

Lavender Oil Usage Guide

**A research-based overview of
the many benefits of lavender oil.**



Compiled by Dr. Steve Foster for
Essentially KateS



Thanks for your purchase. It is very much appreciated. If this is your first introduction to essential oils, welcome! We're honored you chose Essentialy KateS. In addition to our Lavender Oil, we also offer Peppermint and Tea Tree essential oils, with Rosehip to be available soon, and more to follow.

It wasn't long ago that I was new to essential oils. I was amazed at all the uses I saw on the internet. But being a researcher, I wanted to know what had actually been studied scientifically. The more research I completed, the more impressed I became.

Lavender oil is a good start for someone new to essential oils. It has a very relaxing and pleasant aroma, it's great for massage, it's a natural disinfectant, insect repellent and fungicide, and has been shown by research to offer *potential* benefit in some surprising areas of human and animal health.

I'm limited in what I can say about health. Bloggers can do it, because they speak in general. I'm promoting a specific product. If I made some of the statements you'll find on the internet, it would be considered a claim of treatment and cure for our product, and place it in the category of a drug requiring FDA approval.

I can offer directions for use on topics that are not subject to FDA regulation. On health issues, I can only provide information. For that reason, I have put many hours into assembling the body of research included here.

Though essential oils are "natural" and present little or no toxicity in diluted form, they can be toxic in concentrated form, especially to small children. Keep out of reach of children at all times. Be cautious in any topical application. Remember too that oils are flammable.

Be careful to wash your hands after use to prevent transfer to the eyes. If that happens, rinse with warm water, but because oil is not soluble in water, you may get more relief by touching a drop of carrier oil, such as olive oil, to the eye, to dilute the irritant effect until it passes.

Please don't be put off by the length of this guide. Scan through it to see what's here, then look up the topic you need when you need it. If you have questions, e-mail me at support@essentiallykates.com. If you know of a use not included here, please send it along. I have learned more from the kind people like you who buy our products than from all the research I've completed.

Best Regards,
Dr. Steve Foster

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Personal care

Deodorant

Underarm odor is due to bacterial action on perspiration, not to the perspiration itself. I have used a very light dilution of essential oil, botanic soap, and water as my deodorant for years. It has been effective and nontoxic.. no aluminum chlorhydrate.

Mix up a 2% solution (12 drops per ounce) of lavender oil with water in a small spritzer spray bottle. Add a few drops of botanic/castile soap, to help the oil and water mix. Use as you would any spray deodorant. Both the botanic soap and the lavender oil are antibacterial. I spray 3 or 4 times each side. If it isn't as effective as needed, increase the concentration of soap and/or lavender oil.

Shampoo

Add a few drops of lavender oil to your shampoo bottle and stir or shake well, for fresher smelling hair and, a clean and well conditioned scalp.

Shower

Run hot water in the shower, and sprinkle in a few drops of lavender on the floor or walls of the shower out of the direct stream of water. The heat/steam will vaporize the lavender. Lavender oil is more relaxing in this use, peppermint oil more stimulating.

Bath

Add 5 - 10 drops of lavender oil to your bath water as the water is running in, along with a little bath soap to help the oil and water mix.

Foot Bath

Soak your feet in a solution of 2% lavender oil and warm water. Add a few drops of botanic or castile soap to help the oil and water mix, and some epsom salts if available. Let soak for five or ten minutes, then brush around the cuticles and nails with a small soft brush.

Nihon Ishinkin Gakkai Zasshi. 2007;48(1):27-36.

Combined effect of heat, essential oils and salt on fungicidal activity against Trichophyton mentagrophytes in a foot bath.

"This work was originally undertaken to determine the effective conditions of essential oils against Trichophyton mentagrophytes in vitro for the treatment of tinea pedis in a foot bath. "

"The order of the fungicidal activity of 11 essential oils was oregano, thyme thymol, cinnamon bark > lemongrass > clove, palmarose, peppermint, lavender > geranium Bourbon, tea tree > thyme geraniol oils."

Band-Aids

Add a drop of lavender to the cloth portion of band-aids before applying, for anti microbial and healing benefit.

Lip Balm

Mix a few drops of lavender oil per teaspoon of fractionated coconut oil as a carrier to make your own chapstick for chapped lips or hands. Warm the coconut oil for easier mixing.

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Facial Cleanse

Make a strong cup of your favorite herb tea, chamomile works great. Mix 1/4 cup of liquid castile soap, 1/2 teaspoon of olive, rosehip, or other light carrier oil, add 10 drops of tea tree oil, and enough tea to make up a total of 4 ounces. You could also add several drops of vitamin E oil if you have it on hand. Mix well, and place in a small pump or dispenser bottle. Work into a wet washcloth, wash face and rinse.

Restful Sleep

Sprinkle several drops of lavender oil onto a small cloth and place it inside your pillow case. You'll see several studies showing benefit of lavender aromatherapy for sleep in the research addendum.

Closet, Drawers, and Bathroom Air Freshener

Drop a few drops onto cotton balls or small swatches of cloth, and place in the corners of drawers and closets to keep clothes smelling fresh. Replenish as needed. For large closets or bathrooms, cut a 1" slot across the lid of a small plastic lidded container (like the ones kids take in their lunch box). Cut a 10" by 1" inch strip of cloth, fold it in half and pull the folded end from bottom to top of the slot in the lid and form it into a loop. Pour some lavender oil in the container and replace the lid tightly. The lavender will "wick" up into the cloth and keep the closet or bathroom smelling fresh. Adjust the wick surface air to increase or decrease the effect.

Spray Air Freshener

Make up your own bottle of spray air freshener with distilled water, 6 drops per ounce of lavender, and 2 or 3 drops of botanic/castile soap (or unscented dish soap) to help the oil and water mix. Shake and spray.

Cleaning

Though lavender isn't generally the first choice of essential oils for cleaning, it still has many positive attributes to recommend it. Like peppermint and tea tree oils, it is antibacterial, anti-fungal, and a natural insect repellent. That makes it a great nontoxic cleaner. In addition, it leaves a pleasant, relaxing aroma that you won't get with the other oils.

Studies have shown that mixing other essential oils with lavender produces a synergistic beneficial effect, so even if you're cleaning with tea tree or peppermint, add a few drops of lavender for greater benefit.

Anti Bacterial

J Altern Complement Med. 2009 Mar;15(3):275-9.

The antimicrobial activity of high-necrodane and other lavender oils on methicillin-sensitive and -resistant Staphylococcus aureus (MSSA and MRSA).

"All four lavender oils inhibited growth of both MSSA and MRSA by direct contact but not in the vapor phase."

"The results suggest that combinations of lavender oils should be investigated further for possible use in antibacterial products."

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J Appl Microbiol. 2014 May;116(5):1119-28.

Membrane disruption and anti-quorum sensing effects of synergistic interaction between Lavandula angustifolia (lavender oil) in combination with antibiotic against plasmid-conferred multi-drug-resistant Escherichia coli.

"In the time-kill analysis, a complete killing of bacteria was observed based on colony counts within 4 h when LV was combined with piperacillin during exposure at determined FIC concentrations."

"These findings offer a novel approach to develop a new option of phytopharmaceuticals against multi-drug-resistant E. coli."

A Word About Mixing Oil and Water

Any time you mix oil and water, a small amount of the oil may remain "suspended" in the water, but for the most part, the oil will float on top. It is best to add an emulsifier, which helps the oil and water mix.

You can use liquid dish soap for some purposes, but for others, you'll want to buy a liquid nontoxic botanic or castile soap. These are soaps that are made entirely from plants, very much like essential oils. They are generally nontoxic, insecticidal, and very effective cleaners.

There will be cases in which you'll use just a little soap as an emulsifier to help the oil and water mix, and others when you'll want the cleaning benefit of the soap. You might choose to convert entirely to nontoxic soaps in the house, as we did many years ago when we started our family.

These soaps should be generally available at any store that carries natural products, such as Sprouts, Vitamin Cottage or a Health Food Store. We plan to offer our own botanic soap product in the not too distant future, so watch for that as well.

Spray Cleaner/Disinfectant

I suggest making up a spray bottle of 1% lavender oil and water, which would be six drops per ounce, or one teaspoon per 8 oz. cup of water, as there are 50 drops in a teaspoon. Add half that amount of concentrated botanic/castile soap (or the liquid soap of your choice), both to help the oil and water mix, and for the cleaning benefit. If you want something stronger, double the concentration to 2% lavender oil or more. If you have some peppermint oil or tea tree oil on hand, mix what you have in equal quantities to total a 1-2% concentration of essential oil to water.

I like to add a half cup of vinegar, but that's optional. It's best to use distilled or purified water if you have it available. If you have a water filter that can produce acidic water, use that. Spray and wipe hard surfaces as you would with any cleaner. On stubborn matter, spray and let sit for a few minutes before wiping. Use a brush as needed.

Laundry

If you live in a damp or humid climate, add a quarter or half teaspoon of lavender oil to a washing machine load of towels and other washable materials that tend to be prone to moisture, mold and mildew. Fill the tub with water, add the soap, then the lavender oil, and let it cycle a minute before adding the material to be washed.

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In addition, or as an alternative, spray a washcloth with the lavender spray described above nearly to saturation, and throw it in the dryer with towels, sheets, etc. You'll have great smelling laundry, with the added benefit of resistance to mold and mildew. You can use this in place of dryer sheets.

Dishwasher

Sprinkle a few drops of lavender oil in the soap dispenser of your dishwasher, along with the dishwasher detergent, before running. The detergent will act as the emulsifier to help the oil and water mix when the clean cycle runs. If you wash dishes by hand, add a few drops to the sink along with your dish soap.

Hand Washing

Add several drops of lavender oil (6 drops per ounce would be 1%) to the liquid pump hand soap dispenser in your bathroom or kitchen.

Add 8 drops of lavender oil per ounce of a non-greasy unscented hand lotion in a small container and shake or stir well for use as a waterless hand sanitizer.

Please be aware that no claims are being made about the bactericidal or virucidal efficiency of either of these methods. The logic is sound, but the results will vary based on ingredients and concentration.

Repelling Spiders & Other Insects

We get reports every week of people having great success in repelling spiders with our peppermint oil. In a conversation recently with someone fighting a brown recluse infestation in their home, they believe that lavender oil is more effective than peppermint. A combination of both may be best, as several studies show blended essential oils to be more effective than single oils.

I suggest making up a 1 to 2% solution of lavender (or lavender and peppermint) oil and water in a spray bottle by adding 6 (1%) or 12 (2%) drops per ounce of water. There are 50 drops in a teaspoon. Add several drops of dish soap (preferably unscented) to help the oil and water mix. Wipe down the areas you plan to spray with a solution of water and 5 to 10% white vinegar. Shake as you go and spray the lavender solution where appropriate, including baseboards, window frames, screens, and corners.

Ants can be particularly difficult. If they have regular paths that you can locate, wipe them down first with full strength white vinegar, then spray. Repeat as necessary.

How often you need to spray varies with environment. You'll need to spray outside areas more frequently, and you'll need to spray more often in drier climates.

Other Insects

Most essential oils are natural insect repellents, and lavender is no exception. Even better results have often been shown by combining lavender with other essential oils, including peppermint and tea tree.

Lavender oil can be diffused into the air and sprayed (the spray air freshener described above works well) onto surfaces to discourage both flying and crawling insects. To repel houseflies, spray doorways and other entry points with a 1 to 2% solution of lavender and/or peppermint oil (instructions above under spider repellent), as well as using your choice of aromatherapy application to get essential oils into the air in the house and kitchen.

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For pets and livestock, there are several studies listed in the research addendum on use of lavender and other essential oils to repel flies, lice, ticks, etc.

Here are a few quotes from two of the research abstracts that comment on lavender oil studied in this capacity. The full abstracts are included in the Research Addendum at the end of this guide.

Southeast Asian J Trop Med Public Health. 2013 Mar;44(2):188-96.

Efficacy of herbal essential oils as insecticides against the housefly, *Musca domestica* L.

*"The insecticidal effects of 20 essential oils.. were tested against the housefly species *Musca domestica*.."*

*"*Mentha piperita* (peppermint) and *Lavandula angustifolia* (lavender) oils were the most effective, showing 100% knockdown at 30 and 60 minutes."*

Arch Dermatol Res. 2007 Oct;299(8):389-92.

Effectiveness of lotions based on essential oils from aromatic plants against permethrin resistant *Pediculus humanus capitis*.

"We found that experimental lotions containing lavender, peppermint and eucalyptus oils in a 5% composition... showed the best knockdown effect."

Pest Manag Sci. 2013 Apr;69(4):542-52. doi: 10.1002/ps.3411. Epub 2012 Oct 19.

Essential oils and their compositions as spatial repellents for pestiferous social wasps.

*Of the 21 essential oils.. 17 showed significant repellency on yellowjackets [mainly *Vespula pensylvanica* (Saussure)] and paper wasps [mainly *Polistes dominulus* (Christ)]: clove, pennyroyal, lemongrass, ylang ylang, spearmint, wintergreen, sage, rosemary, lavender, geranium, patchouli, citronella, Roman chamomile, thyme, fennel seed, anise and peppermint."*

Equine Vet J. 2015 Mar 10.

Essential oils in the management of the donkey louse, *Bovicola ocellatus*.

"After 2 applications, the groups groomed with lavender or tea tree oil suspensions had a significant reduction in louse intensity, with a mean decline in louse abundance of 78%.."

Food Preservation

Due to its anti-microbial, anti-fungal, and antioxidant properties, studies have shown that fruits, vegetables, and even meats stay fresh longer if soaked (or in some cases sprayed) in a lavender or peppermint oil solution. The insect repellent activity is another added benefit.

Fill a large bowl with warm water, and add twenty drops of lavender oil. If you have a botanic or a nontoxic soap, add a few drops of that as well to help the oil and water mix. Immerse fruits, vegetable and meats for five to ten minutes each, stirring periodically. Rinse and store as usual.

Here are some short quotes from research abstracts that comment on lavender and other essential oils studied in this capacity. The full abstracts are included in the Research Addendum at the end of this guide. You can also access the full abstract, and in some cases the full article, free at www.pubmed.com. Enter the title reference in the search bar.

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Meat Sci. 2012 Dec;92(4):667-74.

Antioxidant and antibacterial effects of Lavandula and Mentha essential oils in minced beef inoculated with E. coli O157:H7 and S. aureus during storage at abuse refrigeration temperature.

"Both EOs caused a significant decrease of bacterial growth in minced beef.."

"results showed that the addition of EOs significantly extended fresh meat odor even at abuse temperature."

Food Addit Contam Part A Chem Anal Control Expo Risk Assess. 2015;32(7):1049-64.

Plant essential oils and allied volatile fractions as multifunctional additives in meat and fish-based food products: a review.

"They play multiple, crucial roles as antioxidants, food pathogen inhibitors, shelf-life enhancers, texture promoters, organoleptic agents and toxicity-reducing agents. For their versatility, they appear promising as food preservatives."

Aromatherapy Options

There are several options for getting lavender essential oil into the air.

1. Place several open shallow containers of lavender oil.
2. Add a few drops of oil to an old style steam humidifier.
3. Use a diffuser, essentially a "cold" humidifier.
4. Use a "wicking" container as described above under Repelling Spiders.
5. Use a simmering pot, which is a small ceramic pot with an electric heating element, in which the oil is added to a water bath.

Diffusers do not heat the oil, which is considered an advantage by some. However, I have been unable to find evidence that moderate heating in a water bath alters the characteristics of the oil. Diffusers require more attention. Depending on their size, they must be refilled as often as every few hours. They also go through more oil.

I have had responses from people that spray their furnace, a/c, or humidifier filters. I learned that, if my intention is to get the aroma into my sinuses and/or lungs, the best method is to put apply a few drops of oil to a "surgeon's mask," and hold the mask over my nose while I inhale. It was extremely effective, and I had only applied a few drops of oil to the mask. It should work as well with a piece of cloth or paper towel as the "mask."

As far as room air, I keep a small heated ceramic pot (simmering pot) in my office which I purchased at WalMart for \$10. It is easily maintained. I add a few drops of oil each morning (from a large selection), and about a half cup of distilled water every 3 to 4 days. I do empty it and clean it occasionally, but it isn't really necessary, as the oils keep it clean. It is set on a timer that comes on an hour before we arrive, and shuts off an hour before we leave. Rarely a day goes by that someone doesn't say "It always smells so good in here!"

When in doubt, dilute. You can always add more.

Topical application of full strength essential oil in small amounts is not a problem for most, but can be too much for some, especially children. You can dilute essential oils with any of several carrier oils,

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including rosehip, jojoba, fractionated coconut oil, olive oil, or even vegetable oil, if that is all you have available. Start at a lower concentration than you think. It's easier to add a few drops more of essential oil than many more of carrier oil. Be sure to record your dilution somewhere, for reference.

Dilution Ratio Chart

<u>Desired Dilution Ratio</u>	<u>1%</u>	<u>2%</u>	<u>3%</u>	<u>5%</u>	<u>10%</u>	<u>25%</u>
Drops of oil per 1 teaspoon (5 ml, 1/6 oz.)	1	2	3	5	10	25
Drops of oil per 2 teaspoons (10 ml, 1/3 oz.)	2	4	6	10	20	50
Drops of oil per 3 teaspoons (15 ml, 1/2 oz.)	3	6	9	15	30	75
Drops of oil per 4 teaspoons (20 ml, 2/3 oz.)	4	8	12	20	40	100
Drops of oil per 5 teaspoons (25 ml, 5/6 oz.)	5	10	15	25	50	125
Drops of oil per 6 teaspoons (30 ml, 1 oz.)	6	12	18	30	60	150