



# Learn About the Importance of Air Circulation for Indoor Plants

Indoor Growing

# Learn About the Importance of Air Circulation for Indoor Plants

Written by Phryne Fisher

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Most indoor growers focus on factors such as indoor growing light, water, and soil but tend to forget one of the most crucial factors that contribute to plant growth: **air circulation for indoor plants.**

Plants obtain carbon dioxide from the air and convert it into simple sugars, which are then used to feed themselves.

When grown outdoors, plants are around an unlimited supply of fresh air. This is why air circulation for indoor plants is really important.

It allows them to have an environment that is similar to what they typically have outdoors.

Let's dive in and try to understand what air circulation is and the impact of proper air circulation on your plants.

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## What is Air Circulation?

Simply put: **Air circulation is the flow or movement of the air in an area. Fans and open windows encourage fresh air to enter the room while replacing older air. This supply of fresh air keeps the room cooler and well-ventilated.**

Air circulation for indoor plants does not only adjust the temperature but also prevents moisture and humidity from encouraging the growth of mold and bacteria.

As humans, we cannot stay inside a closed space for too long and we need fresh air to breathe—likewise, plants require a flow of new air.

Just like humans and animals, plants breathe too. This process is called cellular respiration. They use tiny openings on their leaves known as 'stomata' to take in carbon dioxide from the air and give out oxygen. This is why air plays a crucial role in the growth of plants.

Ultimately, all indoor growers want one thing: a high-quality yield and air circulation for indoor plants is one of the factors that change the game.

It is important for keeping carbon dioxide levels maintained at the right levels. Plants are accustomed to growing outdoors in the wild and we, as growers, need to give them a similar environment.

Of course, when plants are grown outdoors, they are exposed to cool breezes and rain. This is why we need to try and replicate this environment in our grow rooms or grow tents.

Growers like to have an air circulation fan in their grow areas to allow air to circulate or flow in their growing area. This ensures that there's a constant flow of fresh air and that 'old' air gets replaced quickly to maintain proper conditions for growth for indoor plants.

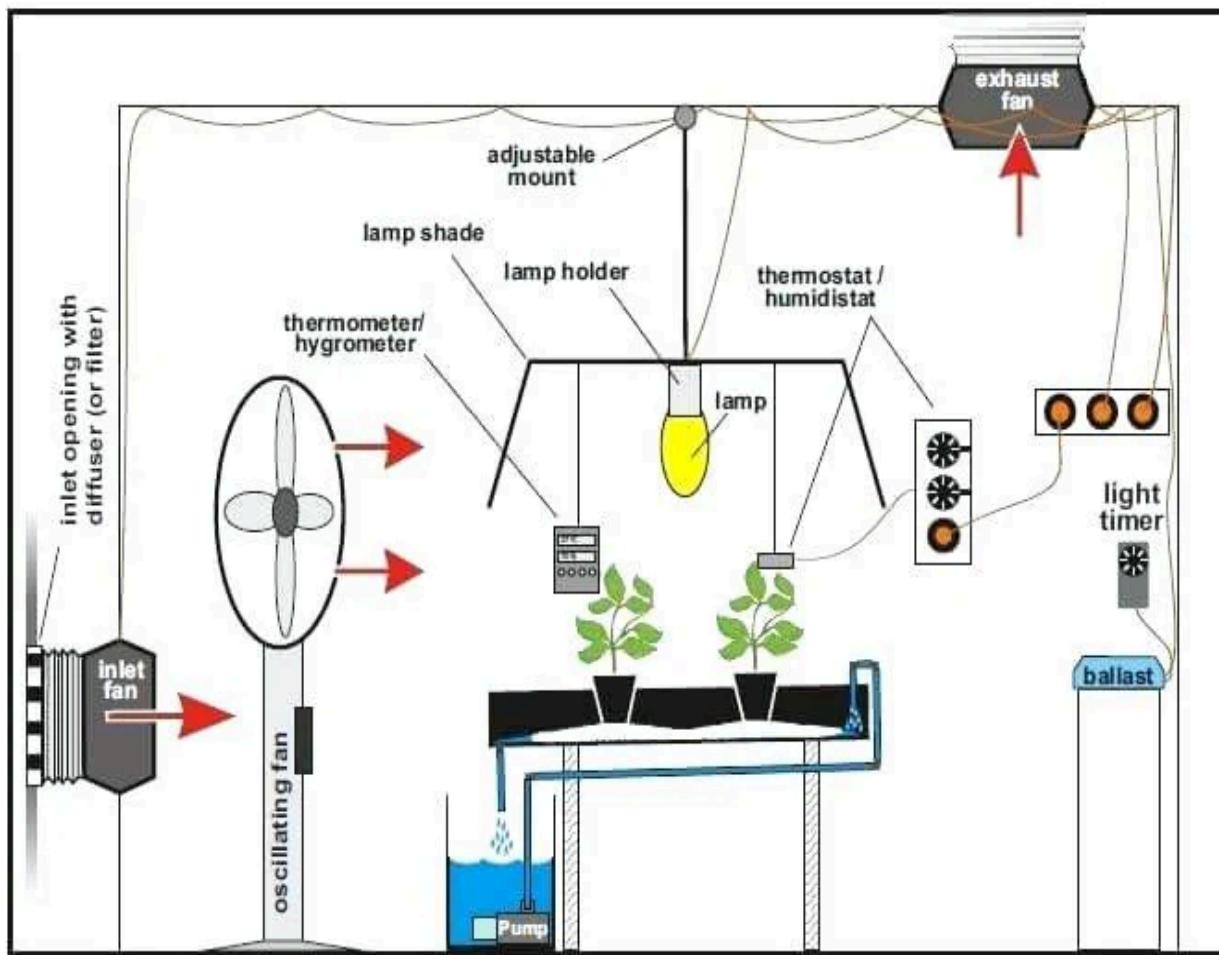


Image Source: 101growlights.com

During the process of photosynthesis, plants require carbon dioxide and water which get converted into glucose and oxygen respectively. Some growers may even go as far as giving their plants an additional supply of carbon dioxide using carbon dioxide generators to maximize their production.



## How Does Air Circulation Affect Plant Growth?

Air circulation for indoor plants is an important aspect of indoor gardening but it is often left out or missed by several growers. Air circulation for indoor plants gives your plants fresh air which they can use to prepare their food. Additionally, it removes pollutants that may be present in the air.

- **Air Circulation Keeps Insects, Mold, and Fungal Diseases At Bay:**

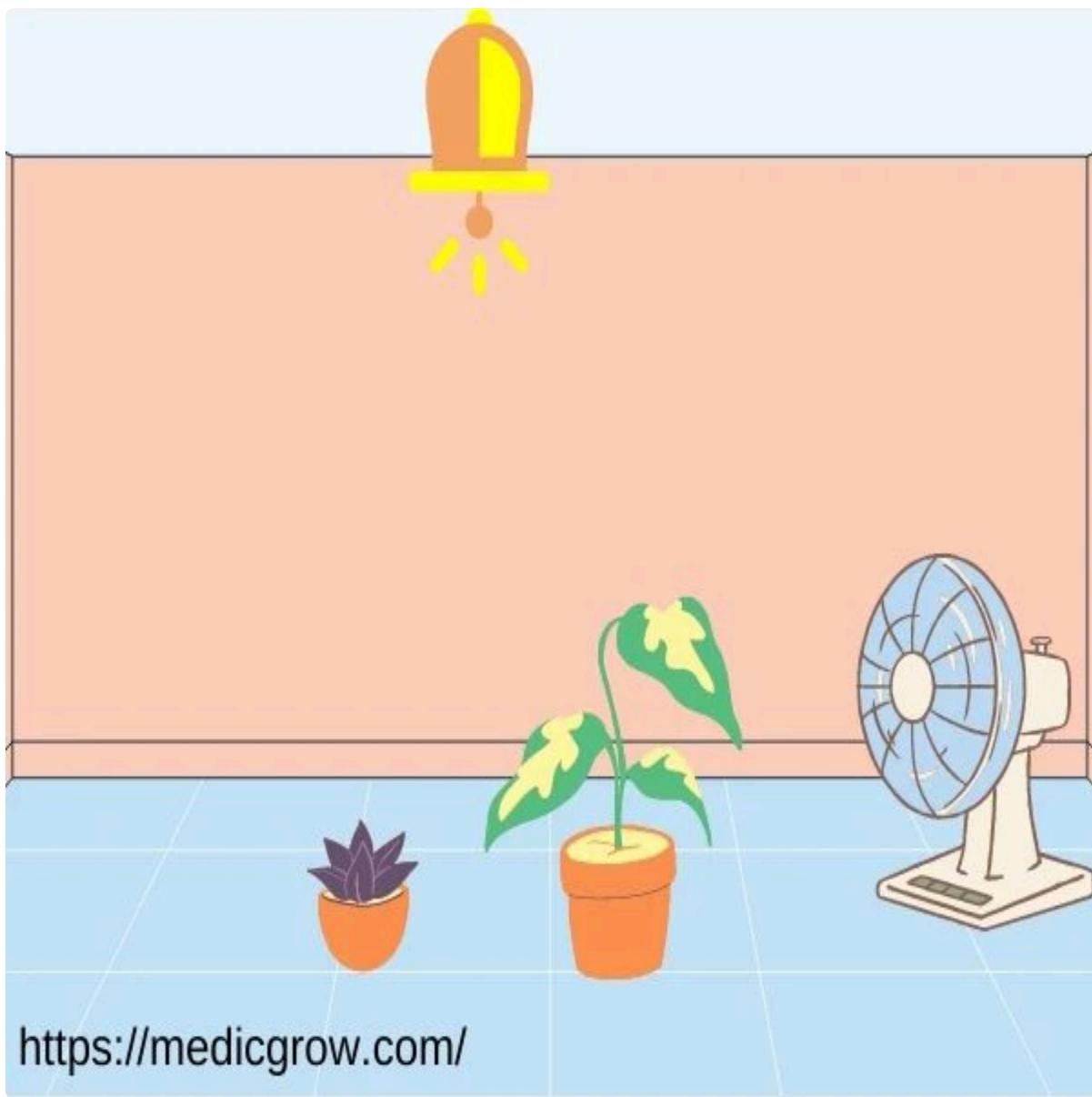
Mold thrives in places with dampness, humidity, and excess moisture. It is harmful to humans and can even cause respiratory problems.

Without air circulation for indoor plants, the soil in which the plants grow would stay damp and become the best hotspot for insects, rot, bacteria, and fungi.

It's very hard to get rid of them once they have settled in. As a result, your plants may also catch diseases that are passed onto other plants.

These problems do not exist when the airflow is appropriate and adequate. Having fans in and around the house allows fresh air to circulate and keeps the temperature regulated.

Growers who grow indoor plants in enclosed spaces such as grow rooms, grow tents or greenhouses often use oscillating fans.



<https://medicgrow.com/>

Some may even have an exhaust system that allows fresh, cool air to replace warm, old air in their growing area. This exhaust system may include intake fans, exhaust fans, and circulation fans. Some growers even go as far as recommending to use fans throughout the year.

#### •**Removes Excess Heat:**

Growers use LED Grow Lights to provide their plants with a light that is similar to sunlight. This light is supplied to plants in a pattern that mimics their natural environments and so, the plants are tricked into believing that they are growing outdoors and not indoors.

This is why having LED grow lights is a great idea, especially for growers who live in colder areas and aren't able to grow their choice of plants outdoors.

Even though LED grow lights produce a low amount of heat, it is important to manage the heat produced by them to ensure that the temperature in your grow room remains optimal for your plants.



An air circulation system maintains and regulates the temperature of your grow room and ensures that it isn't too harsh for your plants.

- **Prevents Dust From Settling On The Leaves Of Your Plants:**

Without ventilation and air circulation for indoor plants in place, dust, and other substances can easily settle on the leaves and parts of the plant. Plants take in gases from the stomata and when the dust settles on the leaves, it can make it difficult for the plants to take in nutrients.

The clogged or blocked stomata disrupt the gaseous exchange and there wouldn't be enough carbon dioxide for the plant due to which the rate of photosynthesis decreases.

This can be prevented by using an efficient air circulation system that prevents dust and dirt from settling on your plants.

Read on to know some tips to improve air circulation for indoor plants.

## Tips To Improve Air Circulation For Indoor Plants

### • Ensure Appropriate Placement Of Plants In Your Growing Area

Several growers have an overcrowded growing area to have bigger produce but this actually hampers the quality of the produce. The right placement allows your plants to take in nutrients properly without having to fight for them.

Make sure that you follow the general guidelines for spacing between plants and do not exceed the maximum number of plants that can be planted in the area.

Keep in mind that the plant can grow up to a considerable height and width, which is why having too many plants in an area is not a good idea.

### • Place Your Plants Near The Windows:

If you're not growing your plants in an enclosed grow tent, you can place them near the windows or on the balcony so that they can get fresh air.

The downside is that your plants may attract pests and insects and you'll have to keep a close watch on them.

### • Install An Air Circulation System

Before installing an air circulation system, ensure that you understand the requirements of your grow set-up and the humidity and heat levels inside it. A basic ventilation system typically includes two kinds of fans for indoor plants:

- Oscillating Fans are moving fans that ensure there is air inside the grow room or tent.
- Extractor Fans are exhaust fans that channel air out of the grow room or tent.



*Image Source: homoq.com*

As you may have noticed, this passive system doesn't involve the intake of fresh air. The oscillating fans move side to side and cool the entire room while extractor fans 'extract' the air inside the grow area and push it outside through the duct.

This system can be used by beginners or those who don't want to invest much but still want to be able to get the most benefit.

If you want to take it up a notch, you can install an intake fan that brings fresh air from the outside through an intake port and supplies it inside the growing area. This is called an active intake system and it is suitable for larger grow set-ups.

In the next part, we'll take a look at some frequently asked questions and answer them.

## FAQ: Frequently Asked Questions

### •Can plants grow without fresh air?

Plants may be able to grow without fresh air but their growth would be slow as they wouldn't get the optimal levels of nutrients that they need.

Much like humans, plants require fresh air for their dose of nutrients and to get rid of their waste. A continuous supply of fresh air ensures that your plants get carbon dioxide and oxygen at appropriate times to function efficiently.

Without air circulation for indoor plants, dust and dirt particles can easily settle on the leaves of the plants. Plus, the humidity levels can be higher than optimal for them and there can be excess heat inside the grow room.

### •What part of a plant allows it to get air?

As discussed earlier in the article, the leaves of the plants have tiny openings or 'pores' called Stomata that allow the plant to get air and indulge in gaseous exchange.

The stomatal pore keeps adjusting its size to control the loss of water during the process of transpiration. The stomata are open throughout the day and closed at night to keep the water trapped inside.

### •Are Fans Hurting Indoor Plants?

No, fans aren't hurting your precious plants as long as they are placed at the right distance away from the plants.

In fact, several growers use an air circulation system to control the climate inside their grow room. Such a system gets rid of excess heat and helps maintain the right temperature inside the growing area.

With that said, having a fan blowing on plants directly may not be the best idea and can cause 'wind burn'. Instead, you can use oscillating fans which don't point directly at the indoor plants.

### •How Long To Leave Fan On For Plants?

It is important to closely watch your plants and ascertain the stage that your plant is at.

Seedlings may require a continuous supply of air to prevent any moisture or dampness from becoming the perfect breeding ground for mold and diseases. Make sure that the air at this stage is gentle and soothing for the plants.

During the vegetative stage, ensure to keep the fan running at maximum capacity while the grow lights are on. This ensures that there is no excess heat trapped inside the grow tent. When it's time to switch off the grow lights, the fan can be turned off.

Likewise, during the flowering stage, the fans can be kept on while the grow lights are switched on. The fans can be switched off an hour after the lights have been switched off to allow them to flower without being interrupted.

Although if you're dealing with strong, bad odors or high humidity inside the grow area, the fan can be kept running on the lowest setting possible.

### •Is too much air bad for plants?

No, air circulation for indoor plants is not bad. When grown outdoors, plants are exposed to air pretty much all the time.

A strong breeze or wind can cause damage to the branches and stems of plants and trees. In certain cases, strong winds may cause trees to be uprooted.

On the other hand, growers try to ensure air circulation for indoor plants. This allows the air inside the growing area to be constantly replaced with fresh air so that plants have an adequate supply of carbon dioxide at their disposal. Air circulation for plants doesn't hamper their intake of carbon dioxide in any way.

It is important to note that too much air is not the same as being supplied with excess carbon dioxide through carbon dioxide generators. Excess carbon dioxide can be beneficial and can help plants get more productive and prompt more growth. But when it goes beyond a certain level, plants may start losing important nutrients.

## Final Thoughts

Air circulation for plants plays a vital role. With the best fan for indoor plants, you can easily have air circulation inside the grow area and get rid of any stinky smells, prevent fungus, rot, and infections, and allow your plants to get optimal levels of nutrients that they need.

Ready to create the perfect environment for your crops?

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