healthy, growing plant gives a lift that can be provided in no other way.

Caring for houseplants needn't be a big burden either. You can select plants that require almost no care at all, just a little bit of water from time to time and the occasional pruning. Many require no fertilizer whatsoever and will thrive in just about any lighting conditions you happen to have.

Rates of growth vary enormously among plant species. You can select one that will change week to week or pick a plant that takes years to grow by any visible amount. If you want to see rapid progress, be prepared to re-pot more often. Some plants can flourish to the point they'll split a clay pot. Others will remain relatively unchanged for years, making them a stable point in your interior design.

You can select plants that thrive at different times of the year as well. Some flowering species grow blossoms very soon after the end of Winter. Others bloom only very late in the Summer. And many are in between. You can select a variety to have color for months on end.

There are a whole range of exotic plants to choose from as well. Carnivorous plants take more care, but they are often admired for their beauty and the stark difference from their more stationary cousins. Not a bad way to naturally clear the air of those pesky flies that always seem to find their way in, either.

There's always a little work involved, though, in taking care of any houseplant.

Many plants are insect and disease resistant, but nearly all will suffer from some sort of problem. Spider mites, aphids and others are easily taken care of though, by simple physical brushing or a mild insecticide.

Poor watering practices kills many more plants than pests, however. Overwatering is one of the most common errors by aspiring indoor gardeners. The surface of the soil looks dry, so we react to keep the plant well watered. But in the eagerness to do well, we can do wrong. Finding out how much water your plant needs and when, and monitoring carefully the actual amount, can eliminate the problem.

Once the basics are mastered, most indoor gardening enthusiasts will want to take the next step by planting from seeds or cuttings. Just a step beyond the skill needed to re-pot, growing your own plant from scratch can be tremendously satisfying.

Selecting quality seeds or the right kind of cuttings will start you off on the right foot. Applying the right kind of fertilizer at the right time will give that new plant the best chance for success. Give it ample light and nature will do the rest.

Houseplants provide beauty and the feeling of life that will enrich any home. Invest a little time learning how to care for your plants and they'll reward you many times over.

## Indoor Plants For Indoor Design

One of the most enjoyable aspects of having houseplants is the opportunity they provide for doing interior design. A home can be lovely with good furniture, fine table-top items and beautiful paintings. But adding indoor plants can expand the choices enormously while moving the decoration into a whole new dimension.

Pots come in all sizes, shapes, colors, designs and materials. A simple clay pot can provide a subtle earth color for a subdued design. A bright yellow ceramic can liven up a dark corner. A pattern in plastic, metal or wood can fold right in with the décor of a hallway or sunroom.

If you have lots of bonsai, for example, you may want to continue the oriental theme by providing several pots in red ceramic. If you have a complex of vines, you can go with a simple line carving on the pot to minimize distraction. If you have a flourishing Pitcher Plant or other carnivorous species, you can select something festooned with crocodile drawings to add humor to your design.

You can vary the effect even more by selecting containers of different shapes. Round pots convey solidity, while a long rectangular tray gives a feeling of motion because it encourages the eye to move along its length. Going with an asymmetrical shape shows the iconoclasm of the designer.

The type of flower you select will play into your color scheme. Bright yellows and reds will add lively splashes to an otherwise quiet room. Or, you can continue the soft atmosphere of your favorite reading spot by choosing a deep purple.

Even the size and shape of the flower comes into play when pondering over your interior decorating plan. Numerous, small, star-shaped blossoms can make for an active looking display. Large, bell-shaped orchids give a bold impression. You can select a species that is just ground cover with small flowers poking up. Or, you can go for a single blossom on a long green stalk to make a living sculpture.

The number and placement of plants is also a factor in the overall design.

A medium-sized room that has a dozen or more small pots placed at different levels gives a feeling of space in three dimensions. A single, larger plant in one corner draws the eye to that spot. A hanging basket draped from the ceiling has a different effect from a large pot pushing up from the floor.

By varying all the possible attributes - color, shape, place, size and so forth - you can tailor your indoor gardening efforts to the total design of your living space. Doing so combines the artificial, decorative elements that make for a personal touch with the living benefits of plants.

## Is It a Houseplant If It's Outdoors?

Many plants will do equally well indoor or out. But some thrive best in the protected environment of the house, while others won't flourish unless they are in the elements. Anyone considering a bit of indoor gardening and decoration with houseplants will want to do a little research to find out which falls into which category.

Herbs in particular are famously adaptable. Provided they have adequate drainage and light, most can do well outdoors or in. But it's still true that some are better suited if your heart is set on indoor plants.

Bay Laurel is a Mediterranean native that has adapted for poor soil and lots of sunshine. That's an advantage and a caution for those considering it as an indoor plant. Some enthusiasts have a tendency to want to care a little too much for their indoor houseplants. That can lead to overwatering and excessive fertilizing. Go easy with those when planting Bay Laurel in a pot indoors.

Parsley does very well indoors, where in fact it thrives better than if it were planted outside. Like most herbs, it loves sun so make sure it's near a window with lots of afternoon exposure.

Most Bonsai prefer the outdoors. But there are several species that adapt well to conditions in the house. In some climates those that would otherwise be considered outdoor plants will actually do better indoors.

Tropical bonsai can, as the name suggests, do very well outside - if you live in the tropics. But only a small range of latitudes get that Caribbean-like climate. If you live in a climate that dips below 50F/10C for more than a day or so, it's best to keep your tropical bonsai indoors where conditions can be controlled.

Simulating tropical conditions inside can lead to discomfort, but need not. Just remember that hot and humid is the call for these plants. You need not mist the whole house, but lots of warmth and regular spray will help this type. Some bonsai pots have automatic misters that make the job super easy. Keep the plants out of direct sun, though. Even though they like the heat and sun, glass can act as a magnifier, overwhelming even these plants.

There are many ways to keep indoor plants healthy. Supplemental lights, and occasionally heat lamps, are great aids to indoor planting. Soil care kits are inexpensive and easy to use. But it's essential to choose plants that thrive inside to begin with.

## Starting From Scratch: Seeds and Cuttings

Buying a houseplant and caring for it takes time and effort. The rewards are a lovely addition to the home that adds a bit of life to the decoration scheme. But there are additional rewards to be had by growing your own plants from seeds or cuttings.

### Seeds

The first step is to select quality seed. There's no sure fire way to guarantee that, unless you've gathered seed from your own first-rate plants. But using a reputable source for seeds is a good beginning too.

For houseplants grown from seeds, proper soil preparation is paramount. Start with sterile earth, not just dirt from outside the house. The soil around your home may have weed seeds, insect larvae, unhelpful soil bacteria or any of a number of other problems waiting to spring up. Maximize your odds by starting with known, good soil.

A seed starting tray is a good idea for most new plants. They provide a capillary mat that soaks up water from below to feed the seeds and keep the surrounding soil moist. They are a good size for new plants that will serve for those critical first few months. Keep the soil fairly warm (at least 72F/22C) during the day. Ensure it doesn't drop below 65F/18C at night. Use a warming lamp if necessary.

Providing ample light is essential for these newly developing plants. If the location and/or climate don't provide enough sunlight, supplement with artificial lighting. Suspend the light a few inches above the tray or pot. The heat will penetrate the soil, provided the seeds are not planted too deeply. When they sprout above the surface, the light will provide the needed energy for photosynthesis, vital to every plant's existence.

Once the new plant has grown to the point of developing leaves, you can add a dilute fertilizer, 1/4-1/2 strength, then transplant the new arrival into a pot.

### Cuttings

Many of the same principles apply to growing from cuttings. Selecting a good cutting is the first step. Make sure you use green stems that haven't hardened or become 'woody'. Use a stem that contains a node (the point where the leaf attaches to the stem). That node will develop into the new plant, by sprouting roots.

Remove all but one or two leaves with their nodes, through which the new roots will eventually emerge. Until those roots develop, the plant will acquire its needed nutrition from the leaves. Prepare the soil as you would for seeds, then insert the cutting gently into the earth.

Keep the soil moist during this critical first growth phase, but not excessively wet. Rot from excessive watering is the most common way new plants are destroyed. Just as with seeds, give them plenty of light, at least 12 hours per day. If natural sunlight doesn't supply the needed amount, supplement with artificial lights.

Once the plant has sprouted roots and had a few months to develop, you can re-plant into a longer-term pot.

## Growing Potted Plants

Having potted plants around the home provides lovely decoration and a healthy atmosphere. Not only do many indoor plants help 'scrub' the air, but the sight of healthy growing things provides a nice mental lift as well.

But there are a number of challenges presented by potted plants.

Selecting the proper sized pot for an indoor plant requires substantial research. Keeping the soil at the right level of moisture and needed nutrients is tricky. And, providing enough sunlight without burning the leaves or overheating the soil takes knowledge of your species and experimentation. Add to those necessary plant-care activities a needed flair for design and you have a task that can befuddle many indoor gardening enthusiasts.

Those challenges can be lessened by picking different species, which also increases the beauty that comes from variety.

Select a few that need no fertilizer and not much watering. That satisfies your goal of having several plants around, but keeps down the amount of needed effort to have an indoor garden. Mix a few cacti in. Add a Spider Plant that needs practically no attention. Then you'll have room in your schedule for those other beautiful species that need a little more care.

The pot you select has to be right for good growth, but you want it to be right for your home as well. Color, shape, size and material all count. The plant you select can vary in size, leaf design, color and other attributes. With all that, the choice becomes an exercise in interior decorating.

For those bright, open corners a larger plant is often the best choice. A medium pot on a tall stand filled with a Sansevieria is a good choice. Or, you can go with a palm that will provide shade both for the home and for other, smaller plants arrayed underneath.

Re-potting will be needed every couple of years for most potted plants. Some bonsai, properly pruned and wired, can stay in the same pot for years. But most houseplants will outgrow a pot. If you have several plants around the home, a substantial task can lay ahead if they all require re-potting at around the same time.

Stage out your work by growing some from seeds or cuttings, buying others at different levels of development, and varying the species in terms of growth rate. That will even out the number that have to be dealt with in any given year. By careful selection of the type of plant, you can re-pot some just before Spring, while others can wait until Fall.

Varying the species has another advantage. If you carefully select different types of flowering plants, for example, you can stage out the blooming period so you have flowers for a longer portion of the year.

Very few flowering plants bloom all year. Some will flower in the early Spring, others in mid-summer, and some even wait until a little later in the year. By varying the species, you will provide color and scent that varies. You can have a profusion of lovely flowers that brighten up the home for six to eight months in most climates.

Mix it up and you'll find the effort needed to maintain an indoor garden is very mild.

## Choosing a Pot

Choosing a pot is one of the most important decisions anyone interested in indoor gardening has to consider.

Even when plants are bought already in the container, making it seem as if the choice has been made for you, you need to consider whether that plant will thrive in that pot. You also need to consider, just as you would with plants grown yourself from seed or cuttings, when to re-pot. That decision will be influenced by the container you select at the outset.

Apart from subjective issues like color and material, which come into play in decoration designs, size is an important criterion to think about. Size will play a role in decoration plans, but it's chiefly a matter of repotting.

Most houseplants will require repotting every couple of years. That varies depending on the initial size, the species, the amount of sunlight and other factors. But as an average, it's reasonable.

A large pot, for example encourages free root growth, and usually provides substantial soil nutrients for them to draw on. Thus, starting with a larger pot will allow the plant to grow faster, leading to quicker repotting. But it can lead to excess water retention, so don't go overboard.

A smaller pot provides less soil to absorb nutrients but can lead to a higher concentration. While there's less room to grow, a smaller pot constrains root growth and the plant grows more slowly. These two effects tend to offset one another, leading to about the same amount of time to repot for a given species. But it's important to take care not to allow the plant to become root bound. Again, aim for the middle ground.

When repotting is required, the pot size will need to be increased about 1-2 inches in diameter to allow for continued healthy growth.

Drainage is an equally important consideration.



Some professional sources estimate that as many as 90% of indoor plants are overwatered, many of them receiving a premature death as a result. Diseases are more likely and more frequent, and often more severe, as a result of excessive soil moisture. Most harmful organisms need a moist environment to thrive. Mold, mildew and fungi are obvious cases.

Herbs are a prime example of plants that can too easily be overwatered. Most evolved in poor, rocky soil and lots of hot sunshine. They flourish in conditions that would stress other plants and require very little water. Bonsai, though most enjoy a moist soil, still need plenty of drainage in order to ensure that they are not 'sitting in water' all the time.

That implies: choose a pot with plenty of holes in the bottom. Keep the holes to a modest size in order to prevent soil spilling out or cover them with small mesh. But neither should they be too small, since they'll become too easily plugged. To test what size is about right, place a saucer under the pot and fill it to about 1/3 full with water. Repeat until the water is no longer taken up by capillary action into the soil above.

Keep track of the volume of water you used. That will give you a measure of the right sized holes for that type of plant and soil, as well as the amount of water to use. With this technique you can measure drainage and watering amount and frequency in one experiment.

Most people choose a pot based on appearance, which is an important factor since you want your home to look nice. But consider the plant's needs, too, since it's a major part of the decorating scheme.

## **Water, How Much Is Right?**

The overwhelming majority of houseplants get most of what they need by their own efforts, from decent soil and adequate sunlight. But, unlike their outdoor cousins, houseplants are very much at the mercy of their owners for proper watering.

It's estimated by professional sources that up to 90% of houseplants are watered incorrectly - receiving too much leading to root rot and other diseases or too little. But getting it right doesn't have to be an impossible dream. Some simple tips will help keep your plants healthy by receiving the right amount at the right time.

For anyone with a serious interest in houseplant care and feeding, a hygrometer makes for a great investment. These simple instruments can be super-cheap or cost a small fortune. But even one costing just a few dollars will often do the job.

Many contemporary designs are digital, making for easy and accurate readout. They also often come in a dual-function form that combines a thermometer in the device. That's great for testing soil temperature, another important factor in healthy plant care.

There are manual methods for testing proper water levels, too.

A finger pressed into the surface will give you a good idea of moisture level in two ways. If your finger gets wet, there's water present, obviously. But at the same time, you're feeling the hardness or sponginess of the soil. Moist soil gives, dry soil resists.

A simple tongue depressor or a chopstick can serve as a quick, easy testing tool. Insert it into the soil and withdraw. If the wood comes back moist and dark, you know there's water present under the surface. It's true that the surface water will wet the wood to a small degree. But wood will only absorb so fast. If you insert quickly, the surface moisture will account for only a small percentage.

A third method is equally useful. Place a saucer under the pot and fill it to about 1/3 full with water. Allow it to stand until the water is taken up by capillary action through the drain holes in the bottom. Repeat until there's water remaining in the dish, then soak up the excess with a towel. Keep track of the total volume of water you added. That provides a good measure of how much that particular soil/plant/pot combination can use.

Still another method, one that doesn't disturb or modify the soil at all is useful. Since water has weight, moist soil will be heavier than dry soil. Simply place the whole pot on to an accurate scale and make repeated measurements. Once you've determined the right amount of water through other methods, you can ensure you're providing it simply by measuring the weight daily. After a while, you'll have a very good estimate of the right amount and can stop the weighing procedure.

Remember that, even though you measured the volume by another method or are following good guidelines, the actual needed amount can vary. As the season changes, as soil composition changes and as other factors vary such as air temperature and humidity, the actual amount of water retained or that's healthy can alter. Using a combination of techniques can help keep it perfect all year 'round.

## How To Feed Your Houseplant

Outdoor plants are relatively self-regulating. They get most of what they need from the surrounding air and soil and often require no feeding aid. Indoor plants are much more reliant on the gardener's tender ministrations. But it's possible to overdo it.

General fertilizers have varying concentrations of Nitrogen (N), Phosphorus (P) and Potassium (K) or potash, hence the shortened name: NPK. The letters are the elements' chemical symbols. 10-10-10 is common but other variations exist, such as 10-20-10 or 5-2-7. The numbers indicate the relative amounts of each element in the fertilizer.

Since every plant species has, as the name suggests, specific needs it's important to research which need what type and when. Some plants, such as flowering or fruit species, tend to require more in the early Spring, but go dormant in the late Fall. Adding the same amount of fertilizer later in the year for these types can poison the plant, since it can't process the excess. Often, zero is the appropriate amount.

Each plant takes up fertilizer at a different rate as well. Slow-release nitrogen, in the form of beads is often desirable, where it helps produce green foliage. Since nitrogen often comes in the form of a salt, such as urea, it will readily absorb moisture from the surrounding soil. Beads take longer to deliver material below the surface.

Phosphorus supports the ability of flowering plants to bloom, and is influenced by the pH level of soil. pH is a numeric measure of acidity, on a scale from 0 to 14, with pure water being 7 - neutral. Measures closer to 0 are more acidic, those closer to 14 more basic.

Soil that is either too alkaline (basic, the opposite of acidic) or too acidic can inhibit the plant's absorption or release of phosphorus. Phosphorus is particularly important for healthy root growth.

Potassium helps fight disease, but promotes fruit development in fruiting species as well. Since it's chemically active in the presence of oxygen and water, it helps transport elements through the tissues of the plant.

All purpose liquids are convenient and will work with a wide range of plants, but for some they deliver fertilizer too quickly. They do have the advantage of delivering fertilizer very evenly, however.

Whichever proportion and form you choose, be sure not to apply fertilizer to a dry soil. That results in a very heavy concentration of elements and can easily burn the plant.

Most plants that you have just purchased will not need fertilizer right away, if they've been properly cared for at the nursery or gardening center. Flowering plants will need a little more, a little sooner in Spring and cacti need almost none, ever. You can tell if you've overdone it by looking for stunted growth, wilting or dried tips assuming you've watered properly.

To flush excess fertilizer just apply a little extra water to a pot that has good drainage. Repeat the procedure three or four times at one hour intervals.

## **Proper Care For Your Houseplants All Year Round**

Most houseplants require some care year round. But exactly what you do is heavily influenced by the season. Most houseplant species have an active growing season in the Spring and early Summer, followed by a tapering off in the Fall. Many become dormant in Winter, even though the temperature in the house remains relatively warm.

That variation grows out of the change in the amount of sunlight available, but also from generations of genetic development the species saw in the wild. Most are not completely insensitive to the uniform temperature provided by an indoor environment, but they still have many genetic drivers that cause their natural cycle to remain intact.

That means that the care you give them should follow that cycle, even for plants kept continually in the house.

Most, for example, will do well with a good fertilizer applied in the mid-Spring when their growth stage is ramping up. As the amount of sunlight grows in Summer, they'll need less. For flowering plants the time after their blooms fall is a signal to taper off sharply of any extra feed. During the dormant season in Winter, they should receive none at all.

Applying fertilizer at a time the plant can't absorb it can lead to a kind of chemical burning, root destruction and the death of the plant. Foregoing it when they need that extra help can result in failure to thrive and lack of fruits or flowers.

Watering follows a similar rising and falling pattern.

Water is a medium for transporting needed chemicals from the soil, through the roots, up the stem and branches, and out to the leaves. It also participates directly in many biochemical reactions. But, as with animals, too much water can be harmful. For plants, the amount is even more critical because of their stationary character.

During the warmer, dryer months a plentiful amount of water is needed by the majority of houseplant species. The exact amount varies from plant to plant, depending on species, soil composition, pot size and other factors. Some require none at all. But on average, most will need some, and more during the Spring and Summer.

That water helps support the growth and also helps keep roots and leaves cool. Most will shut down their pores during the day, when the temperature rises, then open up later on. That's a natural response which has evolved to conserve water. Since they're inside, adjust the watering schedule to accommodate the actual temperature and the amount of sunlight they're receiving.

The most common problems with houseplants are the result of overwatering. Providing good drainage and following the guidelines for your specific circumstances is paramount. That problem becomes bigger in Winter, when people have a tendency to continue the same routine they did during the warmer months. Even though the temperature in the house may vary only a few degrees year round, your plant 'knows' what time of year it is. Adjust the watering schedule accordingly.

## Caring for Tropical Plants

Tropical plants are among the most popular indoor gardening choices. They're often drought tolerant and easy to care for and there are many beautiful species.

Many tropical plant species evolved in sandy soil conditions, so be sure to provide yours with good drainage. Loamy soil with tiny embedded rocks make for a good choice. Every pot used for a tropical plant should have one or more holes in the bottom. If need be, cover the hole

with a wire mesh to prevent a large outflux of earth, but make sure the mesh isn't so small as to clog easily.

Watering tropical plants is easy, since they require very little. Many can go as long as two months in the Winter between waterings. Think of the climate in the tropics: hot, dry, followed by monsoons for a few weeks once a year. Sansevieria, for example, like it when the soil becomes dry in between waterings.

Most tropical plants do well with little or no fertilizer added to the soil. Though the exact mixture will vary with every species, a low nitrogen fertilizer will be great for most. Even tropical plants require several micro-nutrients, though. A micro-nutrient is a chemical that is essential for plant health, but is delivered in much smaller quantities.

Regular fertilizer is typically a mixture of Nitrogen (N), Phosphorus (P) and Potassium (K). Micro-nutrients are such elements as manganese, magnesium, calcium and copper. Nitrogen helps leaf and stem growth, phosphorus helps maintain healthy roots and potassium contributes to flowering and fruiting.

Fertilizer is prepared in relative amounts, such as 30-10-10, which indicates that there is 3 times as much nitrogen as phosphorus or potassium. Hibiscus does well with this mixture, for example. For other flowering plants 15-30-15 works best. You'll need to find out which is the proper amount for your species.

Not surprisingly, tropics like lots of sun. But take care not to overdo it. Smaller plants can readily get overheated when near a window, since glass allows certain wavelengths in, but prevents others escaping. The so-called 'greenhouse' effect. And not only can the leaves get too much energy, but the soil can overheat in the pot, leading to damaged roots.

There are several cold hardy tropicals, such as Peace Lily or Spider Plant. Consider one of these if your houseplant is going to spend a lot of time on the front porch or near a window that gets cold in the Winter.

Several varieties of ficus will tolerate cold reasonably well, such as Wintergreen or Monique. In cold weather they may drop leaves, though, so be prepared for some clean up.

Some will do well in low light, even though they still want warmth. Midnight is one example. The leaves are very dark and grow upright, so they're perfect for those darker hallways. On the other hand, something like a Bougainvillea will need lots and lots of sun.

## How To Grow a Healthy Palm Tree

Palm trees are often associated with the tropics. Images of banana bearing trees come readily to mind, swaying in the breeze under a hot sun. But it's also true that there are many palms that tolerate cold very well. That adaptability, along with their attractive appearance and easy care, make palm trees an excellent houseplant.

King Palms make for excellent shade providers and we often associate that with the outdoors. But they can provide beauty and a useful function by providing shade near a window for other, smaller plants. Direct sunlight through glass can produce very high temperatures. Moderating that with a King Palm allows you to place many plants near the window without risk. But, King Palms can grow very tall, so expect to have to move them outdoors after a few years.

Majesty Palms might be a better choice, since they grow slower, reaching about 10 feet in 10 years. Queen Palms will generally grow too fast, reaching 25 feet (when placed outdoors, of course) in as little as seven years.

For those who want a palm but live in a colder climate, there are many choices. Among the hundreds of species of palm tree, there are dozens that tolerate low temperatures well. Date Palms are hardy down to 18F (-8C), as are Texas Sabal Palms and Canary Island Date Palms. Windmill Palms will tolerate even colder temperatures, down to as low as five degrees Fahrenheit.

None of those temperatures, of course, are typically found inside the house. (We hope!) But houseplants aren't just inside the house. They're often grown in containers that sit just outside the front door and are the same species that might be found actually inside the house. An enclosed porch can also be considered as a great location for a good palm.

As with any houseplant or tree, soil type and care is paramount. Adding a beneficial fungus such as mycorrhizal fungi will help keep your plant healthy. In addition, palm trees require a somewhat different fertilizer from most other houseplants.

You'll need a slow-release fertilizer with NPK ratios that are tailored for this unique plant. A 3-1-3 or 15-5-15 fertilizer is ideal. Either in the same mixture or as an add-on be sure to feed the right amount of magnesium and calcium to your palm tree, too. Manganese is another essential element. These so-called micro-elements are fed in smaller quantities but are still important for palm tree health.

Salt buildup can be a problem with palm trees, but the cure is simple. Just flush with water every hour for a few iterations, measuring the salt content with a soil testing kit until you have the right level.

Palm trees, as you might expect, can thrive on very little water much of the time and their watering schedule is quite different. Just think of what the tropics are like. Very hot, dry conditions for long periods, followed by monsoons.

As with any houseplant, make sure the pot is large enough to avoid root bound conditions and that there is good drainage. Make sure you get one physically large and heavy enough to support these larger plants.

## Spider Plants, Practically Indestructible

The Spider Plant (*Chlorophytum Comosum*) makes for an excellent houseplant. They're attractive and easy to care for. Though, as with any houseplant, it's possible to over or under water, they're much more tolerant than most. And they live practically forever!

Spider Plants have long, narrow leaves that come in subtle variations of dark green with yellow stripes, variegated speckles and others. They quickly grow to produce an abundance of foliage, making them a great decorating choice. As they grow, they'll tolerate a root bound condition very well.

Watering a Spider Plant takes very little effort, just don't overdo it. Any houseplant can suffer from root rot when the soil is kept too wet. A consistently moist earth with occasional drying out periods is best for this plant. They can go several days with no water at all, especially during the less active seasons of Fall and Winter.

If you notice the tips getting brown or spotted, you will do well to change the type of water they receive. If you've been using water from the tap, that might be okay depending on where you live. But some cities supply water with a relatively high concentration of chlorine and/or fluorine. These can damage your Spider Plant. Using collected rainwater or purified water without minerals will solve the problem.

Spider Plants are also very flexible about the amount of light they receive. They'll do well in indirect sun, but can endure very bright light for hours per day. The ideal is to provide them with a few hours of reflected light in an area that is not too cool and not too hot. They'll do great in an area of the house that is around 65F (18C), but will be fine if it decreases to 55F (13C) at night. That variation is part of their natural environment.

Spider Plants are very forgiving about fertilizer, but here again it's important not to overdo it one way or the other. A liquid NPK mixture applied every three to four months in the growing seasons is fine. No need to apply in Fall or Winter. That means only two to three feedings per year. Simple!

In the Summer they'll produce lovely, small, star-shaped white flowers. They grow along a stalk that becomes over three feet long. Stake the stalk if you notice any excessive lean or bending. Blooms may appear more than once and can develop in Spring or early Fall as well.

They make an excellent hanging basket, especially when they're older and have produced an abundance of leaves. But they can outgrow a pot, so you may have to divide and re-pot after two years. They'll reach a couple of feet wide and, even apart from the flower stalk, get two feet high. A healthy Spider Plant can grow enough to crack a clay pot.

Add a delightful look to your indoor garden with a houseplant that's easy to tend. Try a Spider Plant.



## How To Care For Bamboo

Bamboo makes for one of the more interesting houseplants. It's decorative, hardy and can spread like wildfire, so it makes for a beautiful but challenging plant.

Preparing the pot is the first step. Though there are dwarf species, regular bamboo can grow to enormous heights. But the first few years will only see a few feet and the bamboo can be trimmed. So, select a medium-sized pot.

Soil preparation is next. Bamboo enjoys somewhat acidic soil with very good drainage. pH can be measured with a soil testing kit. Loamy earth with not much clay will serve well. You can mulch the surface heavily and seed the pot with earthworms to let them decay the leaves and make holes for good aeration. Just spread a couple of inches of mulch around the top.

Later, when the bamboo begins to shed leaves, just let them lie on the surface over the roots and rhizomes. They'll help keep the soil moist, which bamboo - since it grows naturally in highly humid climates - really needs.

Groundcover can be a good addition to the surface as well. You want something that is high in nitrogen and silica, two things the bamboo needs in quantity for good health. Some gardeners will use chicken manure to supply a high quantity of nutrients, but the odor isn't something that most will want around the house. If the bamboo is kept in a pot on the porch, however, it might serve the purpose.

Bamboo can be planted at any time of the year in milder climates, but in colder areas aim for mid-spring. Planting later won't give the bamboo enough time to establish itself well before the cold weather sets in. Even when kept indoors in temperature controlled conditions, bamboos are usually near the window. The cold surface of the window often draws heat away from the plant. You can counteract that somewhat by mulching heavily.

Remember that, since bamboo can spread readily, you will need to be careful of the plant becoming root bound. A large pot will help, but be prepared to re-pot. Often a smaller species is used to slow the process down. Some gardeners will use a long planter box rather than a round pot, in order to make for a nice row of plants.

Proper watering practice is critical for container-grown bamboo. Because of the geography in which it evolved, bamboo does not tolerate dry soil well. Yet, the soil can't be continually sopping wet, either. Maintaining that balance will require experimentation and careful observation to ensure the plant is staying healthy.

Newly planted bamboo requires more frequent watering. Twice a week is common, where other plants do better with only once per week. In a five gallon pot about a 1/2 gallon of water is called for. More frequent watering will likely damage the plant, as evidenced by excessive leaf dropping. However, in Spring the leaves will yellow and fall, which is normal.



## How To Care For Sansevieria

There are about 60 different species of the Genus Sansevieria, variously known as Snake Plant, Mother-In-Law's Tongue and many other names. Many are natives of Africa, but it can be found in Australia, China, Japan or Hawaii as well as other areas. These beautiful plants make for an excellent addition to the indoor garden and they're very easy to grow and care for properly.

Sansevieria do well in low-light conditions and can go two months between watering in the Winter. This makes them a great choice for an indoor plant. Their beauty is well-known and they grow leaves that have patterns which vary with every new growth. Leaves are often dark green, but can be yellow striped around the edge, or speckled or any of a dozen other variations.

Since the tips are very sharp some care should be taken about placement and maintenance. Trimming the sharp tips is not recommended, so you'll need to be careful when watering and trimming leaves.

Overwatering leads to dropping leaves and can readily produce root rot in this drought-tolerant plant. Underwatering will produce leaves that look wrinkled and can result in permanent root damage. If the long leaves fall over, don't stake them for support. Just trim the leaves at the base and wait for the next ones to sprout up. It won't take long!

Allowing the soil to dry out between waterings is a good idea in the case of Sansevieria. You can use a hygrometer to test the soil under the surface, or just rely on a tongue depressor. Insert the wood into the soil a few inches down, then withdraw and visually monitor the amount of moisture.

As natives of the tropics, they love heat. Give them ample sunlight and a warm room and they'll reward you by growing profusely. Take care to provide an adequate pot, though. These prolific plants have been known to split a clay pot because of their healthy root growth. Providing a very large pot, though, will lead to an overwhelming amount of growth to trim.

Sansevieria also don't require much fertilizer. They do well in fairly low nitrogen-level soil and can easily get overwhelmed in earth that is too rich. Treat them almost as you would a cactus. That will help produce a healthy plant and generate lots of interesting patterns in the leaves.

White or greenish flowers will appear along the stalks of some species. Others are grown because of their great fibrous leaves that were historically used for bow strings, another name for one species of Sansevieria.

If you want a houseplant that is attractive and easy to tend, these delightful species will make a great part of your indoor garden.

## The Braided Money Tree

The Braided Money Tree (*Pachira Aquatica*) is a beautiful and unusual plant that makes for an excellent addition to any home. The tree is composed of several trunks that wind around one another, reaching anywhere from a foot to several feet in height. The bonsai version is around a foot, while full sized trees reach up to seven feet.

Plentiful green foliage tops this artistic display providing a package that is a decorator's delight. In the bonsai style it makes for a particularly nice addition to the indoor garden.

Caring for any bonsai requires time and thought. But acting on some simple guidelines your Braided Money Tree can flourish for years. Growing one from scratch requires expert-level knowledge, but many will acquire their first Braided Money Tree after it has developed for a few years.

As with any bonsai, watering is critical. Bonsai generally like plenty of water, but absolutely require good drainage. That's provided by two essential factors: soil and pot.

The soil should be a loamy mixture of earth and small pebbles lying in a pot with one or more drainage holes. The holes should be covered with wire mesh or small rocks to allow water to flow but still retain the soil. Adding some river sand to the mixture will help create porous areas that aid in good drainage. Some will do well in a mixture of peat, vermiculite and perlite.

Braided Money Trees prefer a little less water than some other species. Once per week is plenty. Some will do fine on as little as a cup per month, but the exact amount will vary with the size of the pot and the composition of the soil. Misting at the same time is a good practice. It helps the leaves absorb some needed moisture and keeps them dust free.

The soil should be allowed to dry out between waterings and there are several indications of when the proper amount is being applied. If the leaves become wilted and yellowed, that is a sign of excessive moisture in the soil. When they become wrinkled or curled, they're receiving too little.

These trees prefer medium sunlight. Indirect sun is best, but a couple of hours of direct sun is fine, provided the area doesn't get too hot. A corner that receives some sun followed by shade is ideal. As a native of wet, hot regions the Braided Money Tree will do less well when the temperature drops. If you keep it outside on the porch, bring it in when the temperature falls below 50F (10C).

It's generally unnecessary to provide any fertilizer for this plant, especially in the bonsai size and style. Just trim the leaves when they die and ensure they get plenty of fresh air.

With the right care, your Braided Money Tree will provide years of beauty.

## Proper Care and Feeding For Jade Plants

Jade Plants provide a great option for indoor gardening, since they're hardy and easy to grow. They thrive in containers and enjoy warm, dry conditions. As succulents, they tolerate low-water conditions well and require very little fertilizer.

Jade Plants can live for years and will reach up to five feet, even indoors. Their dark green leaves, often edged with red trim, provide a perfect shrub or tree for that large, empty corner. They produce clusters of star-shaped white or pink flowers that will liven up any room.

But, like any plant, they do require some care in order to keep them free of insects and common houseplant diseases.

Leaf drop will occur if the soil becomes too dry for too long, but they are susceptible to root rot when (as is too often the case) they are overwatered. Soil that's kept moist is fine when the weather is warmer, such as during Spring and Summer. Let the soil dry out a little more between waterings in the Winter.

Providing them with good draining soil and moderate, regular water will help achieve the right balance. That can be achieved by the use of a cactus soil mix with some added organic matter, such as 1/4 quarter sphagnum peat moss and 3/4 coarse sand.

Give these plants lots of full sun at a window with southern exposure. They'll soak it up and be grateful for four hours or more. But take care the temperature doesn't get too high at their location. They thrive when it's between 65-75F (18-24C), but have no problem with nighttime temperatures around 50F (10C). Watch for any browning of the edges of the leaves, though. Move to a less direct position if you notice that.

Feeding is easy, too. Just add some liquid fertilizer every three or four months. A standard 10-10-10 NPK mixture with some micro-nutrients, such as magnesium, will work wonders. You don't have to worry too much about overgrowth with Jade Plants, since they're very tolerant of root bound conditions. But hold off on any feeding during the dormant season in Winter.

Several pests enjoy a Jade Plant as much as you will, with mealybugs and spider mites among the most common. Mealybugs can be eliminated by wiping the leaves with a cloth or cotton swab soaked in alcohol. Spider mites will be a bit more difficult to deal with, but they can be physically brushed off or sprayed if needed.

Keeping the leaves free of dust by an occasional wipe with a wet cloth is a good idea, even when you don't notice any bugs. That will help the pores do their job of 'transpiration' - the type of 'breathing' that allows plants to exchange carbon dioxide and oxygen. Keep any dead leaves trimmed off.

## Pitchers, Fascinating Carnivores

Most plants receive their nutrients solely from the soil and air. They take up nitrogen, water and other needed materials by capillary action. They soak it up through the roots and distribute it through the stem and leaves. But carnivorous plants supplement their 'diet' with insects and even occasionally small reptiles. That's what makes carnivorous plants all so interesting - their difference.

There are hundreds of species of carnivorous plants and the tropical Pitcher Plant is one of the most fascinating. *Nepenthes*, as they are often called, are natives of the jungles of Asia, Australia and other Pacific Rim islands. The name 'pitcher' derives from the shape of a swelling in the leaves that provides a cup from which monkeys will sometimes drink. That provides yet another name for these plants: Monkey Cups.

Special compounds secreted by the plant produce an odor that attracts insects. The fine hairs around the pitcher then trap the insect and digestive enzymes break down the prey until it's consumed.

Like other houseplants, *Nepenthes* requires some care. Not surprisingly, given where they evolved, they enjoy warm conditions with indirect sunlight and dappled shade. They should get not too much sun, nor too little. Either extreme will produce problems. Thin, weak leaves are the result of too little sunlight, dead areas on the leaves a sign of too much.

Any extended period of cold weather (below about 50F - 10C) will damage the plant, so if you keep them on the porch be sure to bring them in when the nights grow cool. They'll tolerate high temperatures (up to 95F - 35C) very well.

The amount of water to provide is again guided by their evolutionary history. They thrive in humid conditions and the soil should not be allowed to dry out completely. Occasional gushers of water are perfectly fine, provided there is adequate drainage. In fact, a rare profuse watering is healthy since it helps flush excess salts. This is best done with collected rainwater or distilled water.

Ordinary fertilizer isn't best for these unusual plants. Just supply them with the right kind of soil. Unmilled sphagnum with about 40% perlite is a great combination, but many other types are available. Peat moss, fir bark and other compounds help these plants thrive. A small amount of Miracid fertilizer (1/8 teaspoon per quart of water) can be added to plants that look sickly.

Many *Nepenthes*, reflecting their jungle origin, grow in the form of vines, so they make for a great decorative element. Give them a pot with a central stake and some wires to make a hanging basket and you have a delightful addition to the indoor garden. They may take as long as seven years to flower when grown from seed, though, so be patient.

One particularly interesting variety grows in the mountain jungles of South America: Sun Pitcher Plants. They'll do well with moderate humidity and cooler temperatures, in the range of (60F-80F/16C-27C). They thrive especially well in a greenhouse or terrarium where the conditions can be carefully controlled.

## Houseplant Diseases and How To Treat Them

Houseplants are living organisms and get attacked by other living things that produce diseases. Here are some common symptoms and tips on how to treat the diseases they indicate.

Your houseplant may be covered with a powdery substance that is easily removed with the hand or a cloth. That's a sign of powder mildew, a very common houseplant disease. The powder may be white or brown and is usually on the top of the leaves. The condition occurs most often when the plant has received too little light or the soil is kept too dry.

The condition can be treated simply, just by physically removing the mildew with a cloth. But for a more thorough treatment and longer term protection, use a mildewcide. Then place the plant where it can get more sun and be sure to water properly.

Brown spots on your leaves may be a sign of incorrect watering, which may produce leaf spot fungus. Find out how much water and when to apply it is appropriate for your particular size and species of plant. Give the plant a little more sun or move it under a lamp. There's rarely any need to treat this with fungicide.

Spots may be concentric rings, in which case the most likely culprit is a fungus. Remove any dead leaves and allow for good air circulation around the plant. Ensure that water spots don't remain on the leaves for long periods. That promotes the growth of fungi. Use a fungicide.

But leaf spots can also be caused by bacteria.

Bacterial leaf spots will often appear as a yellow halo and the spots will enlarge to the point they form a blob when the plant is kept wet. Dryer conditions produce brown spots and the leaves become speckled. Keep your plants warm enough for their species and give them plenty of room to spread out. Treat with a bacteriacide.

Another common watering-induced problem is stem rot. The outer leaves will not hold tightly to the plant and practically fall off in your hand. The outer edges will start to yellow. You can apply a fungicide for quick results, but the long-term solution is to find out how much and when to water your plant.

Root rot is another common problem produced by excess moisture in the soil. Bacteria that live there all the time grow to harmful levels and invade the roots, working their way up the plant. The leaves will be discolored. You can try easing off the water, but few plants will recover.

To minimize the odds of plants becoming infected by any disease, start with disease free plants. The best way to do that is buy from a reputable source. Use sterilized soil, not just any old dirt from around the yard. Treat early and often. Don't let problems go unattended.

## Indoor Garden Pests

There are millions of species that feed on houseplants. But there are a few that are found in almost every area.

The first category of common pests are so small you can't even see them, though their effects can become obvious: bacteria.

Root rot is a common problem with houseplants that have been overwatered. Some forms of root rot are caused by fungi that grow with excess watering. That excess moisture aids the growth of soil bacteria that are already present and may even be beneficial in limited amounts. But once they grow to a certain colony size, they invade the roots where they are transported upward into the body of the plant and its leaves. That can quickly turn a healthy plant into a dead one.

The phrase 'an ounce of prevention is worth a pound of cure' applies well here. Simply take care how much water you supply to your plant and when. How much is right, and when it is best to water, varies from one species to another. You'll need to research the needs of your particular houseplant.

Whiteflies are another common indoor garden pest. They're easy to identify, with their waxy-looking, white bodies. You'll often see them flying around the leaves if you shake the plant gently. Aphids look similar, but they don't display the rapid movement of whiteflies and their bodies are more rounded, especially after they've fed on the plant.

Mealybugs are quite different, since they attach themselves to the joint between a branch and leaf stem. The small sacs they create look like wet cotton.

Spider mites are another common pest and can be readily spotted by a close inspection with a magnifying glass if needed. They look like very small spiders and make tiny webs. Often they have yellow bodies (that turn reddish in the Fall) with light black spots, though black mites are also common.

Fungus gnats are yet another pest, though the flying ones are not the major problem for the plant. The larvae that develop from eggs they lay in the soil feed on roots and can harm your plants. You should treat the soil and kill the flying adults, since they will lay more eggs.

All these common pests can typically be taken care of with a commercial insecticide. For fungus gnats and spider mites, neem oil works great. For mealybugs, ladybugs are a biological control method. In many cases, a simple spray of diluted liquid hand dishwashing detergent works very well. To create your own homemade treatment, add about half an ounce to a quart of water and mix well. Spray the plant, making sure to get the underside of leaves as well.

Take care not to overdo the concentration or the spraying frequency. You don't want to plug the pores of the leaves, since that's how plants 'breathe'. They take in carbon dioxide and release oxygen through their pores.

When the weather is hot they close down, making that a good time to spray. Then, when the temperature drops and the bugs are dead, you can spray with water to rinse. Though with the right mixture and spraying routine it isn't necessary.