

What's That I Smell?

The Claims of Aromatherapy

*A small dose of aromatic oil may make for a pleasant experience,
but the claims of aromatherapy go way beyond that.*

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Aromatherapy typically involves putting a few drops of some pleasant-smelling, plant-derived oil in your bath water, sniffing it from an inhaler, or massaging it directly into your skin. I sampled a number of these “essential oils,” as they are called, and I was impressed with their unique aromas. So what’s the problem with smelling something fragrant while you are bathing or while you are getting massaged? According to John Meisenheimer, who practices dermatology in Orlando, Florida, a tiny percentage of the population is allergic to some essential oils. But for the rest of us, the answer is, “nothing.” A small dose of aromatic oil probably won’t hurt you a bit, and if you enjoy the smell, that’s fine!

The problem lies with the claims made by aromatherapy’s most widely known practitioners—claims that are causally confused, ambiguous, dubious, and unsupported by scientific evidence. After reading several books and articles written by the enthusiastic supporters of aromatherapy, I believe that there are some recurrent themes that are worth a closer look.

One such theme is what I call "confused causation." Virtually all aromatherapists claim that if you relax for several minutes in warm bath water to which has been added a few drops of essential oil, you will get out of the tub feeling pleasant. I agree, but what causes the pleasantness? Is it the warmth, the water, the minutes spent resting, the few drops of oil, or some combination thereof? It would be easy to conduct an experiment in order to find out, but for some strange reason aromatherapists haven't seen fit to do this. Instead, they imply that the essential oil is the main cause. Says Meisenheimer: "The amount of essential oil from a few drops placed in your bath that might actually penetrate the stratum corneum [skin] is probably too small to have any meaningful, systemic, physiologic effect."

Other examples of confused causation permeate aromatherapists' writings. Hoffmann (1987, p. 94) claims that chamomile is good for insomnia *if* taken in a late bath. Is it the lateness or the chamomile that makes you sleepy? For stress, Lavabre (1990, p. 108) recommends relaxation, a better diet, nutritional supplements, more exercise, and a few drops of an oil blend. Heinerman informs us (1988, p. 197) that jasmine oil massaged into the abdomen and groin promotes sexual stimulation. I'll bet it does, with or without the jasmine. On page 301 he suggests that to make unsafe water safe, boil it and add rosemary, sage, or thyme before drinking. The heat probably kills most of the germs. Edwards (1994, p.

135) mentions that many patients in hospitals in England receive massages with essential oils. According to her, "the relaxing and uplifting effect of the oils helps boost the morale of the patients." Isn't it possible that the massage did as much to boost morale as the oils did?

One of the favorite tactics employed by aromatherapists is the use of ambiguous claims. Any good psychic can tell you that you *never* make a specific prediction. You always leave yourself enough room so that whatever the outcome, you can claim success. Judging from what I read, the aromatherapists have mastered this strategy. Here are some of my favorites, followed by my brief commentary.

According to Frawley (1992, p. 155), incense "cleanses the air of negative energies." What are negative energies? The reader is encouraged to get massaged with oil regularly (p. 155) because this "keeps the nerves in balance." How would we know an unbalanced nerve if we saw one? Hoffmann tells us (p. 95) that

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ylang ylang is "supposedly an aphrodisiac." Is it or isn't it? Lavabre declares (p. 114) that benzoin resinoid will "drive out evil spirits." I'd love to see that. Presumably spruce oil is an even better essence because it is recommended (p. 64) "for any type of psychic work." Why limit yourself to evil spirits? Edwards (p. 134) quotes Visant Lad as saying that "life energy enters the body through breath taken through the nose." Is life energy the same thing as oxygen, and if so, why can't it enter through the mouth? About tea tree oil, Edwards opines (p. 135), "There is hope [it] may play a role in the successful treatment of AIDS." Is it hope or is it evidence? On the same page she tells readers that aromatherapy is good for "restoring harmony and balance between the mind and body." Such a phrase can mean almost anything you wish.

Not all of the claims are hopelessly ambiguous or unlikely to be true. I did a computer search of the psychological literature back to 1967, using the terms *essential oils*, *aromatherapy*, and the names of 23 common essences. I found that chamomile (Roberts and Williams 1992) can put people in a better mood, and lavender

sometimes causes mistakes in arithmetic (Ludvigson and Rottman 1989). Furthermore, several of the odors used by aromatherapists are capable of producing physiological arousal as measured by electroencephalogram (EEG) recordings (Klemm et al. 1992); and emotional changes, as measured by self-report (Kikuchi et al. 1992; Nakano et al. 1992). Peppermint odor appears to be capable of causing very small EEG, elec-

tromyogram (EMG), and heart rate changes during sleep (Badia et al. 1990); and some odors can modify artificially induced sleep time in mice (Tsuchiya et al. 1991). There is evidence that specific odors can better enable one to recall information that was learned in the presence of that odor (Smith et al. 1992).

As a whole, these findings stretched to the limit would support only small craft, sailing cautiously near the shores of the aromatic sea. Unfortunately, some aromatherapists have been more than willing to sail boldly into uncharted waters. Consider these claims about specific essential oils, with my comments.

"A few drops of jasmine (Tisserand 1988, p. 87) cures postnatal depression." I didn't find any olfactory research that mentions postnatal depression. "Marjoram oil (Tisserand, p. 37) turns off sexual desire." The few studies I found that mentioned marjoram had nothing to do with sex. Price (1991, p. 93) tells us that juniper berry is "relaxing" and "stimulating" (both?), and she (p. 48) and Valnet (1982, p. 87) recommend lavender for insomnia. The Klemm study showed that lavender was both arousing and unpleasant. Hoffmann (p. 94) claims that patchouli is good for anxiety. My computer search of the word *patchouli* turned up nothing. Valnet (p. 70) claims that ylang ylang is good for one's



sex drive. *Ylang ylang* didn't turn up anything either.

Other claims of dubious validity are common to the writings of aromatherapists—broad claims that are related to the practice of aromatherapy in general. The following claims are my words, but they represent a synthesis of views expressed by the authors listed.

• *Smell is the most direct route to the brain.* (Avery 1992; Edwards 1994; Green 1992; Raphael 1994). The implication is that smell is superior to the other senses because olfactory information gets to the brain quickest, and since aromatherapy is concerned with smell, it is a superior method of treatment. Olfactory information gets to the brain very quickly, but so does auditory, tactile, and visual information. The differences would certainly be measured in milliseconds, and it would have no practical consequence. The olfactory sense is directly linked to the limbic system—a portion of the brain concerned with emotionality and memories. The aromatherapists make much of this—the smell of ginger evokes memories of grandma's cookies, etc. What they don't tell you is that the sight of grandma's photo or hearing her voice can do the same. All the senses are part of a massive network that links all parts of the brain. Smell enjoys no particular advantage when it comes to access to or speed of access to various parts of the brain.

• *Natural oils are better than synthetic ones.* (Avery 1992; Edwards 1994; Hillyer 1994; Lavabre 1990; Price 1991; Raphael 1994; Rose 1988). Most of these authors felt it unnecessary to explain such a statement, but Lavabre told readers that "natural" molecules work better because they have memory (p. 49). It is possible to make a synthetic preparation identical on a molecular level to the most important compound in an essential oil. John Renner, who has heard many of the bizarre claims made by aromatherapists, told me that if the molecules are the same, "I doubt seriously that your body could tell the difference." Given that essential oils contain several compounds, it seems possible that a natural oil might have more than one active agent. If that is so, then aromatherapists should be spearheading the research effort to determine which chemical compounds are inducing the changes they claim are taking place. Instead, most of them seem all too willing to assume that natural oils are better, and that there is no need to defend this assertion with any rationale or research evidence.

• *Essential oils can help your memory.* (Hoffmann 1987; Lavabre 1990; Price 1991; Valnet 1982). I found no evidence to support this, and none of these authors provided a hint about how they arrived at that conclusion. Psychologist Elizabeth Loftus, a world-renowned human memory expert, told me in a personal communication that she knows "of no cogent scientific evidence that smells cure amnesia, or that they strengthen memory." There is such a phenomenon as context-dependent learning. It has been shown that it is easier to remember X when you can return to the environment or context in which you learned X. Presumably, the context provides cues that make it easier to recall X. It has further been shown that at least one essential oil can serve as a contextual cue (Smith et al. 1992). If this is the basis for the above-mentioned claim, it is highly misleading. The essence itself is not important, only the fact that it was a significant part of the context in which the original learning took

place. In other words, if the essence wasn't present when you learned X, then it won't help you recall it later.

• *Scientists are doing a lot of research on essential oils.* (Avery 1992; Price 1991; Rose 1988; Valnet 1982). Statements like this are usually followed by specific claims. The implication is that these claims are supported by scientific research. As we saw earlier, that isn't necessarily true. Whether or not scientists really are doing a lot of research on essential oils is debatable. By comparison with 50 years ago, there is probably more research on essential oils today. By comparison with hearing and vision, research on the consequences of smelling essential oils lags way behind. If there really is a lot of research on the effects of essential oils, why is it that these authors are so reluctant to cite it? Their books and articles rarely list or mention any scientific journal articles. Instead, if there are any references at all they are to books written by other aromatherapists.

All of this sounds as though I am strongly opposed to the use of essential oils. I'm not! If it pleases you to put some in your bath water or have a little rubbed on your back once in a while, by all means, go ahead. It is not the odor that arises from these fragrances that is troubling, it is the stench arising from the unwarranted claims made about them.

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