

Many people have hair or scalp problems which could eventually result in dandruff, a fungal infection. Fortunately, this can easily be treated.

Healthy scalp, healthy hair, healthy psyche in a world where overall wellness is a key concept. We care because scalp hair isn't just any tissue. It has special significance for us that is manifested in social, cultural and religious settings. Our hair-especially our scalp hair-is one of the principal presentations of "self" we make to the world.

Many people have hair or scalp problems. Hair may thin or fall out, break off, or grow slowly. Dandruff or an itching or peeling scalp may cause embarrassment and discomfort. Hair and scalp problems can be upsetting, but they usually are not caused by serious medical problems. Many hair loss conditions need nutritional or medical intervention, but we will focus on what we can treat, or even better, prevent.

Dandruff is often mistaken as dry scalp, which is actually a rare condition. Truly dry, peeling skin sheds transparent flakes that are barely visible rather than oily white to yellow flakes.

Any treatment that might cause mild inflammation in the scalp (such as chemical treatments, hair extensions, braids, weaves) could eventually result in dandruff, which is actually a fungal infection caused by *Malassezia globosa*, a microbe that is present on everybody's skin.

All hair-straightening chemicals are active and are inherently dangerous in that they are designed to alter the structure of hair (hard keratin), not the skin (soft keratin). Chemical burns are the result of the high alkalinity and reactivity of straighteners and particularly of relaxers. If the skin of the scalp has in any way become involved by direct chemical contact, whether during application or within acceptable processing time, it will usually first become red and inflamed and be accompanied by burning or sensations of irritation. Even after mild processing with skin contact or sensitisation, as the skin heals, intense itching of the skin or scalp will be experienced. The skin surface will usually flake off often heavily for a long period before healing is complete this could, if not treated, become a chronic condition.

Traction alopecia or baldness is a hair loss condition caused by damage to the dermal papilla and hair follicle in the dermis because of constant pulling or tension over a long period. Folliculitis is most common in African-American women and men who braid their hair too tightly or who attach hair extensions to their own hair. It is also common in Sikh men of India and Japanese women whose traditional hair styles also pull and damage hair. Traction alopecia occurs more frequently in children, teenagers and young adults than it does in older women and men. Traction alopecia tends to follow a series of progressive

events starting with red, itchy skin, flaking and eventually dandruff. With persistent traction, the traumatised follicles undergo changes and no longer produce the typical long and coarse hair. Instead, thinner, finer, short hair is generated, and if this routine continues, permanent alopecia may result.

The skin microbes, *M. globosa* of the *Malassezia* species, are lipophilic organisms which are nourished by scalp sebum. They have the highest lipase activity of those found on human beings, and it is frequently present on the scalp of dandruff sufferers, and in seborrheic dermatitis scales. *M. globosa*

consume human sebum, and the waste product is oleic acid, an intensely irritating substance. Oleic acid has been shown to induce dandruff-like flaking when scalp conditions allow it. Dandruff or worse, seborrheic dermatitis, depend on susceptibility - the inborn tendency for skin to have an inflammatory response to oleic acid, sebum which nourishes fungi and scalp microflora such as *M. globosa* which flourishes under the right conditions. Susceptibility and sebum production are genetic, and not easily changed, so topical treatment is the best option. Mild shampoos and styling treatments containing a fungal specific anti-microbial such as zinc pyrithione is the most efficient, least invasive treatment.

Beards are very trendy, but it often is accompanied by a slight itch. The combination of a beard, skin microflora and sensitivity to oleic acid is all you need to develop beard dandruff, but you need not be embarrassed, because more than 3 billion people in the world has this sensitivity.