

ANCIENT SUNRISE®

Henna and Your Health

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Ancient Sunrise® Henna for Hair Chapter 13, Henna and Your Health

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Henna and Your Health

Henna, Pregnancy, Nursing, and Doctor's Orders

Most physicians recommend that women who wish to become pregnant, or who are pregnant or nursing stop using permanent oxidative chemical hair dye. There have been studies that suggest chemical hair dye may be linked to birth defects, and though these have been inconclusive, physicians prefer to recommend that mothers not risk the health of their infants or their own health.

Based on toxicity assays, the European Union recommends that henna is safe to use as a hair dye when formulated and applied as a paste to hair.¹ There have been no published medical journal articles indicating that henna, indigo, or cassia cause any hazard to a mother or her child when used to dye the mother's hair. Many physicians recommend that women switch to henna if they want to continue dyeing their hair. Since henna has been used by women to dye their hair across a large part of the world for over four thousand years with no hazard perceived, a mother may henna her hair with a reasonable assurance of safety, as long as the henna has no chemical adulterants, additives, pesticides, or impurities. 1% of the available lawsone in henna crosses the dermal layer into the blood stream, a level that is safe for people. The only exception to this harmlessness is for individuals, especially young children, with homozygous G6PD deficiency.²

Women who want to cover their gray while pregnant or nursing can do so safely with Ancient Sunrise® henna, indigo, and cassia. Every batch of Ancient Sunrise® henna, indigo, and cassia is sent to an independent laboratory to be tested for lead, pesticides, contaminants and adulterants. Many products sold as henna contain metallic salts and toxic coal tar dyes. Even henna products which carry a 'natural' or 'organic' label may have unlisted ingredients and contaminants.

Henna has been tested and has been shown to not be genotoxic in normal applications on humans; you can dye your hair with henna without any increased risk of cancer.³ Present research on the association between the chemicals in dark-colored oxidative (permanent, chemical) hair dyes and non-Hodgkins lymphoma⁴ and other cancers,⁵ lupus, and asthma is suspected and statistically linked but research is inconclusive and ongoing. Many ingredients in chemical hair dye, particularly dark-colored hair dye, are known to be carcinogenic,⁶ but a direct cause and effect relationship between chemical hair dye use and cancer has not been proven, as is the case with tobacco use and cancer.

¹ SCCP, 2013. Opinion on *Lawsonia Inermis* (henna). European Commission.

² See chapter 13, Henna and G6PD Deficiency

³ Kirkland, D., Marzin, D. 2003. An assessment of the genotoxicity of 2-hydroxy-1,4-naphthoquinone, the natural dye ingredient of Henna. *Mutation Research*. 2003 Jun 6;537(2):183-99.

⁴ Bolt HM, Golka K. The debate on carcinogenicity of permanent hair dyes: new insights. *Critical Reviews in Toxicology* 2007; 37(6):521-536.

⁵ de Sanjose S, Benavente Y, Nieters A, et al. Association between personal use of hair dyes and lymphoid neoplasms in Europe. *American Journal of Epidemiology* 2006; 164(1):47-55.

Physicians often recommend that their patients who are being treated for cancer, or who are recovering from cancer discontinue the use of chemical oxidative hair dye. They often recommend that people who have or who have survived cancer use only henna and other plant dyes to dye their hair. Since Ancient Sunrise® henna, indigo, and cassia have been tested by an independent laboratory to be certain that they are free of pesticides, adulterants, contaminants, and chemical additives, they may be safely used by people who are being treated for or who have survived cancer.

Health Benefits of Henna

In the countries where henna is traditionally used, henna is regarded as having ‘*baraka*,’ or blessedness. This blessedness is the folk interpretation of observed relief or prevention of minor physical skin and hair problems which were not understood before the era of microscopes and petri dishes. The Ebers Papyrus, an Egyptian medical text written around 1550 BCE, described henna as being part of medicines compounded for what appears to be ringworm and athlete’s foot. It was also used to promote wound healing. Henna was also used to promote wound healing.⁷ Henna was associated with cleanliness and health in Ibn Qayyim Al-Jawziyya’s 14th century book on herbal and medical practices.⁸

Though henna has been used for the health and wellness of skin and hair for thousands of years, medical research projects testing the therapeutic potential of henna are fairly recent, with dozens of studies currently underway or recently completed.⁹ There are promising medical uses for refined and formulated henna being tested in current medical research but these will not be covered in this book because they are still experimental. This book will concentrate on henna applications suitable for minor problems and simple applications associated with hairdressing, manicures and pedicures.

At the present time, henna is not used in the west for its health benefits because there is no regulation or standardization of henna processing and exporting.¹⁰ Exports labeled “henna” often contain unlisted additives, adulterants, metallic salts, para-phenylenediamine and other dangerous chemicals which pass through customs without seizure, and which could cause serious

⁶ Baan R, Straif K, Grosse Y, et al. Carcinogenicity of some aromatic amines, organic dyes, and related exposures. *Lancet Oncology* 2008; 9(4):322–323

⁷ Nicoletti, M., Petitto, V., Gallo, F., Multari, G., Federici, E., Palazzino, G. 2012. “The Modern Analytical Determination of Botanicals and Similar Novel Natural Products by the HPTLC Fingerprint Approach.” *Studies in Natural Products Chemistry*, Volume 37, page 242. Atta-ur- Rahman, editor

⁸ Ibn Qayyim al-Jawziyya. *Medicine of the Prophet* 1998. Islamic Texts Society. Translated by Penelope Johnstone

⁹ Semwala, R. B., Semwala, D. K., Combrinck, S., Cartwright-Jones, C., Viljoen, A. 2014. "Lawsonia inermis L. (henna): Ethnobotanical, phytochemical and pharmacological aspects," *Journal of Ethnopharmacology*, June 2014

¹⁰ Semwala, R. B., Semwala, D. K., Combrinck, S., Cartwright-Jones, C., Viljoen, A. 2014. “Lawsonia inermis L. (henna): Ethnobotanical, phytochemical and pharmacological aspects,” *Journal of Ethnopharmacology*, June 2014, P 20.

harm rather than healing, as was shown in a misdiagnosis and death of a pet from ingesting an inaccurately labeled henna product.¹¹ Even if a package labeled ‘henna’ does not contain contaminants and adulterants, there is no requirement for independent laboratory testing for lawsone content, pesticides, or naturally occurring contaminants. Without regulatory standards for henna, dose/time for medical use is not possible.

Henna is an agricultural product and there is tremendous variation within and among crops; the variability has been an obstacle to medical research. Catherine Cartwright-Jones, PhD, sends every Ancient Sunrise® shipment to an independent laboratory for testing to prove purity for your safety. Ancient Sunrise® henna can be used in traditional home-remedy topical applications with the assurance that henna, and only henna, is in the package, and the characteristics of that henna have been tested.

Only a physician is qualified to diagnose a condition and prescribe treatment, but with a physician’s permission, there are some simple applications of pure henna tested by an independent laboratory that are suitable for self-care of several minor conditions of the hair and scalp.



¹¹ Jardes, D. J., Ross, L. A., Markovich, J., E., 2013. “Hemolytic anemia after ingestion of the natural hair dye Lawsonia inermis (henna) in a dog.” *Journal of Veterinary Emergency and Critical Care*. Volume 23, Issue 6, pages 648–651, November/December 2013

Henna and Hair Care

Henna is antifungal,¹² and has some proven antibacterial activities as well. Henna can eliminate fungal dermatophytes¹³ living in the skin such as the *tinea* and *malassezia*. These fungi can cause superficial infections of the skin, hair and nails. Some examples are dandruff, ringworm,¹⁴ athletes' foot, and fungal infections of the nails.¹⁵ Henna can also reduce some inflammations¹⁶ and can eliminate head lice.¹⁷ These simple remedies only require applying henna paste¹⁸ to the area of discomfort or infection and keeping it on the skin long enough for the lawsone to penetrate; no complicated formulation is necessary to achieve good results.

Henna can eliminate dandruff when caused by *Malassezia furfur*,¹⁹ a species of fungus naturally found on the skin surfaces of humans and many animals. This fungus consumes the oils from skin, and in humans, often inhabits the scalp. Most people who use henna regularly to dye their hair have no dandruff. People who have dandruff caused by *Malassezia furfur* may experience a sudden fall of dandruff after their first application of henna: this is because when henna kills off the fungus, the outermost layer of infected skin exfoliates. Healthy skin remains and flourishes.

Ringworm infections are caused by *tinea* fungal species which feed on keratin, often in hairy areas of the body. Henna can eliminate most *tinea* dermatophytosis in a single application of henna paste.²⁰ Ringworm thrives in tanning beds, and can infect people who patronize them.

¹² Rahmoun, Nadjib, Zahia Boucherit-Otmani, Kebir Boucherit, Mohammed Benabdallah, and Nouredine Choukchou-Braham. 2013. "Antifungal activity of the Algerian *Lawsonia inermis* (henna)." *Pharmaceutical Biology* 51, no. 1: 131-135. Academic Search Complete, EBSCOhost (accessed March 20, 2015).

¹³ G.S. Gozubuyuk, E. Aktas, N. Yigit "An ancient plant *Lawsonia inermis* (henna): Determination of in vitro antifungal activity against dermatophytes species." *Journal de Mycologie Médicale / Journal of Medical Mycology*, Volume 24, Issue 4, Pages 313-318

¹⁴ Bosoglu A., Birdane F., and Solmaz H., 1998. "The Effect of Henna Paste in Ringworm in Calves" *Indian Veterinary Journal* 75, January

¹⁵ Berenji, F. Rakhshandeh, H., Ebrahimipour, H., 2010. "In vitro study of the effects of henna extracts (*Lawsonia inermis*) on *Malassezia* species." *Jundishapur Journal of Microbiology*, Volume 3, Issue 3, Summer 2010, 125 – 128.

¹⁶ Gupta, S., Ali, M., Pillai, K.K., Sarwar Alam, M. 1993. "Evaluation of anti-inflammatory activity of some constituents of *Lawsonia inermis*." *Fitoterapia* Volume 64, Issue 4, 1993, Pages 365-366

¹⁷ El-Basheir, Z., Fouad, M. A. H. 2002. "A Preliminary Pilot survey on Head Lice, Pediculosis in Sharkia Governate and Treatment of Lice with Natural Plant Extracts." *Journal of the Egyptian Society of Parasitology*, Vol 32, No 3, December 2002, Zeinab

¹⁸ Mix pure henna powder with a mildly acidic liquid just as show in chapter 7, Mix Your Paste

¹⁹ Berenji, F. Rakhshandeh, H., Ebrahimipour, H., 2010. "In vitro study of the effects of henna extracts (*Lawsonia inermis*) on *Malassezia* species." *Jundishapur Journal of Microbiology*, Volume 3, Issue 3, Summer 2010, 125 – 128.

²⁰ Bosoglu A., Birdane F., and Solmaz H., (1998) "The Effect of Henna Paste in Ringworm in Calves" *Indian Veterinary Journal* 75, January

Ringworm often infects dogs and cats, and their owners can be infected through cuddling and grooming. Ringworm survives in moist areas of gyms and swimming pools, causing athlete's foot. A single topical application of henna paste can effectively relieve tinea pedis (athlete's foot),²¹ tinea cruris (jock itch) which affects the groin area, tinea capitis which affects the scalp, and tinea barbae which affects facial hair. Henna will stain hair and skin when applied to these areas. A single application is sufficient to rid the area of tinea until the stain has exfoliated. Repeated applications of henna paste can relieve tinea unguium which affects the fingernails and toenails.

A person who, on their physician's recommendation and permission uses henna paste to eliminate fungal infections will have to weigh the convenience of getting rid of the fungus with a single henna application against having a henna stain for three weeks on the skin or several months on the nails.

Henna and Head Lice

Head lice (*Pediculus humanus capitis*) have been itchy, contagious pests annoying humans for millennia, living in people's hair and sucking their blood. Head lice populations have increased since the 1960's and now infest hundreds of millions of people worldwide.²² Head lice lay eggs on the shafts of hair.²³ Once established in a household, school, or village, head lice are stubbornly resistant to eradication even with strong chemical remedies because they can live for two days in bedding, hair brushes, and clothing. Lice spread when people are in close, friendly contact, grooming, dressing, and sleeping near each other. One application of henna paste to the hair can kill head lice,²⁴ will kill the eggs as it does for other insect pests,^{25 26 27} and nymphs without resorting to chemical treatments or shaving the head.

²¹ For a complete description of applying henna to treat athlete's foot, see Chapter XX pages XXX.

²² Gratz, N. (1998). "Human lice, their prevalence and resistance to insecticides." Geneva: World Health Organization (WHO).

²³ Buxton, Patrick A. (1947). "The biology of *Pediculus humanus*". *The Louse; an account of the lice which infest man, their medical importance and control* (2nd ed.). London: Edward Arnold. pp. 24–72.

²⁴ M. El-Basheir and Mahmoud A. H. Fouad (2002) A Preliminary Pilot survey on Head Lice, Pediculosis in Sharkia Governate and Treatment of Lice with Natural Plant Extracts." *Journal of the Egyptian Society of Parasitology*, Vol 32, No 3, December 2002, Zeinab

²⁵ Marimuthu, S., Rahuman, A. A., Santhoshkumar, T., Jayaseelan, C., Kirthi, K. V., Bagavan, A., Kamaraj, C., Elango, G., Zahir, A. A., Rajakumar, G., Velayutham, K. 2012. "Lousicidal activity of synthesized silver nanoparticles using *Lawsonia inermis* leaf aqueous extract against *Pediculus humanus capitis* and *Bovicola ovis*." *Parasitology Research*, November 2012, Volume 111, Issue 5, pp 2023-2033 Date: 13 Oct 2011

²⁶ Dwivedi, S. C., Mathur, M., 2000. "Investigation of five plants for ovicidal effect against the pulse beetle, *Callosobruchus chinensis* (L.)" *Pestology* 24, 19 - 22

²⁷ Dwivedi, S. C., Kumari, A., 2000. "Laboratory evaluation of eight floral species inhibiting egg hatching in diamondback Moth, *Plutella xylostella* (L.) (*Lepidoptera, Plutellidae*)" *Pestology* 24, 36 - 39

To kill head lice, eggs, and nymphs, use laboratory certified pure henna with high lawsone content, and no impurities or additives, mix and apply as seen in Chapter X, pages XXX. For difficult infestations, add 25g of artemisia or fenugreek per 100g of Ancient Sunrise® henna.²⁸ A mixture of Artemisia and henna is the most effective against head lice, but Artemisia should not be used on children, pregnant or nursing woman.

Ridding the hair of a head lice infestation with henna WILL dye the hair. In dark haired people, this will not make a perceptible difference in color. Compound henna, chemical henna, and adulterated henna will be ineffective and may harm hair or the person.



Head lice are evolving resistance to chemical cures. Henna has been used effectively against head lice in folk remedies for centuries, and does not seem to have reduced effectiveness.

Henna and G6PD Deficiency

People who have homozygous G6PD deficiency, also known as Favism, should not use henna to dye their hair.²⁹ This disorder is a genetically inherited anomaly on the X chromosome; henna may cause hemolytic anemia in people who have this disorder because the G6PD enzyme deficiency leaves the blood cells vulnerable to oxidative hemolysis. Your doctor can diagnose G6PD deficiency with a blood test and advise you of these risks. If you have G6PD deficiency, there are many foods and drugs that you must avoid, and your physician can advise you of these. The homozygous condition of G6PD deficiency is far more common in males than females. Males under the age of ten who have G6PD deficiency are the most vulnerable to oxidative hemolysis from henna. Do not henna the hair of any child unless you are certain that they do not have this genetic disorder.³⁰

²⁸ M. El-Basheir and Mahmoud A. H. Fouad (2002) A Preliminary Pilot survey on Head Lice, Pediculosis in Sharkia Governate and Treatment of Lice with Natural Plant Extracts.” *Journal of the Egyptian Society of Parasitology*, Vol 32, No 3, December 2002, Zeinab

²⁹ Katar, S., C. Devcioglu, M. N. Özbek, and S. Ecer. 2007. "Henna causes life-threatening hyperbilirubinaemia in glucose-6-phosphate dehydrogenase deficiency." *Clinical & Experimental Dermatology* 32, no. 2: 235-236. Academic Search Complete, EBSCOhost (accessed February 26, 2014).

Though the appearance of green urine after dyeing your hair with henna is harmless, the appearance of blood in your urine is potentially serious and should be brought to the attention of your physician, to see whether you might have homozygous G6PD deficiency. A simple blood test will confirm whether or not you have Glucose-6-Phosphate Dehydrogenase Deficiency, or whether there is blood in your urine from some other condition.

³⁰ Eghbal, Fariba, Mohammad Reza Fakoorziba, Mohammad Hossein Eghbal, and Soheila Latifnia. 2012. "Survey on causes of hemolysis in Glucose-6-Phosphate Dehydrogenase (G6PD) deficient pediatric patients." *Pakistan Journal of Medical Sciences* 28, no. 3: 666-669.