

The perils of skin bleaching

Introduction

Bleaching of normal skin by black people is practiced by diverse communities worldwide. It involves the use of a wide range of products, applied to specific or widespread areas of the skin, the main function being to lighten normal black skin. This practice is seen at all ages and in both men and women, however some studies^{1,2} indicate a much higher prevalence in young, unmarried and educated women. The reason for this observation maybe that this group is more likely to be influenced by Western concepts of beauty. Unfortunately, there are many adverse reactions, which occur as a consequence of this practice. This ranges from a paradoxical increase in skin pigmentation to severe systemic problems such as mercury poisoning.

There are several factors contributing to and perpetuating this behavior. First, black people are at a higher risk of pigmentary disorders of the skin.³ Thus, the use of skin lightening products may be sought initially as a genuine treatment for this problem; however, it may be inadvertently abused due to a lack of understanding about the appropriate use of these products. Nonetheless, a significant proportion of individuals may intentionally abuse these products due to misconceptions about the presumed superiority and desirability of fair skin. This assertion is supported by studies in which users of bleaching agents have stated explicitly, that their motivation is a desire to change their skin colour.^{2,4} It is a shame that such misconceptions and self-identity issues persist within certain members of the black community. Thus, in addressing this practice of skin bleaching we need to undertake a parallel discourse about both the dangers of this practice and also issues of racial self-identity. Furthermore, it is also important to explain to individuals that diverse skin types have developed as an adaptation to the natural surrounding environment.

Understanding skin types

Fitzpatrick, a famous skin doctor, devised a classification system for correlating the colour of the skin with how it reacts to ultraviolet radiation (either burning or tanning).⁵ Since it was developed to classify white skin, there are some limitations as to its usefulness in classifying black skin. Despite this, this classification system, is the most widely used method for classifying all skin types. The Fitzpatrick skin phototype system ranges from type 1 (the fair skinned Celtic, who burns easily with sun exposure) to type 6 (the black African, who does not burn with sun exposure).

Why the diversity of skin types?

The sun emits ultraviolet radiation, which can have beneficial or detrimental effects. Vitamin D production by the skin is a major beneficial effect of the sun on the skin. Vitamin D is required for calcium formation in the body, this latter mineral being required for developing strong bones. The detrimental effects of the sun are in inducing skin cancer and damaging elastic fibers of the skin, with the consequence of skin wrinkling. The presence of melanin pigment, produced by specialized cells in the skin called melanocytes, is important in protecting the skin from the harmful effects of the sun. Interestingly, individuals with different skin phototypes all have the same total number of melanocytes, but the differences in skin colour are due to variations in the amount of melanin pigment.⁶

Since, melanin is important for protection against ultraviolet radiation, we can postulate that increased or decreased amount of melanin pigment in the skin will depend on the surrounding environment. In fact, darkly pigmented races inhabit parts of the world, where exposure to the sun is strongest. Given the fact that melanin is protective against the sun's ray, it is easy to appreciate the advantages of having dark skin in such areas. On the other hand, fair skin types (with less melanin pigment in the skin) inhabit countries in the Northern hemisphere, where there is less sun exposure. Less melanin pigment allows more of the sun's rays to be absorbed. This explains the high rates of skin cancer observed in fair-skinned people when they migrate to countries like Australia.⁷

What is skin bleaching?

This is a process where different products are used for the purpose of lightening normally dark skin. These agents remove the melanin pigment, but do not destroy the melanin producing cells. Thus, daily use combined with minimization of exposure to the sun (which will stimulate more of the melanin pigment production), is required for persistence of the lightening effect. Given the above discussion on the advantages of pigmented skin in certain parts of the world, it is easy to appreciate the adverse consequences of this practice.

What agents are used for skin bleaching?

A wide range of products is available for skin bleaching, often sold under many brand names (Box 1).⁸ Often, these agents are obtained without a prescription, from non-medical personnel and are subsequently misused by individuals. The active agents used include hydroquinone, steroids (of which there are many types, with different potencies), mercury, lemon, citric acid and even cement water. Various concoctions may be used and for this reason, the active agent may never be known.

Active substance

Hydroquinone

Branded products

Skin Light, Niuma, Top-tone, Sivoclar, Fair White, Peau Claire, Akagni, Immediat Clair, Clairliss, Black Star, Body Clear

Steroids

Tenovate, Neoprosone, Niuma Extra, Movate, Topgel, Clovate

Mercury salts

Niuma, Rico, Jaribu

Box 1. Examples of skin lightening products⁸

How common is skin bleaching in black communities?

Several studies report a high prevalence of skin bleaching in black people, especially women in Africa and Europe.

1. A study of 368 adult women (representative sample) attending a skin clinic in Dakar, Senegal (West Africa), showed that 52.7% of these women were current users of bleaching products. Within the group of bleaching agent users 92% applied these agents to the whole body.⁸
2. In Bamako, the capital of Mali (Africa), 25% of adult women reported current use of bleaching products.⁹
3. A study of patients over the age of 16 attending a skin clinic in Nigeria (West Africa), between February and October 2004, reported the use of skin bleaching agents in 92% of female and 5% of male patients. The reasons cited for use of these agents was a desire to even out skin tones, a desire to lighten complexion, a desire to improve appearance of the skin prior to an event and dependency on these agents.⁴
4. A study carried out in two cities in Burkina Faso (West Africa) reported the use of skin bleaching agents in 39.5% and 49.2% of women in Ouagadougou and Bobo-Dioulasso respectively. Some of the reasons cited for use included a desire to change the color of skin and a desire to change the texture of the skin.²
5. Studies done in South Africa in 1986 indicated that the total sales volume of skin lighteners was an estimated 30 million pounds, demonstrating the great demand for these agents.¹⁰

The uncontrolled use of skin bleaching agents is not restricted to Africa, as it has also been reported in black women living in Europe.¹¹ They may seek to use these agents initially for genuine medical conditions, such as increased skin pigmentation, however as they are often obtained without medical prescription, they may be subsequently inadvertently mis-used.

What are the consequences of skin bleaching?

Prolonged use of bleaching agents, with the loss of the protective effect of melanin pigment, combined with sun exposure can theoretically lead to an increased risk of skin cancer. Anecdotal evidence indicates that this occurs, however a search of the English language scientific literature did not reveal any such reported cases. Premature aging is also seen due to damage to the elastic fibers of the skin. Hydroquinone⁸ causes a paradoxical increased pigmentation of the skin, called ochronosis (Fig1). This results from pigment deposition in the deeper parts of the skin. Other complications include eczema, as these agents are often irritating to the skin. With steroid⁸ use, the main side effect is the increased risk of skin infections, for example, fungal infections and scabies. There is also skin thinning, with the development of stretch marks (Fig2) and acne. Furthermore, with the uncontrolled use of steroids on the skin, individuals may experience poor wound healing. With the use of more potent steroid creams, applied over a large body surface area, there is a risk of systemic side effects including the development of high blood pressure and diabetes. Mercury agents¹² when applied to the skin in sufficient quantities can be absorbed leading to mercury poisoning, which is manifested by a range of symptoms including psychiatric, neurological and kidney problems. Systemic side effects of some of these agents (including mercury poisoning) may also be observed in babies if they are used by pregnant or breast feeding women.

Final comment

Bleaching of normal skin, for the purpose of changing skin colour, is a dangerous practice, which is still undertaken by some black people. Health-care professionals must lead the way in educating communities about the dangers of this practice. While doing this, we must emphasize the positive and beautiful aspects of black skin.



Fig1. Increased facial pigmentation secondary to skin bleaching (photograph courtesy of Dr Frances O.A. Ajose, FRCP-Lagos State University Teaching Hospital)



Fig2. Stretch marks because of the use of steroids for skin bleaching (photograph courtesy of Dr Frances O.A. Ajose, FRCP-Lagos State University Teaching Hospital)

Scientific References

1. Pitché P, Kombaté K, Tchangai-Walla K. Cosmetic use of skin-bleaching products and associated complications. *Int J Dermatol* 2005;44(Suppl 1): 39-40
2. Traore A, Kadeba J-C, Niamba P, Barro F, Ouedraogo L. Use of cutaneous depigmenting products by women in two towns in Burkina Faso: epidemiologic data, motivations, products and side effects. *Int J Dermatol* 2005;44(Suppl 1):30-32
3. Halder RM, Nootheti PK. Ethnic skin disorders overview. *J Am Acad Dermatol* 2003;48(Suppl.):S143-S148
4. Ajose FOA. Consequences of skin bleaching in Nigerian men and women. *Int J Dermatol* 2005;44(Suppl 1):41-43
5. Fitzpatrick TB. The validity and practicality of sun reactive skin type I through VI. *Arch Dermatol* 1988;124:869-71
6. Taylor S. Skin of color: Biology, structure, function, and implications for dermatologic disease. *J Am Acad Dermatol* 2002;46:S41-62
7. Demierre MF. Epidemiology and prevention of cutaneous melanoma. *Curr Treat Options Oncol* 2006 May;7(3):181-6
8. Mahé A, Ly F, Aymard G, Dangou JM. Skin diseases associated with the cosmetic use of bleaching products in women from Dakar, Senegal. *Br J Dermatol* 2003;148:493-500
9. Mahé A, Blanc L, Halna JM et al. Enquête épidémiologique sur l'utilisation cosmétique de produits dépigmentants par les femmes de Bamako (Mali). *Ann Dermatol Venereol* 1993;120:870-3
10. Hardwick N, van Gelder LW, van der Merwe CA, van der Merwe MP. Exogenous ochronosis: an epidemiological study. *Br J Dermatol* 1989;120:229-38
11. Bongiorno MR, Arico M. Exogenous ochronosis and striae atrophicae following the use of bleaching creams. *Int J Dermatol* 2005;44:112-115
12. Engler DE. Mercury 'bleaching' creams. *J Am Acad Dermatol* 2005 Jun;52(6):1113-4

Medicine is a science and an art form, which is constantly evolving and changing because of ongoing research. Despite this, the author of this article and Black Health Matters have provided to their best ability an overview of the topic discussed, based on a review of the scientific literature. Despite this, neither the author or Black Health Matters warrants that the information provided in this article is complete or accurate, nor are they responsible for any omissions or errors in this article. We advice all readers to confirm the information in this article from other sources prior to use. For more information, please see our full terms and conditions of use of this website.