CH-10 Skin: eczema, psoriasis, fungal infection, leg ulcers and acne, and the topicals that work

HEALING after the FALL, research library, CH-10

Researched 10 October 2026 by Claude Opus agent for THRIVING after the FALL, Book Four. Library document, unverified.

1. Findings by section

This report builds on the library and does not repeat it. Salve bases, zinc oxide ointment, lanolin and calendula are in ME-11, scabies and lice in IN-08, honey, sugar, maggots and aloe in WO-02 and WO-04, the diabetic foot in CH-01, sulfur recipes in ME-08, skin cancer in CH-06. Varicose vein surgery belongs to CH-11, not yet written, and is left to it.

The brief's thesis, that compression, sulfur, tar, zinc, sun and fat do most of the work, mostly holds. Fat alone does more for eczema than any herb. Compression is the strongest treatment here and the one most able to cost a leg. The commonest harms come not from herbs but from salvaged pharmacy products used wrongly.

1.1 Eczema (atopic dermatitis)

What the tradition says. Almost every tradition treats dry, itching skin with fat, oil or butter, oatmeal in the bath, sea water, sun and astringent washes. European folk medicine added wood tars, and twentieth-century dermatology added coal tar and, from the 1950s, steroid creams.

What the record shows. Emollients are the base of all treatment, and the evidence is grade A. A Cochrane review of 77 studies with 6,603 participants found that people using a moisturiser had fewer flares (risk ratio 0.40), a longer time to flare (median 180 against 30 days) and used less steroid cream (9.3 g less), and that no moisturiser was clearly better than another (van Zuuren 2017). So a plain fat or wax-and-oil salve should do as well as a branded cream. Olive oil damages the barrier and should not be left on eczematous skin, sunflower and coconut oil are better, and lanolin sensitises 1.7 to 6.0 per cent of patch-tested patients (THRIVING library, ME-11).

Soap strips skin lipids, and guidelines advise washing with the emollient instead. I read no trial of soap avoidance and grade it C [VERIFY].

Dilute bleach baths. The aim is to reduce Staphylococcus aureus on eczematous skin. Huang and colleagues in Chicago randomised 31 children with infected eczema, all first given cephalexin, to bleach baths with nasal mupirocin or to water baths with placebo. Severity fell more with bleach at 1 and 3 months, but only on skin under the water. The head and neck did not improve (Huang 2009). Later pooled analyses are less kind. Chopra and colleagues (2017) pooled 5 trials and found bleach baths no better than plain water baths. Bakaa and colleagues (2022) pooled 10 trials with 307 participants, added unpublished data and found a modest benefit: 32 per cent of bleach-bathed patients reached a 50 per cent improvement against 22 per cent on water, moderate certainty, which is about 1 extra patient in 10. The bath and the emollient do most of the work. Grade A for a small effect.

The recipes come from two sources and agree within a factor of two. The American Academy of Dermatology says: regular 6 per cent bleach, half a cup in a full bathtub, a quarter cup in a half-full tub, one teaspoon per gallon in a baby bath, soak 5 to 10 minutes (AAD 2026). The American Academy of Allergy, Asthma and Immunology says a quarter to half a cup of 5 per cent bleach in a 40-gallon tub, about 10 minutes, no more than twice a week, head not submerged, rinse and moisturise (AAAAI 2026). My arithmetic: half a cup (118 mL) of 6 per cent in 40 US gallons (151 L) gives about 0.005 per cent hypochlorite, and one teaspoon (5 mL) of 6 per cent per gallon (3.8 L) gives about 0.008 per cent [VERIFY]. In metric terms, 1 mL of 5 per cent bleach per litre of water gives 0.005 per cent [VERIFY]. After the Fall the danger is bleach of unknown strength, since hypochlorite weakens in storage (Protocol 3).

Wet wraps (damp cloth over emollient, then a dry layer) are standard for severe childhood eczema. I read no trial and grade them C [VERIFY].

Coal tar, sun and sea. The Goeckerman regimen (crude coal tar then ultraviolet light, devised for psoriasis in 1925) was adapted for severe eczema at the University of California San Francisco. A review of their records over six years found a mean remission of 7.2 months, with mild folliculitis and occasional ultraviolet burn as the only adverse effects (Dennis 2013). A single-centre series, grade B. I found no trial of sun or sea bathing for eczema.

Salvaged steroid creams. These are effective, grade A, and the best-documented harm in this report. The quantity rule is the fingertip unit: the cream squeezed from a standard tube along the last segment of an adult index finger, which weighs about 0.49 g in men and 0.43 g in women and covers about 312 and 257 square centimetres (Long and Finlay 1991). DermNet's patient guidance translates this into about two adult handprints of skin per fingertip unit (DermNet, secondary). Hesperian says to apply steroid creams 3 to 4 times a day but not for long periods or over large areas (Hesperian 2025). I did not read a modern guideline on frequency and mark the difference unresolved [VERIFY]. The harm is long use of potent steroids on thin skin. A systematic review of 34 studies on "topical steroid withdrawal" found that 99.3 per cent of reported cases involved the face or genitals and 81 per cent were women, after long, frequent use of moderate to potent steroids (Hajar 2015). Potent steroids belong on thick skin for short courses, and only hydrocortisone 1 per cent on the face, folds and babies [VERIFY].

1.2 Psoriasis

What the tradition says. Sun and sea water for plaques, and tar, sulfur and oils to soften scale. In Brazil, the powder found in cavities in the trunk of the araroba tree (Andira araroba) was used on skin disease and reached Europe through Goa as Goa powder. Its active substance, chrysarobin, was named for psoriasis treatment in the 1870s (Kemp in 1875 and Squire in 1876 are named in secondary sources [VERIFY]), and Galewsky introduced the synthetic relative anthralin, now called dithranol, in 1916 (Araroba powder, secondary). The tree is a rainforest species, so dithranol after the Fall is salvage only.

What the record shows. A Cochrane review of 131 trials with 21,448 participants found that vitamin D analogues (calcipotriol) beat coal tar, dithranol beat placebo, and potent steroids worked about as well as vitamin D with fewer local side effects (Mason 2009). Salvage potent steroid or calcipotriol first. Tar and dithranol last longer on the shelf [VERIFY].

Goeckerman and Ingram. William Goeckerman at the Mayo Clinic combined crude coal tar with ultraviolet light in 1925 (Goeckerman 1925, not read). Modern versions apply 2 to 4 per cent crude coal tar in a petrolatum base daily before broadband ultraviolet B (Goeckerman therapy, secondary). John Ingram in Leeds (1953) described daily dithranol in a stiff zinc oxide paste, with a tar bath and ultraviolet light, the Ingram regimen (Ingram 1953, not read). Both are inpatient regimens of weeks, grade B from hospital series.

Is tar a carcinogen? Coal tar contains polycyclic aromatic hydrocarbons, and tar workers had skin cancers. But a Dutch cohort of 13,200 patients treated with coal tar for psoriasis or eczema found no excess of cancer: hazard ratio for non-skin cancer 0.92 (0.78 to 1.09) and for skin cancer 1.09 (0.69 to 1.72) (Roelofzen 2010). The contest is real

but the patient data are reassuring. Wood tars (pine, birch, juniper) have a long European folk use. I read no trial of them and grade them D [VERIFY].

Sun and the Dead Sea. At the Dead Sea, 64 patients treated with 4 weeks of sun and bathing saw their psoriasis severity score fall by 95.5 per cent, 75.9 per cent reached a 75 per cent improvement, and the median remission was 23.1 weeks (Harari 2007). An uncontrolled series at an unusual site, grade B. Sunburn can trigger new plaques [VERIFY].

Salicylic acid lifts scale and lets other treatments in. It is also the most dangerous psoriasis topical in this report (section 4).

1.3 Fungal infection

Ringworm of the body and groin. A Cochrane review of 129 trials with 18,086 participants found every modern topical antifungal effective. Terbinafine gave clinical cure against placebo with a risk ratio of 4.51 (number needed to treat 3), and clotrimazole gave mycological cure with a risk ratio of 2.87 (number needed to treat 2). Steroid-antifungal combinations gave quicker clinical cure but no better mycological cure. On the old remedy, the review states there was insufficient evidence to judge Whitfield's ointment (El-Gohary 2014).

Whitfield's ointment. Arthur Whitfield (1868 to 1947) of King's College Hospital, London, gave his name (Whitfield's ointment, secondary) to compound benzoic acid ointment, 6 per cent benzoic acid and 3 per cent salicylic acid. The 1907 date in the brief I could not confirm [VERIFY]. It is on the MSF essential list: apply twice daily to clean, dry skin for 3 to 6 weeks, never on weeping lesions, mucosa or the eyes, not contraindicated in pregnancy, store below 25°C (MSF Essential Drugs, Whitfield's). Hesperian gives twice daily for 2 to 4 weeks and a home version of 3 parts salicylic acid and 6 parts benzoic acid to 100 parts petrolatum, lard or 40 per cent alcohol, rubbed in 3 to 4 times a day (Hesperian 2025). The sources agree on strength and differ on duration. In India, 120 patients on Whitfield's plus oral fluconazole did as well as on butenafine (Thaker 2013), but the fluconazole confounds it. Grade B from a century of use.

Sulfur. Hesperian gives 1 part sulfur to 10 parts petroleum jelly or lard, 3 to 4 times a day, for ringworm and scabies on one page, and 1 in 20 (5 per cent) for scabies on another (Hesperian 2025). ME-08 records the same figures. For scabies use IN-08. I found no trial of sulfur for ringworm. Grade C.

Ringworm of the scalp (tinea capitis) lives inside the hair shaft and needs an oral drug. A Cochrane review of 25 studies with 4,449 children found that for Trichophyton species, 4 weeks of terbinafine cured as many as 8 weeks of griseofulvin (84.2 against 79.0 per cent), and for Microsporum species griseofulvin did better (50.9 against 34.7 per cent) (Chen 2016). The doses from two sources differ. Hesperian gives griseofulvin 15 mg/kg a day for at least a month, with adult doses of 500 to 1,000 mg and avoidance in pregnancy (Hesperian 2025). MSF gives 10 to 20 mg/kg once daily for children aged 1 to 12, maximum 500 mg, for at least 6 weeks and up to 8 to 12, adults 500 mg to 1 g, with itraconazole as the alternative, and says oral antifungals are contraindicated in pregnancy and breastfeeding (MSF Clinical Guidelines, superficial fungal infections). MSF also says to shave or cut the hair. Use the longer MSF course. Fungal nails need 12 to 18 months of griseofulvin (MSF Clinical Guidelines).

Steroid on ringworm. In India, over-the-counter creams combining clobetasol with an antifungal and an antibiotic have produced an epidemic of extensive steroid-modified ringworm. Verma and Vasani (2016) described 24 men with genital ringworm altered by such creams. The steroid hides the redness while the fungus spreads. No steroid on a ring-shaped or scaly rash until ringworm has been excluded.

Candida. A trial in HIV-infected adults found 0.00165 per cent gentian violet in the mouth twice daily as good as nystatin suspension (68.5 against 67.8 per cent cured or improved) at a fraction of the cost (2.51 against 19.42 US dollars) (Mukherjee 2017). Grade A for oral thrush. Hesperian lists 0.5 to 2 per cent pre-mixed solution and says a teaspoon of crystals in half a litre of water makes 2 per cent, painted once a night for 3 nights for yeast (Hesperian 2025). By my arithmetic a level teaspoon of crystals weighs nearer 3 to 5 g, which in 500 mL gives 0.6 to 1 per cent,

not 2 [VERIFY]. In June 2019 Health Canada told Canadians to stop using drug products containing gentian violet, because it caused cancer in animals given it by mouth, though no human case was found. Products were withdrawn, and dressings containing it were left on sale with warnings against use beyond 6 months or in pregnancy (Health Canada 2019). I could not find the FDA's position. For skin-fold candida, MSF gives miconazole 2 per cent twice daily for 2 to 4 weeks, and for persistent candida nappy rash, zinc oxide plus nystatin (MSF Clinical Guidelines).

Pityriasis versicolor (pale or brown patches on the trunk, from Malassezia yeast) responds to topicals, and oral terbinafine does not work (Gupta 2015). Selenium sulfide 2.5 per cent daily for 7 days cleared 16 of 20 patients against 17 of 20 on oral itraconazole, with irritation in about a quarter (del Palacio Hernanz 1987), and 76.2 against 47.8 per cent on sulfacetamide (Hull 2004). Hesperian gives selenium sulfide 1 or 2.5 per cent, washed off after 30 minutes, daily for a week, and as a household alternative sodium thiosulfate (photographers' "hypo"), 1 tablespoon in half a cup of water, followed by a rub with vinegar, twice daily, repeated every 2 weeks to prevent return (Hesperian 2025). I found no trial of thiosulfate and grade it C [VERIFY]. Pale patches persist for months after cure.

Tea tree oil is steam-distilled from the leaves of Melaleuca alternifolia of New South Wales. Other Melaleuca species (cajuput, niaouli) give different oils, so an oil of unknown source is not the oil of the trials [VERIFY]. The brief cites Satchell 2002 as a nail trial. It is not. Satchell and colleagues in Sydney randomised 158 patients with athlete's foot between the toes to 25 per cent oil, 50 per cent oil or placebo, twice daily for 4 weeks. Clinical response was 72 and 68 per cent against 39 per cent, and mycological cure 64 per cent on 50 per cent oil against 31 per cent on placebo. Four patients (3.8 per cent) developed moderate to severe dermatitis (Satchell 2002). The nail trial is Buck 1994: 117 patients applied 100 per cent oil or 1 per cent clotrimazole for 6 months, and mycological cure was 18 against 11 per cent, no difference and poor for both (Buck 1994). Grade A for athlete's foot (one trial), D for nails. Its harms are in section 4.

1.4 Leg ulcers

Kinds. Most chronic leg ulcers in old people are venous [VERIFY]: above the inner ankle, shallow, wet, with swelling and brown staining. Arterial ulcers sit on toes, heel or shin, are punched out and pale, on a cold foot, with pain worse when the leg is raised (Protocol 1). Many are mixed. In the tropics add tropical and Buruli ulcer.

Compression heals venous ulcers. This is grade A, and the best evidence in this report. A Cochrane review of 48 trials with 4,321 participants found that compression heals more ulcers than no compression, that systems of several components heal more than a single layer, that the four-layer bandage healed faster than the short-stretch bandage (median 90 against 99 days, hazard ratio 1.31, 1.09 to 1.58), that two-layer stockings beat short-stretch bandages (risk ratio 1.62), and that the four-layer bandage did no better than a paste bandage of the Unna type (O'Meara 2012). A second Cochrane review restricted to compression against none, 14 studies with 1,391 participants, found faster healing (hazard ratio 2.17, 1.52 to 3.10), more ulcers healed within 12 months (risk ratio 1.77, 1.41 to 2.21, moderate certainty) and less pain (Shi 2021).

The Unna boot. Paul Gerson Unna (1850 to 1929) of Hamburg devised in 1885 a bandage impregnated with zinc oxide, gelatin and glycerin that sets semi-rigid around the leg (Tekiner and Karamanou 2019). The brief's 1896 I could not confirm [VERIFY]. It is inelastic and works when the calf pumps against it in walking. Since paste bandages matched the four-layer bandage, a village could in principle make one from zinc oxide, bone gelatin and soap glycerin. I found no recipe and give none [VERIFY].

Improvised compression. A cotton bandage over padding from toes to knee, firmest at the ankle, is an improvised short-stretch bandage: weaker than multi-layer systems, far better than none. Without a gauge its pressure is unknown [VERIFY], hence Protocol 2's checks.

Walking and raising the leg. A review of 5 trials with 190 participants found that prescribed calf exercise with compression healed 14 more ulcers per 100 at 12 weeks (1 to 27) than compression alone (Jull 2018). Elevation is universal advice. I found no trial of it alone [VERIFY].

The arterial check before compression. Compression over a leg with poor arterial supply can cause pressure sores, gangrene and amputation. Callam and colleagues collected cases of such injury from Scottish surgeons (Callam 1987, not read, title only). The CLOTS 1 trial gives a measured rate even in a population not selected for arterial disease: of 2,518 stroke patients, those given thigh-length stockings had skin breaks, ulcers, blisters or necrosis in 5 per cent against 1 per cent without, odds ratio 4.18 (2.40 to 7.27), and the stockings did not prevent deep vein thrombosis (CLOTS 2009). The standard test is the ankle-brachial pressure index (ABPI) with a hand-held Doppler: the ankle systolic pressure divided by the arm systolic pressure. The Queensland University of Technology summary of the Scottish SIGN 120 guideline says to check pulses and measure ABPI, to compress only with an ABPI of 0.8 or more, and that compression is contraindicated below about 0.7 or above 1.2 (where calcified arteries cannot be compressed and the reading is false) (QUT 2019). A scoping review of 13 guidelines found that they disagree about the band from 0.6 to 0.8, some forbidding compression and some allowing reduced compression (Weller 2019).

Can the check be done by hand? Only partly. A systematic review for the International Working Group on the Diabetic Foot found that clinical examination including pulse palpation cannot exclude peripheral artery disease, negative likelihood ratio 0.75, while an ABPI under 0.9 had a positive likelihood ratio of 6.5 (Forsythe 2020). In the TrEAD study of 305 people with diabetes, palpating foot pulses detected only 43 per cent of those with arterial disease (Normahani 2022). Palpable pulses do not clear a leg, and absent pulses forbid firm compression. Protocol 1 turns the hand findings into a stop list. A salvaged hand-held Doppler and cuff at the district change outcomes more than any other equipment in this report. Whether a village healer should apply firm compression with no Doppler, using the hand check alone, is the owner's decision [OWNER].

Honey, sugar and maggots. Honey speeds the healing of partial-thickness burns by about 4.7 days (Jull 2015, THRIVING library, WO-02). In venous ulcers it does not help. The HALT trial in New Zealand randomised 368 patients, all under compression, and found 55.6 per cent healed at 12 weeks with honey dressings against 49.7 per cent with usual care, not a significant difference, and more adverse events, chiefly pain, with honey (risk ratio 1.3, 1.1 to 1.6) (Jull 2008). Honey adds nothing under compression. I found no trial of sugar (WO-02) on venous ulcers. Maggots of the green bottle fly clean an ulcer quickly. In VenUS II, 267 patients with sloughy ulcers were randomised to loose or bagged larvae or to hydrogel. Larvae removed the dead tissue about twice as fast (hazard ratio 2.31, 1.65 to 3.2) but the ulcers did not heal faster (hazard ratio 1.13, 0.76 to 1.68), and larvae hurt more (Dumville 2009). The history from William Baer in Baltimore (1929) onward is in WO-02. The ulcer's real treatment remains compression.

Buruli ulcer (Mycobacterium ulcerans) is found in West and Central Africa, south-east Australia and parts of Asia and the Americas. It begins as a painless nodule or swelling and becomes a large ulcer with undermined edges [VERIFY]. A trial in Ghana and Benin found 8 weeks of rifampicin plus clarithromycin healed 96 per cent (140 of 146) of small lesions by 52 weeks, as well as rifampicin plus streptomycin (95 per cent), which caused deafness in some (Phillips 2020). The organism grows best at 30 to 33°C and not at body core temperature, so heat applied locally kills it. At Ayos in Cameroon, Junghanss and colleagues treated 6 patients for 4 to 8 weeks with packs of sodium acetate trihydrate, the material of pocket hand warmers, recharged in hot water. All healed or were grafted, and all were free of relapse 18 months later (Junghanss 2009), and then 53 patients with heat for up to 8 weeks: 92.4 per cent were cured at 6 months and 83.7 per cent had no recurrence at 24 months (Vogel 2016). The packs held about 40°C [VERIFY]. Heat needs no drug, but too hot burns. Grade B.

Tropical ulcer (tropical phagedenic ulcer) affects children and young adults in the hot wet tropics, usually on the lower leg after a small wound. It spreads within days into a large, foul, painful slough. Adriaans and Robinson sampled patients in the Gambia, Papua New Guinea, southern India, Fiji and Zambia and found Fusobacterium and spirochaetes (Treponema), and noted that antibiotics given early interrupt the disease (Adriaans 1988, Robinson 1988). Penicillin and metronidazole are the drugs usually named [VERIFY]. Old tropical ulcers can become cancers (see CH-06). The Apsokok of Papua New Guinea use 16 plant species on tropical ulcer, among them Homalium foetidum bark, and several extracts were antibacterial in the laboratory (Prescott 2017). The source does not describe this knowledge as restricted. Grade D.

1.5 Acne

Benzoyl peroxide is grade A, and the cheapest effective salvage. Mills and colleagues found 2.5 per cent as effective as 5 and 10 per cent against inflamed spots in 153 patients, with less irritation (Mills 1986). Allergic contact dermatitis occurs in about 1 in 40 users [VERIFY], and it bleaches cloth and hair (Akhavan 2003). Stock should be used at the lowest strength, not the highest.

Tea tree oil. In 124 patients, 5 per cent tea tree gel and 5 per cent benzoyl peroxide both reduced acne, the oil more slowly and with fewer side effects (Bassett 1990). The Cochrane review of complementary therapies found one trial of 60 people against placebo, with a lesion count reduced by 7.53, low quality (Cao 2015). Grade A, low certainty.

Sulfur. Sulfur lotions and soaps have a long dermatological use for acne. I found no trial and grade it C [VERIFY].

Tetracycline salvage. Hesperian gives tetracycline 250 mg four times a day, never in pregnancy or under 8 years, not with milk, warns of sunburn, and warns that old or expired tetracycline can be poisonous (Hesperian 2025). I read only one source for the dose [VERIFY]. Months of antibiotics for acne compete with infections that kill (THRIVING library, IN-05). A Cochrane review found minocycline no better than other treatments and found it caused skin pigmentation and rare serious reactions (Garner 2012). Whether antibiotic stock is ever spent on acne is the owner's decision [OWNER].

Diet. A meta-analysis of 14 studies with 78,529 young people found dairy intake associated with acne (odds ratio 1.25, 1.15 to 1.36), with signs of publication bias (Juhl 2018). In a trial of 43 young men, a low-glycaemic-load diet for 12 weeks reduced lesions by 23.5 against 12.0 on a usual diet (Smith 2007). Cordain and colleagues examined 1,200 Kitavan islanders of Papua New Guinea and 115 Aché of Paraguay and found no acne at all (Cordain 2002). Grade B for dairy, A (one small trial) for glycaemic load.

Scarring. Squeezing worsens scars, and scar revision is hospital-only, so treat acne early.

1.6 Warts, sunburn, aloe, calendula and the nappy rash

Warts. A Cochrane review of 85 trials with 8,815 participants found salicylic acid better than placebo (risk ratio 1.56, 1.20 to 2.03), more clearly on the hands (2.67) than the feet (1.29). Freezing was no better than placebo, and duct tape, in 2 trials with 193 participants, did not help (risk ratio 1.43, 0.51 to 4.05) (Kwok 2012). Focht and colleagues reported 85 per cent cured with duct tape against 60 per cent with freezing in 51 children who completed the study (Focht 2002). Wenner and colleagues then ran a placebo-controlled trial in adults and found 21 per cent cured with duct tape against 22 per cent with placebo (Wenner 2007). Many warts go on their own. Wart paints use 10 to 40 per cent salicylic acid on a small area (Madan 2014).

Sunburn and aloe. Aloe vera leaf gel, the clear inner jelly of Aloe vera (Aloe barbadensis), not the yellow bitter latex under the skin, is graded in WO-04 for burns and WO-02 for wounds. On surgical wounds it delayed healing by about 30 days in one trial (Dat 2012, THRIVING library, WO-02). In 20 volunteers, a 70 per cent aloe cream did not prevent or treat sunburn (Puvabanditsin 2005). Grade X for sunburn. Agave americana has a similar rosette and its sap causes dermatitis (THRIVING library, WO-04). Shade, cool water and fat are the treatment.

Calendula (Calendula officinalis, flower heads) is graded in ME-11: B for radiation dermatitis on one positive and one negative trial, C for minor wounds, avoided in daisy-family allergy, with Tagetes (French marigold) as the look-alike (THRIVING library, ME-11).

Zinc oxide. Zinc oxide ointment BP is 15 per cent in simple ointment (THRIVING library, ME-11). It is the barrier for nappy rash and for the skin around an ulcer, and the base of the Unna boot. MSF puts zinc oxide first for nappy rash, with nystatin if candida persists (MSF Clinical Guidelines). I read no trial and grade it B from long practice [VERIFY].

1.7 Remedies that harm

Mercury creams. Skin-lightening creams often contain mercury. The US limit is 1 part per million. Creams tested by Minnesota's health department in 2011 contained 135 to 33,000 parts per million (Minnesota Department of Health). WHO and UNEP describe kidney and nerve damage, and poisoning of others in the house (WHO 2019, UNEP fact sheet). In India, three women developed membranous nephropathy (kidney damage) after using creams containing 2,180 to 7,698 parts per million, and improved after stopping (Sultan 2023). Grade X. Salvaged creams of unknown origin with "whitening" or "lightening" on the label should be destroyed [OWNER].

The other harms are in section 4.

2. Evidence grades

Remedy, condition	Grade	Effect
Emollient, any bland fat, eczema	A	Flares RR 0.40
Olive oil left on, eczema	X	Barrier damage
Soap avoidance, wet wraps	C	No trial read
Bleach bath, eczema	A	About 1 in 10
Tar with ultraviolet, eczema	B	Remission 7.2 months
Steroid by fingertip unit	A	Harms if misused
Vitamin D analogue, psoriasis	A	Beats tar
Coal tar, dithranol, psoriasis	A	Beat placebo, no cancer excess
Sun, Dead Sea, psoriasis	B	Uncontrolled
Wood tars	D	No trial read
Azole or terbinafine cream, ringworm	A	NNT 2 to 3
Whitfield's ointment	B	Under-tested
Sulfur 1 in 10, ringworm	C	No trial
Oral antifungal, scalp ringworm	A	79 to 84 per cent
Steroid on ringworm	X	Spreads it
Gentian violet, oral thrush	A	Equals nystatin
Selenium sulfide, versicolor	A	76 to 80 per cent
Thiosulfate, versicolor	C	No trial read
Tea tree oil, athlete's foot	A	One trial
Tea tree oil, nails	D	18 per cent
Compression, venous ulcer	A	RR 1.77 healed
Calf exercise, venous ulcer	A	14 per 100 more
Honey, venous ulcer	X	No gain, more pain
Maggots, sloughy ulcer	A	Clean, no faster healing
Heat, Buruli ulcer	B	92 per cent
Apsokok plants, tropical ulcer	D	Laboratory only
Benzoyl peroxide 2.5 per cent	A	Equals 10 per cent
Tea tree 5 per cent, acne	A, low	Slower
Sulfur, acne	C	No trial
Less dairy and sugar, acne	B	Modest
Salicylic acid, warts	A	RR 1.56
Duct tape, warts	X	Equals placebo
Aloe, sunburn	X	No effect
Zinc oxide, nappy rash	B	No trial read
Mercury creams	X	Kidney, nerve damage

Remedy, condition	Grade	Effect

3. Means ledger

Rung	What it can do	What changes
Hands and knowledge	Tell venous from arterial ulcer, feel pulses, refuse steroid on ringworm, stop soap on eczema, raise and walk the leg, shave the scalp, cut sugar and dairy, destroy mercury creams	Avoids the main harms. Exercise adds healing. Pulses alone miss most arterial disease
Hearth	Lard, tallow or sunflower oil as emollient, boiled-water baths, cotton cloth bandages over wool padding, sun exposure timed by the shadow, warm packs for Buruli ulcer, vinegar	Eczema flares fall. Compression becomes possible. Buruli lesions can be heated
Garden and still	Beeswax salves (ME-11), calendula, a scale to weigh sulfur and acids, soap for washing, wood tars, glycerin from soap-making, gelatin from bones for a paste boot	Weighed ointments (sulfur, Whitfield's from salvage), an Unna-type boot in principle
Village dispensary (300)	Trained healer, salvaged creams sorted by potency, bleach of known strength, benzoyl peroxide, selenium shampoo, gentian violet, a register of ulcers and their dressings, maggot rearing if allowed, a microscope for skin scrapings with potassium hydroxide [VERIFY]	Ringworm confirmed before treatment. Steroid kept under lock. Versicolor and thrush cured
District infirmary (3,000)	Hand-held Doppler and cuff for ABPI, oral griseofulvin or terbinafine, antibiotics for tropical and Buruli ulcer, inpatient tar or dithranol regimens, skin grafting, biopsy where a microscope reader exists	Safe firm compression. Scalp ringworm cured. Buruli and tropical ulcer cured. Severe psoriasis cleared
Hospital before the Fall	Duplex ultrasound, vein surgery (CH-11), biologic drugs, phototherapy cabinets, isotretinoin, patch testing	Most psoriasis and eczema controlled, ulcer recurrence cut by surgery

4. Harm test

Compression on an ischaemic leg. It kills tissue over the shin and the bony points of the foot (CLOTS 2009). Who must never receive it: absent foot pulses, ABPI under 0.5 [VERIFY], rest pain, gangrene, the diabetic with numb feet who cannot feel the warning pain, and acute cellulitis until the infection settles [VERIFY]. Signs it is going wrong:

new pain, toes pale, blue or cold, numbness or tingling, a blister or dark patch at the bandage edge. What to do: cut the bandage off at once, raise nothing, keep the leg flat and warm, and do not reapply until an arterial check has been done.

Bleach. Unknown or concentrated bleach makes a bath that burns. Mixed with vinegar or ammonia it releases toxic gas. Signs: stinging beyond a minute, redness after. Rinse and stop.

Salicylic acid. It is absorbed through skin, more through damaged skin. Madan and Levitt (2014) found 25 published cases of poisoning since 1966, 4 of them fatal, and listed 13 earlier deaths, 5 of them in patients treated for scabies. Every case involved a large area of skin. Their calculation shows that 6 per cent salicylic acid over 40 per cent of the body can bring blood salicylate to the toxic level of 35 mg/dL. Newborns have been poisoned by 1 to 2 per cent preparations. Signs: vomiting, ringing in the ears, fast deep breathing, confusion, low blood sugar in children. Wash it off, give fluids and sugar, stop aspirin and willow bark. Never on large areas in infants, children or widespread psoriasis.

Topical steroid. Potent steroid thins facial skin, marks folds, is absorbed by infants and spreads ringworm (Verma 2016), and long use on face or genitals brings a burning withdrawal (Hajar 2015). Signs: rash returning worse on stopping, spreading rings, thin shiny skin. Step down to hydrocortisone and treat the fungus.

Coal tar and dithranol. Tar causes folliculitis and sun burning, cancer not shown (Roelofzen 2010). Dithranol burns normal skin and stains purple-brown. Keep both off face and folds, tar out of pregnancy [VERIFY].

Sulfur. Irritation and smell. I found no record of poisoning from sulfur ointment.

Tea tree oil. Allergy in 1.8 per cent of patch-tested people (THRIVING library, ME-11). A 17-month-old who swallowed under 10 mL became ataxic and drowsy (Del Beccaro 1995). Store out of reach.

Gentian violet. Stains, and carries an animal cancer signal (Health Canada 2019). Weakest strength, briefly, not in pregnancy [OWNER].

Tetracycline and griseofulvin. Tetracycline never in pregnancy, before age 8 or expired (Hesperian 2025). Griseofulvin not in pregnancy or breastfeeding (MSF Clinical Guidelines).

Maggots. Wild larvae carry tetanus, and screwworms eat living tissue. Only clean Lucilia sericata cultures (THRIVING library, WO-02).

Heat on a Buruli ulcer. Burns numb skin. Check under the pack hourly at first.

Misidentification. Agave for aloe, Tagetes for calendula, other Melaleuca oils for tea tree, and unlabelled white crystals or bleach for anything.

5. Red flags

1. **Eczema with punched-out sores and fever** (eczema herpeticum). It can kill infants and needs aciclovir. Stop steroid, keep the child warm and fed, send [VERIFY].
2. **Red skin over the whole body** (erythroderma). Heat, water and protein are lost. Keep warm, give fluids, food and bland fat, send.
3. **Pustular psoriasis with fever.** Same management, send.
4. **Spreading redness, heat and fever around an ulcer or eczema** (cellulitis), and worse, pain out of proportion with dusky skin and crackling (necrotising infection, WO-14). Antibiotics and the knife at the district.
5. **A black toe, pain at rest, a cold white foot.** Critical limb ischaemia. Remove compression. Without vascular surgery the honest outcome may be amputation (CH-01). Give pain relief and keep the foot dry, padded and clean.

6. **An ulcer that does not heal in 3 months, has a raised rolled edge, bleeds easily or grows** may be a cancer (CH-06). Biopsy or excision at the district.
7. **Tropical ulcer in a child spreading over days.** Early antibiotics stop it. Late, it destroys tendon and bone.
8. **Buruli ulcer over a joint.** Scarring contracts the joint. Start heat or antibiotics early and keep the joint moving and splinted straight [VERIFY].
9. **A boggy, pus-filled swelling on a child's scalp** (kerion, inflammatory ringworm). It is not an abscess. Do not cut it. Oral antifungal [VERIFY].
10. **Ringing in the ears, fast breathing or confusion in someone using salicylic acid** on large areas. Stop and wash off.
11. **A drug rash with blisters, raw lips and sore eyes** (Stevens-Johnson syndrome). Stop every new drug, protect the eyes, give fluids. Many die even in hospital [VERIFY].

Honest comfort: most chronic skin disease can be lived with. The cool bath, bland fat, cotton gloves at night and short nails ease the itch that steals sleep. An ulcer that will never heal can still be kept clean, odourless and painless, and the person walking.

6. The case against

Against compression in the village. The Cochrane Wounds authors, among them Nicky Cullum and Jo Dumville, report effects under Doppler screening and measured bandages (O'Meara 2012, Shi 2021). Robert Forsythe and the IWGDF, and Prashant Normahani's TrEAD group, show that a hand cannot exclude arterial disease (Forsythe 2020, Normahani 2022). Christina Weller's review shows that experts do not even agree on the threshold (Weller 2019). An improvised bandage, applied by a lay healer to an old leg with no Doppler, carries an unmeasured risk. The answer is firm compression only for legs that pass every hand check, light support for doubtful ones [OWNER].

Against the bleach bath. Ravi Chopra and Jonathan Silverberg's pooled analysis found bleach no better than water (Chopra 2017), and Derek Chu's group found a benefit of about 1 in 10 (Bakaa 2022). The Chicago trial that made bleach baths popular gave every child an antibiotic first and treated only 31 (Huang 2009). The case against: a scarce chemical and a burn risk for a small gain. The case for: bleach is a stock any village will keep for water, and the bath is the vehicle for the emollient.

Against the old remedies. Whitfield's, sulfur, thiosulfate, wood tar and zinc rest on use, not trials (El-Gohary 2014). Old does not mean proven.

Against the herbal vendors. Tea tree oil has one decent foot trial, one null nail trial and an acne evidence base the Cochrane review rated low (Cao 2015). Aloe failed for sunburn and delayed surgical wounds (Puvabanditsin 2005, Dat 2012). Duct tape looked like a cure until Rachel Wenner's placebo trial (Wenner 2007). Honey, the best natural burn dressing, did nothing for venous ulcers (Jull 2008). Skin diseases come and go, so remedies seem to work.

Against the romance of the hospital. Shyam Verma's Indian work shows that pharmaceutical abundance, not scarcity, produced the epidemic of steroid-modified ringworm (Verma 2016). Jon Hanifin's group documented harm from overused steroid creams (Hajar 2015). Health Canada withdrew gentian violet, while Hesperian and MSF still list it for places with nothing else (Health Canada 2019, Hesperian 2025). Removing the supply removes some harm.

Against the diet story. Loren Cordain's Kitava and Aché observations are striking, but they compare whole ways of life and peoples of different genetic background (Cordain 2002). The dairy meta-analysis shows publication bias (Juhl 2018).

7. 10-line summary

1. Compression heals venous leg ulcers: about 1.8 times as many heal in a year, and multi-layer and paste bandages beat single layers.

2. Compression over an ischaemic leg causes necrosis, and feeling for pulses misses more than half of arterial disease.
3. Any bland fat or wax salve reduces eczema flares by more than half, and olive oil should not be left on the skin.
4. Dilute bleach baths at about 0.005 per cent help about 1 eczema patient in 10 beyond a plain bath, and only when the bleach strength is known.
5. Steroid creams work but harm on the face, folds and ringworm, and the fingertip unit sets the dose.
6. For psoriasis, vitamin D and potent steroid beat tar, and tar plus sun still clears plaques without a measured cancer excess.
7. Modern antifungal creams cure body ringworm with a number needed to treat of 2 to 3. Whitfield's ointment is plausible but under-tested, and scalp ringworm needs an oral drug.
8. Honey does nothing for venous ulcers under compression, and maggots clean ulcers fast without healing them faster.
9. Benzoyl peroxide 2.5 per cent works as well as 10 per cent for acne.
10. Salicylic acid on large areas, mercury creams and swallowed tea tree oil poison.

8. Open questions

1. Can any hand test, or an ABPI taken with a cuff and palpation instead of a Doppler, clear a leg for compression? I found no study [VERIFY].
2. What pressure does an improvised cotton bandage give, and for how long?
3. Can a village make an Unna-type boot that holds?
4. Is sulfur effective for acne and ringworm in a modern trial?
5. Does sodium thiosulfate cure versicolor as well as selenium?
6. How safe is gentian violet in humans, given the animal data and no human cases?
7. Do wood tars (pine, birch, juniper) match coal tar for psoriasis, and do they carry the same hydrocarbon risk?
8. Can household heat replace phase-change packs for Buruli ulcer?
9. How many minutes of temperate sun clear psoriasis?

9. Sources to read in full

1. O'Meara 2012, Cochrane, compression for venous leg ulcers.
2. Forsythe 2020, bedside tests for arterial disease.
3. Madan and Levitt 2014, salicylic acid toxicity.
4. Hesperian 2025, Where There Is No Doctor, skin chapter and green pages.
5. MSF Clinical Guidelines, chapter 4, and the Essential Drugs entry for Whitfield's.
6. El-Gohary 2014, Cochrane, topical antifungals.
7. Mason 2009, Cochrane, topical psoriasis treatments.
8. van Zuuren 2017, Cochrane, emollients.
9. Vogel 2016, heat for Buruli ulcer.
10. Dumville 2009, VenUS II.

10. At the bedside after the Fall

Household. Wash dry, itching skin with fat, not soap. Keep a pot of bland salve (ME-11). Raise swollen legs and walk. Nothing with steroid on a ring-shaped rash. Keep tea tree oil, bleach and salicylic acid from children. Throw away lightening creams.

Village of 300. One healer keeps the skin chest: sorted steroid creams with potency marked, bleach of known strength, salvaged antifungal creams, Whitfield's or sulfur ointment weighed on the scale, benzoyl peroxide, selenium shampoo, gentian violet, zinc oxide ointment, cotton bandages and wool padding. The healer keeps the ulcer register,

does the hand arterial check, compresses legs that pass, sees each ulcer weekly and teaches calf exercise. A village of 300 may have one to three chronic leg ulcers at any time [VERIFY]. Every ring-shaped rash is examined, scraped under a microscope where there is one, and kept from steroid.

District of 3,000. Doppler and cuff, oral antifungals, antibiotics and heat packs for tropical and Buruli ulcer, beds for tar or dithranol, the biopsy knife.

What it needs to start. Plants: sunflower for oil, calendula, bees for wax. Materials: lard or tallow, beeswax, cotton cloth for bandages, wool for padding, zinc oxide, sulfur, salvaged benzoic and salicylic acid, bleach with a known label, a kitchen scale to the gram, measuring spoons and jugs marked in millilitres. Skills: telling venous from arterial ulcer, applying a graduated bandage, recognising ringworm, the fingertip unit. Records: the ulcer register (date, size by tracing on cloth or paper, bandage, pulses), the steroid book (who received what potency, where, for how long).

First failure to expect. Not lack of remedy but wrong remedy: a salvaged potent steroid put on ringworm, a child's face or every itch in the village until the tube is gone and the rash is worse. The second: a compression bandage on a leg with poor circulation because pulses were felt wrongly.

11. Protocols

Protocol 1. The leg ulcer visit and the arterial check by hand

- ☐ Ask: how long, calf cramps on walking that stop on rest, night pain eased by hanging the leg down, diabetes, smoking.
- ☐ Look: site (above the inner ankle suggests venous, toes, heel or shin arterial), base (pink and wet, or pale and dry), brown staining, swelling, veins, hairless shiny foot [VERIFY].
- ☐ Feel both feet: temperature against the other foot and the shin. Feel the pulse on the top of the foot (between the first and second long bones) and behind the inner ankle bone, for a full 10 seconds each, on both feet.
- ☐ Press a toenail for 5 seconds and release. Colour should return within about 3 seconds [VERIFY].
- ☐ Raise the leg to about 45 degrees for 1 minute. A foot that turns white, then dusky red when hung down, has poor arterial supply [VERIFY].
- ☐ STOP, no compression, if any one of: no pulse found in either site on that foot, a cold or white foot, pain at rest or at night eased by hanging down, a black or dusky toe, the ulcer on the toes or heel, diabetes with numb feet. Use a light retention bandage only, and send to the district for a Doppler.
- ☐ If the district has a Doppler: ABPI 0.8 to 1.2 permits full compression. 0.5 to 0.8 means reduced compression only under the district's watch. Below 0.5 or above 1.2, no compression (QUT 2019, Weller 2019) [OWNER].
- ☐ A pass is not proof: the hand misses most arterial disease (Normahani 2022). Recheck every visit.
- ☐ Trace the ulcer outline on clean paper or cloth at every visit, date it, and keep it in the register.

Protocol 2. Improvised compression bandage

- ☐ Only after Protocol 1 is passed. Not on acute cellulitis, fresh deep vein thrombosis or a leg that is red, hot and painful [VERIFY].
- ☐ Clean with cooled boiled water. Cover with a cloth filmed with petrolatum. Zinc oxide ointment on the skin around, not in, the ulcer.
- ☐ Pad the leg with wool or cotton wadding from toes to knee, extra over the shin bone and the ankle hollows, so the bandage pressure is even.
- ☐ With the foot held at a right angle, start at the base of the toes. Take one turn around the foot, then a figure of eight around the ankle, then spiral up the leg with each turn covering half the previous one.
- ☐ Pull firmest at the ankle and gradually less towards the knee. Stop two fingers' width below the knee crease.
- ☐ Check at once: toes pink, warm and movable, no numbness. Check again after 1 hour and that evening.
- ☐ Teach: walk often, rise on the toes 10 times every hour when awake, raise the leg above the hip when sitting.

- ☐ Remove immediately if pain increases, toes turn pale, blue or cold, or tingling or numbness begins.
- ☐ Re-dress once or twice a week, or when soaked through or slipping. Keep going until healed.
- ☐ After healing, keep a lighter support bandage or stocking for life, because ulcers return [VERIFY].

Protocol 3. Dilute bleach bath for eczema (about 0.005 per cent)

- ☐ Only plain, unscented bleach with the strength on the label. Unknown strength, do not use.
- ☐ Count the litres of bath water with a marked bucket.
- ☐ For 5 per cent bleach, add 1 mL per litre of water (100 mL per 100 L). For 6 per cent, add 0.8 mL per litre (80 mL per 100 L) [VERIFY]. A full Western bath of 150 L takes half a cup (AAD 2026, AAAAI 2026).
- ☐ Baby bath: the AAD's teaspoon per gallon is stronger than its adult recipe [VERIFY]. Use the adult proportion.
- ☐ Mix the bleach into the water before the person enters. Never pour bleach on skin. Never add vinegar or anything acidic.
- ☐ Soak for 5 to 10 minutes. Keep the head out of the water and the water out of the eyes.
- ☐ Rinse with plain water, pat dry, apply steroid if prescribed, then emollient within 3 minutes [VERIFY].
- ☐ At most twice a week (AAAAI 2026). Stop if it stings for more than a minute or the skin reddens.

Protocol 4. Daily eczema care and the fingertip unit

- ☐ Wash with lukewarm water and the emollient. No soap except on the hands, armpits and groin.
- ☐ Emollient generously at least twice a day: sunflower oil, lard, tallow, coconut oil or beeswax salve, not olive oil (ME-11).
- ☐ Steroid only for flares. Measure in fingertip units: one fingertip unit (about 0.5 g) covers about two adult palms of skin (Long and Finlay 1991, DermNet).
- ☐ Hydrocortisone 1 per cent only on the face, folds and in babies. Potent steroid only on thick skin, for no more than a few weeks, then step down [VERIFY].
- ☐ Never steroid on a ring-shaped or scaly patch with a clear centre until ringworm is excluded.
- ☐ Wet wrap for a severe night: emollient, then a damp cotton layer, then a dry layer. Remove in the morning [VERIFY].
- ☐ Record each steroid course in the steroid book: name, potency, site, number of fingertip units, dates.

Protocol 5. Whitfield's ointment and sulfur ointment from salvaged ingredients

- ☐ Only labelled pharmaceutical or food-grade benzoic and salicylic acid.
- ☐ Whitfield's (BP strength): 6 g benzoic acid and 3 g salicylic acid, ground very fine, worked into 91 g of petrolatum or a lard and wax salve. Hesperian's home version is 6 parts benzoic and 3 parts salicylic acid to 100 parts base (Hesperian 2025, MSF Essential Drugs). The two agree within a few per cent.
- ☐ Apply a thin layer twice a day on clean dry skin (MSF) to 2 cm beyond the edge, for 3 to 6 weeks (MSF) or 2 to 4 weeks (Hesperian). Continue 2 weeks after the skin looks clear.
- ☐ Never on raw, weeping skin, the eyes, the mouth or the genitals' mucosa. Never on more than about one tenth of the body in an adult, or a child's two palms of skin, because of the salicylic acid [VERIFY].
- ☐ Sulfur ointment for ringworm: 10 g of finely powdered sulfur in 100 g of lard or petrolatum (1 in 10), 3 to 4 times a day (Hesperian 2025). For scabies use 1 in 20 and follow IN-08.
- ☐ Label each pot with name, strength and date.

Protocol 6. Pityriasis versicolor

- ☐ Selenium sulfide shampoo 2.5 per cent: spread on the trunk, leave 30 minutes, wash off. Daily for 7 days (Hesperian 2025, del Palacio Hernanz 1987).

- ☐ Or sodium thiosulfate (photographers' hypo) from a labelled container: 1 tablespoon in half a cup of water, rub on, then rub with vinegar. Twice a day for 2 to 4 weeks [VERIFY]. Repeat every 2 weeks to stop return (Hesperian 2025).
- ☐ Tell the patient the pale patches stay for months after cure.

Protocol 7. Scalp ringworm (district)

- ☐ Shave or cut the hair short. Wash with selenium shampoo to reduce spread [VERIFY].
- ☐ Griseofulvin: children 10 to 20 mg/kg once daily, maximum 500 mg, adults 500 mg to 1 g (MSF). Hesperian gives 15 mg/kg. Use at least 6 weeks (MSF), not the 4 weeks Hesperian allows.
- ☐ Not in pregnancy or breastfeeding.
- ☐ Do not cut a kerion. Check close contacts and treat them.

Protocol 8. Psoriasis

- ☐ Soften scale with emollient. Salicylic acid 2 to 3 per cent only on small areas, never more than a few palms of skin [VERIFY].
- ☐ Sun: expose plaques daily, starting with a few minutes and increasing slowly, never to burning [VERIFY].
- ☐ Tar: 2 to 4 per cent crude coal tar in petrolatum on plaques, then sun, once a day (Goeckerman therapy, secondary). Not on face or folds.
- ☐ Salvaged calcipotriol or potent steroid on plaques for flares (Mason 2009).
- ☐ Erythroderma or pustules with fever: Red flag 2 or 3.

Protocol 9. Acne

- ☐ Wash the face twice a day with plain soap and water. No squeezing.
- ☐ Benzoyl peroxide 2.5 per cent at night on the whole affected area, starting every second night (Mills 1986). Warn about bleached pillow cloth.
- ☐ Or 5 per cent tea tree oil in a bland base, if tolerated (Bassett 1990).
- ☐ Less milk and sugar.
- ☐ Antibiotics only for severe scarring acne, under the owner's rule [OWNER].

Protocol 10. Warts

- ☐ Leave most warts alone. Many go on their own.
- ☐ Salicylic acid paint or plaster 10 to 40 per cent on the wart only (Madan 2014). Soak, rub down with a pumice, apply nightly, cover. Up to 12 weeks [VERIFY].
- ☐ Protect the skin around with petrolatum. Never on the face, genitals or in a diabetic foot. Never on many warts at once in a small child.

12. Numbers to carry

1. **1 mL per litre**: 5 per cent bleach to water gives a 0.005 per cent bath. At most twice a week.
2. **0.8**: the ABPI at or above which full compression is safe. Below 0.5, none.
3. **43 per cent**: the share of arterial disease that pulse palpation finds. Absent pulses forbid compression, present pulses do not prove safety.
4. **1.8 times**: how many more venous ulcers heal within a year with compression.
5. **6 and 3**: per cent benzoic and salicylic acid in Whitfield's ointment, twice daily for 3 to 6 weeks.
6. **1 in 10 and 1 in 20**: sulfur in fat for ringworm and for scabies.
7. **6 per cent over 40 per cent**: salicylic acid strength and body area that can poison an adult.

8. **0.5 g for two palms**: the fingertip unit of steroid cream.
9. **6 weeks**: the minimum course of oral griseofulvin for scalp ringworm, 10 to 20 mg/kg.
10. **2.5 per cent**: benzoyl peroxide is as good as 10.

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