

How to Care for Orchids



In the 1700s when explorers began to bring these beautiful plants back home, orchids gained the reputation for being exotic, challenging to grow, and they were expensive. Fortunately, the common ones that you find commercially today are affordable and usually thrive with reasonable attention to their needs.

Orchids are one of the largest plant families that we have, growing on every continent except Antarctica, from the highest mountain tops to the seashores and all the environments and climates between. Many are **epiphytes** growing in trees, some are **terrestrial** growing in soils, and a few are **lithophytes** growing on rocks. Some varieties are **monopodial** in which the new leaves grow from the tip of the stem. Other varieties are **sympodial** where each stem grows to a certain defined size and new stems are produced each year.

Growing Healthy Orchids

There are four basic requirements that all orchids share with adjustments for their particular needs. They all need light but never direct sunlight. They need moisture but require excellent drainage. They need specific temperatures that should differ by 15-20 degrees between day and night. They need good air circulation to dry the moisture on their leaves and to keep plants cool on hot days.

Most orchids require bright to intermediate light to grow but never place them in direct sunlight as it will burn the leaves and dry the plant out. They will tolerate brighter light and higher temperatures when there is good air circulation; however, the air should not blow directly on the plant. Air circulation is very important as it cools the plant, dries excess moisture off the leaves, and helps with evaporation.

Orchid Light Requirement Terms:

Bright: as a clear sunny day without the intense heat or direct sunlight on the plant

Intermediate: enough light to easily read the phone book by

Low: the light of an overcast day but not a dark, cloudy stormy day

All orchids have a temperature preference that is related to their native environment and they will bloom the best when in this range. They need a difference of temperature between day and night to stimulate flower formation. Temperatures above 90 degrees are not tolerated well at all and cold will damage flowers.

Orchid Temperature Terms:

Daytime Warm:	80-90 degrees F	Nighttime Warm:	65-70 degrees F
Daytime Intermediate:	70-80 degrees F	Nighttime Intermediate:	55-65 degrees F
Daytime Cool:	60-70 degrees F	Nighttime Cool:	50-55 degrees F

Most orchids do well in a mix of orchid bark, charcoal, and perlite in a short clay pot that accommodates the roots easily but is not oversized. This will provide the excellent drainage they require and support the plant in the pot. Repot orchids when the new growth begins after the post-bloom dormant cycle or when the potting medium breaks down and drainage is impaired. Orchids purchased today are rooted in moss and come in plastic containers. This is for shipping purposes as it keeps the plant moist and tight in the pot. It is harder to regulate water for these moss-grown orchids as the drainage

is uneven and not as good as a bark mix. The plastic pots do not allow for evaporation. Watch these orchids carefully and wait until they finish blooming then transplant them into a clay pot and bark mix. NEVER water orchids with ice cubes no matter what the instructions say and NEVER soak them in a sink of water.

Orchids are very sensitive to fertilizer and require it only during the active growing phase, once or twice a month at the most. Use an orchid fertilizer according to the instructions or use a liquid fertilizer diluted to 1/4-1/2 strength. Water with clear water between fertilizer applications to wash out the salt residue which damages the leaves. Slow release fertilizers can burn the roots because they do not dissolve in the bark mix.

Check the pot to determine how much water the orchid actually needs before watering it. Don't let the plant dry out completely but don't let it stay soaking wet either. The best way to water orchids is to hold them under the kitchen tap and run warm water over the bark mix until it is all moist and runs out the drainage holes. Once it is finished draining, place it back on the saucer. Never get water on the crown of the plant or the flowers. Always water plants early in the morning to allow the leaves to dry off before the cooler night. It takes a lot of energy for a plant to produce flowers and they require a rest period once the blooms are done. This post-bloom dormancy lasts about a month and the plants will need less water and no fertilizer. Resume a normal watering schedule once new growth appears.

Orchid Pests

The most common orchid pests are: aphids, scale, mealybugs, thrips and spider mites. These are all sucking insects that damage leaves and flowers. Usually a strong spray from a hose will dislodge most of them. Then apply insecticidal soap, an ultra-refined horticultural oil or rubbing alcohol, paying close attention to the underside of leaves, where the leaves and flowers attach to stems, under the sheaths, and the roots. Wipe the solutions off with Q-tips or cotton pads to remove insects and excess oils. If the infestations are really bad, take the plant out of the pot, clean off as much of the old potting mix as possible and hose off the entire plant. Apply the solutions and wipe dry before repotting in a clean, disinfected pot and new bark mix.

Orchid Diseases

Fungal and bacterial infections thrive in humid and stagnant conditions of overwatered soil, poor drainage, crowded spaces, and lack of air circulation. An infected orchid will have soft brown areas on the leaves and the roots rot. To avoid this, do not water on cool, cloudy days or late in the day. Repot to improve drainage and space the plants farther apart to improve the air circulation. Do not get water on the crown of the plant as crown rot will kill the plant. Use a fungicide as directed on the package.

Viral infections are all too common; they spread quickly and kill the plant. They originally came from wild orchids brought into domestic cultivation and spread by infected tools, pots and insects such as thrips and aphids. To prevent spread of the virus, practice excellent sanitation of pots and tools, control insect colonies and take care handling all plants. You must destroy every infected plant, the pots they are in and the potting mix. Do not throw them in the compost pile where the disease can be spread to other plants.

Orchid Problems and What Causes Them

Failure to bloom is caused by not having enough light, too little difference in day and night temperatures, extreme temperatures, damaged roots, low humidity, excessive or insufficient fertilization, immature plant, and genetic problems.

Bud blast or drop is where the buds turn yellow and drop off-usually from sudden changes in environment or temperature or high salt levels from over fertilization.

Wrinkled leaves are due to insufficient nitrogen, lack or excess of water causes root damage.

Black or brown spots on leaves or stems are signs of fungus (smaller spots) or bacteria (large areas), caused by sunburn or virus.

Dying leaf tips are an indication of high salt levels from over fertilization, drought stress, and fungus.

Sticky honeydew is a result of high humidity levels which increases nectar production that attracts insects.

Root tip dieback is caused by a lack of water or salt injury from fertilization.

No new growth for a year is due to a loss of dormant buds.

Common Orchid Varieties Sold Commercially

Phalaenopsis

There are about 60 species from Asiatic tropics, monopodial epiphytes, some lithophytes. The common name is Moth Orchid. They are known for their long spikes of 10-20 blooms that last three to four months and may re-bloom.

Plant Requirements:

- Light: intermediate, indirect, never put in sun as leaves burn easily.
- Temperature: intermediate day and night, needs 65 degrees at night to set buds.
- Water: every seven to ten days as needed (hint-water when roots turn silver/white color). **DO NOT GET WATER ON THE CROWN OF THE PLANT!** Plant needs excellent drainage.
- Fertilizer: apply once a month with a diluted solution, clear water the rest of the time.

Dendrobiums

There are about 1,500 species from Korea, Japan, New Zealand, Australia, and the Asiatic tropics. They are sympodial deciduous epiphytes (grow in trees, multi-stemmed, drop leaves). Plant size varies from miniature to 10 foot canes with exotic, colorful blooms. When humidity is too high, they produce too much nectar and petals stick together. This also attracts insects. Repot every three to four years after spring bloom, when new growth appears, when potting mix breaks down or when plant outgrows the pot. Many varieties require a dormant period of six to eight weeks — November 1 to January 1 with minimal water (only enough to keep the canes from shriveling), no fertilizer or bright light, cool temperatures. Resume usual routine once flower buds show.

Plant Requirements:

- Light: intermediate to bright, can do south or west exposure if light is indirect.
 - Temperature: warm in spring and summer, cool in winter and at night.
 - Water: let the plant dry slightly between watering; it needs good drainage.
- Fertilizer: apply every two weeks in spring and summer, once a month in fall and winter.

Cattleya

There are about 50 species from Central and South America, and they are sympodial epiphytes or lithophytes. They like to grow in baskets but tolerate pots. The common name is Corsage Orchid. The single leaf variety has two to three large flowers per stem and needs low temperatures during short days from October to April to set buds. The two leaf variety has up to 20 smaller flowers, rests from October to February, needs bright light and 15 degree day-night temperature difference. **DO NOT TOUCH THE FLOWERS! THEY WILL DIE SOONER.**

Plant Requirements:

- Light: bright enough to turn leaves a slight yellow/green color in summer and early fall. They will tolerate bright light if they are kept cool. This variety requires shade when the buds open to intensify their color.
- Temperature: day temperatures 60-75, NEVER above 90 degrees. Needs night temperatures 45-55 from summer to fall to set buds, intermediate temperatures during the growing season, and cool/cool intermediate temperatures in winter. Excellent air circulation essential.
- Water: water well from March to October for new growth; reduce water from October to March.
- Excellent drainage is essential—PLANTS MUST NOT BE OVERWATERED!
- Fertilizer: apply every two weeks during the growing season - January to July - and once a month from August to December. Use clear water between fertilizer applications.

Sources and Resources

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