

Natural deodorants and antiperspirants

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Abstract

Most conventional deodorants and antiperspirants contain several ingredients linked to serious health effects, from Alzheimer's disease to virulent cancers. Since deodorants and antiperspirants are designed to stay on our bodies for hours, this allows the potential for more harmful chemicals to be absorbed through the skin. While natural options are available, many people complain about the inadequacy of natural deodorants to adequately mask body odor. There is now an abundance of alternative options many improved upon since their initial introduction several years ago that may inspire us to think again about incorporating natural deodorants into our body care regime. This article attempts to review the natural deodorants and antiperspirants and their advantage over the conventional ones.

Keywords: Alzheimer's disease, Deodorants, Antiperspirants.

INTRODUCTION

The cosmetics industry produces billions of items worldwide every year. Quite a large proportion of these include deodorants and antiperspirants. 'Body odour' is never a pleasant topic of conversation. Men, women and children from all walks of life use deodorants to cover up this natural emanation. Antiperspirants are also used to try to prevent the formation of sweat (the more usual term for perspiration), which is responsible for the unpleasant smells we associate with perspiration. Most conventional deodorants and antiperspirants contain several ingredients linked to serious health effects, from Alzheimer's disease to virulent cancers. Since deodorants and antiperspirants are designed to stay on our bodies for hours, this allows the potential for more harmful chemicals to be absorbed through the skin. . The following article is a review of the natural deodorants and antiperspirants and their advantage over the conventional ones [1].

The Physiology of Perspiration

The apocrine glands are the reason that underarm perspiration smells stronger than the sweat secreted by the rest of the body. The two types of sweat glands that cover the human skin are:

- Apocrine, or scent, glands located only in the armpit, ear, navel, nipple, and genital regions
- Eccrine glands do the work of regulating the body's temperature by secreting a watery

sweat over the skin. This sweat quickly evaporates and keeps the body cool.

In hot weather or under stress or hard exercise, excessive perspiration exceeds the rate of evaporation. Sweat produced by the eccrine glands does not contribute to body odor because eccrine sweat contains no substances that are attractive to bacteria. Apocrine sweat, on the other hand, contains organic compounds that are quickly populated by bacteria on the surface of the skin. This bacterial activity is what produces underarm odor [2].

ANTIPERSPIRANTS Vs DEODERANTS

A deodorant is a substance applied to the body to prevent body odor caused by the bacterial breakdown of perspiration in armpits, feet, and other areas of the body. A subgroup of deodorants, antiperspirants, affect odor as well as prevent sweating by affecting sweat glands. Antiperspirants are typically applied to the underarms, while deodorants may also be used on feet and other areas in the form of body sprays. In the United States, the Food and Drug Administration classifies and regulates most deodorants as cosmetics, but classifies antiperspirants as over-the-counter drugs.

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Antiperspirants work by clogging, closing, or blocking the pores with aluminum ions so they cannot release perspiration. Aluminum is a hazardous material that the FDA allows to be added to body care products in regulated amounts. There is no proof that these "regulated amounts" of what is essentially poisonous to the human body are actually safe. Arguments against the use of aluminum emphasize the fact that aluminum accumulates in the brain over time and may contribute to Alzheimer's disease and breast cancers [3].

Recent studies on the effects of aluminum and the dangers of antiperspirant usage suggest that it travels more easily into the lymphatic system when underarms are shaved. The antiperspirant label may list aluminum as:

- Aluminum chlorohydrate
- Ammonium aluminum sulfate
- Potassium aluminum sulfate
- Aluminum zirconium tetrachlorohydroxygly

Aside from aluminum, most antiperspirants also contain parabens, antimicrobial agents derived from toluene a toxic petrochemical derivative. Some evidence suggests that repeated exposure to toluene may contribute to hormone disruption.

Thirteen research studies performed since 2000 have shown that various types of parabens act like estrogen in living tissue. Estrogen is known to drive the growth of cancerous cells.

Some people with sensitive skin have an allergic reaction to parabens, which results in a skin condition known as contact dermatitis.

Antiperspirants also have harsh astringent salts containing metals that can cause granulomas (small, itchy bumps) on underarm skin.

Deodorants work by:

- Neutralizing the smell of the perspiration mixed with bacteria
- Antiseptic action against that bacteria

Deodorants are healthier than antiperspirants because they don't interfere with perspiration, but many conventional brands contain harsh, potentially toxic ingredients that should be avoided. Deodorant ingredients to avoid include parabens, all forms of aluminum, and the following substances:

- Propylene glycol: a penetration enhancer that absorbs quickly through the skin and which has not been fully investigated for carcinogenic potential.

- Talc: classified as a carcinogen by the International Agency for Research on Cancer if it contains asbestiform fibers, which are unregulated in cosmetic grade talc.
- Steareth-n: ('n' may be any number, say 100), may be vegetable derived but is processed with ethylene oxide (ethoxylated), a known human carcinogen.
- Triclosan: an antibacterial found in deodorants and soaps. It has an astounding ability to create resistant bacteria.

Ammonium alum is a prevalent natural compound that cannot be absorbed into the skin and doesn't clog pores the way aluminum chloride does. While it doesn't kill the bacteria or stop perspiration, ammonium alum inhibits bacterial growth that causes odor. It is the primary ingredient in deodorant crystals, a safe and effective alternative to antiperspirant and commercial deodorants [4].

ENVIRONMENTAL IMPACT OF CONVENTIONAL DEODERANTS

Showering washes our deodorants and antiperspirants down the drain, introducing known or suspected toxins into our nation's waterways. Octoxynol compounds, otherwise known as alkylphenol ethoxylates (APEs), are found in deodorants, antiperspirants, and bodies of water. These chemicals are slow to break down and have been shown to disrupt the endocrine systems of fish, birds, and mammals.

The process of mining aluminum used in antiperspirants destroys the landscape, pollutes water, and consumes vast amounts of electricity.

According to Lester Brown's *Eco-Economy: Building an Economy for the Earth* (Norton, 2000), each year the aluminum industry consumes as much electricity as the entire continent of Africa.

ALTERNATIVE OPTIONS: FROM NATURAL SOURCES

It's up to the conscious consumer, to choose the best and safest product for the body. Before buying any deodorant or product that goes on to the skin, always read the ingredients. Avoid conventional antiperspirants altogether and opt instead for hypoallergenic, paraben-free, and aluminum-free deodorant. Choose deodorants with ingredients like:

Vegetable glycerin, Charcoal, Vinegar, Coconut oil, Baking soda, Algae extract, Green tea, Aloe vera gel, Natural preservatives like bio flavanoids and lichen, Essential oils etc.

Many of these new natural body products can protect us from exposure to unnecessary, harmful ingredients and still leave us smelling fresh and feeling confident.

Natural Deodorants uses a blend of essential oils and natural sweat controlling ingredients to help safely and effectively combat odor-causing bacteria. Formulated with Aloe Vera, Tea Tree Sage etc, it helps soothe skin and keeps us feeling fresh and clean throughout the day. These deodorants are specially formulated to provide a cleaner, more even spread on underarm skin, and it's strong enough to stand up to even the most active lifestyles, making it a powerful alternative to traditional antiperspirants that may contain other harmful chemicals.

Lots of Americans are making the switch to homemade deodorants and with good reason

HOMEMADE DEODERANTS

Commonly used ingredients in homemade deodorants are as follows:

Coconut & Almond Oils

Raw, unrefined, virgin coconut oil has wonderful antibacterial properties. Coconut oil will liquefy at 76 degrees; below that and it's in a semi-solid state. If we want the deodorant to stay more fluid, we can add almond oil.

Shea Butter

Raw and unrefined shea butter is high in vitamins A and E and is incredibly soothing for our skin.

Beeswax

Beeswax is another inherently excellent choice in skincare products, as it does not clog pores, but it does help the moisturizing properties of the butters and oils in this recipe to 'lock' into our skin so they can do their jobs.

Arrowroot Powder

Arrowroot not only helps to serve as a thickener in this deodorant, but it also has the power to help draw out toxins.

Diatomaceous Earth (DE)

DE is almost entirely silica, which is a crucial trace element needed by our bodies, and one in which many are deficient. By adding DE into our

homemade deodorant, we are giving our sensitive skin a nice dose of DE (essentially, silica) which helps with sensitive areas of skin that might become rashy and it also helps to draw out toxins and to ease sensitive skin.

Vitamin E

Vitamin E can penetrate through the skin surface and get to the living cells. About 5% of the amount that's smeared on the skin is actually converted to the free tocopherol once it's inside those deep skin cells and provides beneficial antioxidant effects.

Essential oils

The most commonly used essential oils include Coconut oil, Grapefruit oil, Lemon oil, Geranium oil, Sandalwood oil, Lime oil, Cypress oil, Lavender oil, Clove oil, Oregano oil, Cedar wood oil, Lavender oil, Rosemary oil, etc. They have some degree of antimicrobial, antibacterial, antiseptic, astringent, and anti-inflammatory properties. Some of the oils were chosen more for smell than for health.

SHEA BUTTER DEODORANT

Ingredients

- 3 T Coconut Oil
- 3 T Baking Soda
- 2 T Shea Butter
- 2 T Arrowroot or organic cornstarch
- Essential Oils

Instructions

1. Melt Shea butter and coconut oil in a double boiler over medium heat until barely melted. Remove from heat and add baking soda and arrowroot. Mix well.
2. Add essential oils and pour into a glass container for storage. It does not need to be stored in the fridge.
3. We can cool it completely and can put into an old deodorant stick for easier use.
4. NOTE: It may take several hours to completely harden and this process can be sped up by putting in the fridge for a few minutes.

COCONUT OIL DEODORANT

Ingredients

- 6 T coconut oil
- 1/4 cup (4 T) baking soda
- 1/4 cup (4T) arrow root or organic corn starch
- Essential oils (optional)

Instructions

1. Mix baking soda and arrowroot together in a medium sized bowl.
2. Mash in coconut oil with a fork until well mixed.
3. Add oils if desired.
4. Store in small glass jar or old deodorant container for easy use.

SPRAY DEODORANT

Ingredients

- 4 ounce glass spray bottle.
- 2 ounces (1/4 cup) apple cider vinegar
- 2 ounces (1/4 cup) distilled or spring water
- 30 drops lemongrass or lemon essential oil
- 15 drops lavender essential oil
- 5 drops tea tree essential oil

Instructions

1. Fill a 4-ounce glass bottle halfway full with apple cider vinegar.
2. Add your essential oils.
3. Fill it the rest of the way up with water. Shake well.

FLOWER POWER DEODORANT SPRAY

Ingredients

- 2 tablespoons vodka (the higher the proof the better)
- 2 tablespoons distilled water
- 2 drops rose absolute essential oil
- 2 drops jasmine essential oil
- 2 drops orange essential oil
- 1 drop lavender essential oil
- Small bottle with mister

Instructions

Combine all ingredients in a small, dark colored bottle. The dark colored bottle will help keep the essential oils from degrading. Shake well to combine ingredients.

NOTE: Shake before each use to distribute the essential oils. Give each underarm 2-3 spritzes and let air dry. It might sting a tiny bit if applied right out of the shower after shaving. Apply again after exercising or heavy exertion, if desired..

DEODORANT RECIPE FOR SENSITIVE SKIN

This is a gentle formula that works well for those that are sensitive to baking soda. Diatomaceous

earth is a powder made from fossilized phytoplankton. It's rich in silica and highly antimicrobial, which is why it works so well. It's pH can vary depending on where it is sourced from, but it is typically lower than baking soda.

Ingredients

- 3/4 cup arrowroot powder or cornstarch
- 1/4 cup food grade diatomaceous earth
- 7-9 tablespoons melted coconut oil

Instructions

1. Combine diatomaceous earth and arrowroot powder/cornstarch.
2. Add six tablespoons melted coconut oil and mix with a fork. Continue adding coconut oil until the deodorant reaches our preferred consistency.
3. Transfer mixture to a jar with a tight fitting lid [5-6].

CONCLUSION

The production of perspiration is a fact of life which we all must learn to live with. We each find ways to deal with it, often as outlined in the foregoing article. Once mastered, body odour is a relatively minor inconvenience. Always read ingredient labels, even of purportedly natural brands. Also remember that everyone's body chemistry is different. What worked for our friend may not work so well for us and we may have to try a few before we find the right one. Some people find that crystal rocks and tea tree oil-based deodorants are too harsh and cause irritation, while others say some natural deodorants give off unpleasant odors that are worse than the body odor itself. A very healthy diet rich in unprocessed vegetables and grains and low in meat-based products, alcohol, and caffeine is shown to help reduce body odors. Regular showering and wearing fabrics that breathe can also do wonders for a sweeter smelling body without compromising the health of our body.

ACKNOWLEDGEMENT

None.

CONFLICT OF INTEREST

No Conflict of Interest.

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