



Fig 1. Age distribution of *Malassezia* folliculitis cases.

Most patients in both the pediatric (75.9%) and adult (64.9%) age groups received oral antifungal therapy with either itraconazole or (before 2016) ketoconazole 200 mg daily for a median of 28 days, with an overall improvement rate of 92.5%. Of note, oral ketoconazole therapy for superficial fungal infections is no longer recommended because of the potential for hepatotoxicity and QT prolongation. Other patients were treated topically with sertaconazole or clotrimazole cream twice daily for a median of 14 days, with an overall improvement rate of 84.3%. The retrospective nature and lack of follow-up data in 30% of patients were limitations of this study.

Although *Malassezia* folliculitis has a predilection for the trunk, this condition is more likely to affect the face in pediatric patients. The presence of monomorphic small papules and pustules without comedones represent clues to differentiate it from acne vulgaris. We suggest direct microscopic examination of follicular contents to facilitate diagnosis of *Malassezia* folliculitis, especially in male teenagers and patients who fail to respond to antibiotic therapy.

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Use of complementary and alternative medicine by patients with psoriasis



To the Editor: Research on the efficacy of complementary and alternative medicines (CAMs) for psoriasis is increasing,¹ but patients may misunderstand the benefits of these therapies. Previous studies have examined the rate of CAM utilization, reporting use as high as 62%.^{2,3} However, these studies failed to delve into patients' reasons for using CAMs, and the populations sampled limit the widespread applicability of the results.²⁻⁴ This institutional review board–approved survey was disseminated by the National Psoriasis Foundation to determine the types of CAMs used and patients' motivations for using CAM. Statistical analyses were performed using chi-square tests.

The survey was promoted in the National Psoriasis Foundation's October 2018 newsletter

Table I. Responses to survey questions regarding participants' insurance status, psoriasis diagnosis and severity, and use of complementary or alternative medicines

Question*	Answer	n (%)
1. Has a dermatologist diagnosed you with psoriasis? (n = 219)	Yes	210 (95.89)
	No	9 (4.11)
2. Do you currently have... (n = 218)	Mild psoriasis: few plaques that can be covered by 1-2 palms	80 (36.70)
	Moderate psoriasis: scattered patches that can be covered by 3-9 palms	85 (38.99)
	Severe psoriasis: plaques over areas of the body that can be covered by 10-20 palms	33 (15.14)
	Very severe psoriasis: plaques over areas of the body that can be covered by more than 20 palms	14 (6.42)
	Unsure	6 (2.75)
3. Do you consider your psoriasis to be severe? (n = 218)	Yes	100 (45.87)
	No	98 (44.95)
	Unsure	20 (9.17)
4. Do you have health insurance that covers most of the cost of your medication? (n = 219)	Yes	143 (65.30)
	No	57 (26.03)
	I don't use medication.	19 (8.68)
5. Have you used any alternative treatments in the last 5 years?‡ (n = 217)	Yes	89 (41.0)
	No	118 (54.38)
	Unsure	10 (4.61)
6. Have you used any complementary treatments in the last 5 years?‡ (n = 215)	Yes	85 (39.53)
	No	108 (50.23)
	Unsure	22 (10.23)
7. Why did you try these alternative or complementary treatments? (n = 189)	Traditional allopathic medicines did not help me.	57 (30.16)
	I had side effects/did not want to get side effects from traditional allopathic medicines.	49 (25.93)
	I prefer "natural" ingredients.	43 (22.75)
	I do not have access to medical doctors to get traditional allopathic medicines.	8 (4.23)
	To supplement traditional allopathic medications.	8 (4.23)
8. Which of the following treatments have you tried in the last 5 years?† (select all that apply) (n = 452)	Other	24 (12.70)
	Oral vitamins	89 (19.69)
	Dietary changes (ie, gluten free)	84 (18.58)
	Topical herbals/botanicals	73 (16.15)
	Dead Sea bath salts	45 (9.96)
	Meditation	45 (9.96)
	Yoga	37 (8.19)
	Acupuncture	26 (5.75)
	Laser therapy (not including light therapy or excimer laser therapy in a doctor's office)	7 (1.55)
	Cupping	6 (1.33)
	Other	40 (8.85)
9. Are you still using the alternative/complementary treatments? (n = 204)	Yes	98 (48.04)
	No	106 (51.96)
10. How long have you previously used or have you been using alternative/complementary treatments? (n = 158)	Less than 6 months	29 (18.35)
	6 to 12 months	23 (14.56)
	1 to 3 years	37 (23.42)
	More than 3 years	69 (43.67)
11. Would you recommend a CAM to others with psoriasis? (n = 218)	Yes	93 (42.66)
	No	41 (18.81)
	Unsure	84 (38.53)

CAM, Complementary and alternative medicine.

*There were a total of 219 participants (numbers of total responses vary by question).

†In response to the question "Which of the following treatments have you tried in the last 5 years?", participants who used at least 1 CAM selected an average of 2.88 therapies (standard deviation = 1.62).

‡The following definitions were provided in the survey: Complementary treatments means in addition to traditional allopathic treatments like prescription strength topicals, oral pills, injectables, and light therapy. Alternative treatments means in place of traditional allopathic treatments.

Table II. Free response answers [n (%)] for therapies used in addition to those presented in Table I, question 8

Oral vitamins/ supplements	Dietary changes	Herbals/botanicals*	Behavioral methods	Other
Vitamin D, 14 (5.8)	Gluten free, 13 (5.4)	Turmeric, 14, including 3 oral (5.8)	Sun exposure, 4 (1.7)	Over-the-counter cream/lotion/ ointment, 15 (6.3)
Omega 3/fish oil, 6 (2.5)	Low/no sugar, 5 (2.1)	Coconut oil, 7 (2.9)	Tanning bed use, 3 (1.3)	Marijuana/ cannabidiol, 5: including 1 oral, 1 topical (2.1)
Vitamin E, 5 (2.1)	Low processed food, 4 (1.7)	Aloe vera, 6 (2.5)	Massage, 2 (0.8)	Essential oils, 5 (2.1)
Vitamin B ₁₂ , 2 (0.8)	Dairy free, 4 (1.7)	Sorion herbal cream, 3 (1.3)	Chiropractor, 2 (0.8)	Shampoo, 4 (1.7)
Vitamin C, 2 (0.8)	Low meat, 3 (1.3)	Tea tree oil, 2 (0.8)	Reiki self-care, 1 (0.4)	Epsom salt baths, 4 (1.7)
Probiotics, 2 (0.8)	Autoimmune protocol diet, 3 (1.3)	Olive oil, 2 (0.8)	Aromatherapy, 1 (0.4)	Oils, 3 (1.3)
Magnesium, 2 (0.8)	Low/no carbs, 3 (1.3)	Noni juice, 2 (0.8)	Stress reduction, 1 (0.4)	Magnesium salt baths, 2 (0.8)
Vitamin A, 1 (0.4)	No night shade, 3 (1.3)	Curcumin, 2 (0.8)	Cryotherapy, 1 (0.4)	Vitamin D cream, 2 (0.8)
Thiamine, 1 (0.4)	Food trigger avoidance, 2 (0.8)	Herbal tincture, 2 (0.8)	Infrared sauna, 1 (0.4)	Ayurveda, 2 (0.8)
Chondroitin, 1 (0.4)	Elimination diet, 2 (0.8)	Chinese herbal medicine, 2 (0.8)	Myofascial release, 1 (0.4)	Banana peel rubs, 2 (0.8)
Glucosamine, 1 (0.4)	Homemade/fresh food, 2 (0.8)	Herbal cream, 1 (0.4)		Mineral oil, 2 (0.8)
Methylsulfonylmethane, 1 (0.4)	No eggs, 1 (0.4)	Hemp oil, 1 (0.4)		MetaDerm, 1 (0.4)
Flaxseed, 1 (0.4)	Vegetarian, 1 (0.4)	Nigella sativa, 1 (0.4)		Red light therapy, 1 (0.4)
Krill oil, 1 (0.4)	High protein, 1 (0.4)	Black seed oil, 1 (0.4)		Skin Cap Spray, 1 (0.4)
Type II collagen, 1 (0.4)	Low salt, 1 (0.4)	Garlic pills, 1 (0.4)		Tiger Balm, 1 (0.4)
Glutamine, 1 (0.4)	Increased fish, 1 (0.4)	Ginger, 1 (0.4)		African black soap, 1 (0.4)
Folic acid, 1 (0.4)	Blueberries and sour cherries, 1 (0.4)	Arnica, 1 (0.4)		Natural hair mask, 1 (0.4)
Ubiquinol, 1 (0.4)	No artificial preservatives, 1 (0.4)	Kava, 1 (0.4)		Drinking sea water, 1 (0.4)
Bioflavonoids, 1 (0.4)	Detox diet, 1 (0.4)	Thistle, 1 (0.4)		Glycerin, 1 (0.4)
	Pagano diet, 1 (0.4)	Ashwagandha, 1 (0.4)		Apple cider vinegar, 1 (0.4)
	Whole 30 diet, 1 (0.4)	Herbal tar shampoo, 1 (0.4)		Homemade balm with oils and vitamins, 1 (0.4)
	Anti-inflammatory diet, 1 (0.4)	Argan oil, 1 (0.4)		Homeopathy, 1 (0.4)
	Oatmeal, 1 (0.4)	Witch hazel, 1 (0.4)		
	Turkey, 1 (0.4)	Bitter gourd juice, 1 (0.4)		
	Whisky-soaked raisins, 1 (0.4)	Nigella sativa, 1 (0.4)		
		Bioperine, 1 (0.4)		
		Cilantro, 1 (0.4)		
		Geranium oil, 1 (0.4)		
		DermaOil, 1 (0.4)		
		Gotu kola, 1 (0.4)		
		Castor oil, 1 (0.4)		

There were a total of 239 free responses. Participants were instructed, "Please list the specific treatments you have tried, if any."

*For herbals/botanicals, unless otherwise specified, the delivery method (oral or topical) was not indicated by respondents.

sent to 100,927 members; 6101 opened the newsletter, 324 clicked the survey, and 219 completed it. More respondents were female than male (68.5% vs 31.5%). Most participants were white (84.1%); 6.2% were Hispanic, 3.1% Asian, and 2.6% African American. Most participants were diagnosed by a dermatologist and had health insurance to cover their medications. Psoriasis severity was assessed by body surface area and patient self-perceptions. **Table I** describes nondemographic survey answers.

Forty-one percent reported using alternative therapies (defined, **Table I**), with higher utilization seen among patients who consider their psoriasis to be severe than among those who do not (50.0% severe vs 33.6% nonsevere, $P = .040$). Of the respondents, 39.5% reported using complementary therapies (defined, **Table I**). Women were more likely to use complementary medicines than men (45.6% women vs 26.5% men, $P = .002$). The most common reasons for using CAMs were that traditional medications did not help or had side effects; only 4% reported care access as a reason. Therapies reported differed by gender, with more men than women using vitamins (24.0% vs 18.9%), Dead Sea bath salts (17.0% vs 7.8%), and cupping (3% vs 0.8%) and more women than men using herbals/botanicals (17% vs 14%) and yoga (9.6% vs 2%) ($P = .017$). **Table II** lists reported therapies. A total of 42.7% would recommend CAMs to others. Patients with moderate psoriasis by body surface area were more likely to recommend CAMs than those with mild or severe psoriasis (52.4% moderate vs 35.0% mild, 40.4% severe; $P = .005$). Answers did not differ by insurance status; this is similar to results from another survey in which CAM use was not correlated with income or education.²

These results demonstrate that patients with psoriasis frequently use CAMs because of traditional medication failures or side effects. Few turned to CAMs because of limited care access, indicating that patients use CAMs despite the availability of traditional treatments. Although Dead Sea treatments, which have shown therapeutic benefit,⁵ were commonly reported, patients frequently used CAMs that have not exhibited efficacy or have not been studied per a recent systematic review.¹ Vitamins were the most reported therapy, yet neither vitamin D nor B₁₂ have documented efficacy.¹ Similarly, indigo naturalis was not mentioned by respondents but has demonstrated efficacy.¹ Meditation use was not commonly reported but has

established efficacy, highlighting an addressable treatment gap.¹ The common use of therapies with limited evidence of effectiveness may partially explain why only 43% would recommend CAMs to others. Clearly, CAMs are part of our patients' armament. Educational initiatives that enable physicians to discuss evidence-based CAMs with patients may improve patient satisfaction and outcomes.

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