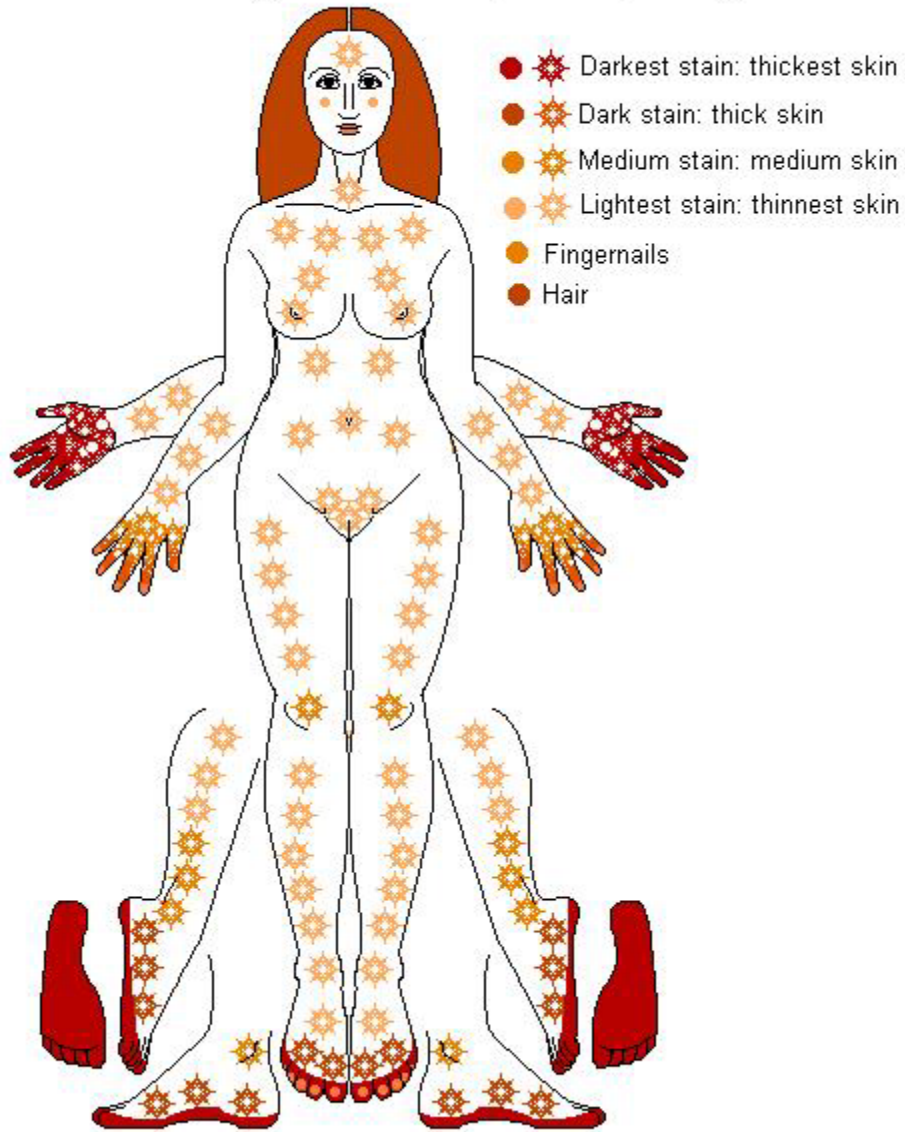


Map of Henna Stains:

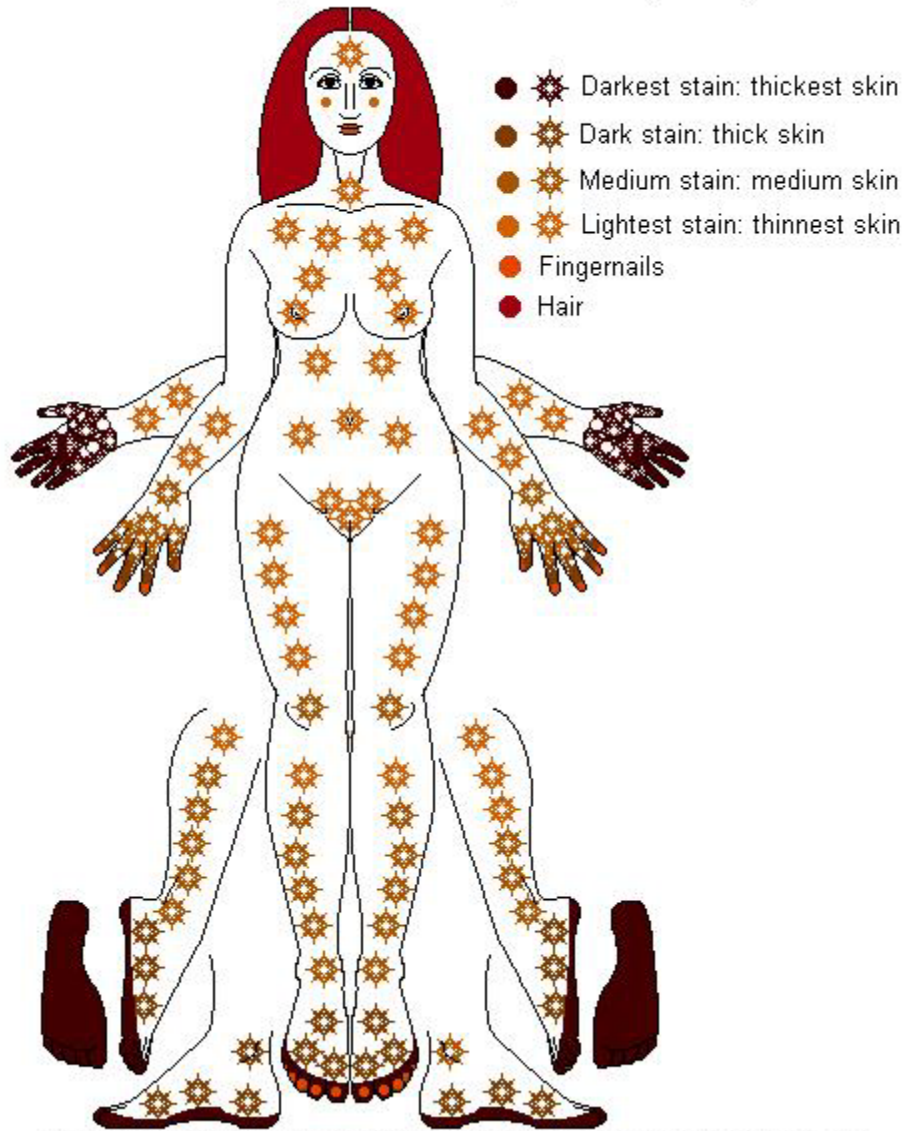
The thickest skin gets the darkest , most long-lasting stains.



Catherine Cartwright-Jones c 2003 for The Encyclopedia of Henna, The Henna Page

### Map of Henna Stains:

The thickest skin gets the darkest , most long-lasting stains.



Catherine Cartwright-Jones c 2003 for The Encyclopedia of Henna, The Henna Page

## Diagram of Henna Application on Skin

Diagram of Ear Skin: Stratum Corneum about 7 layers deep

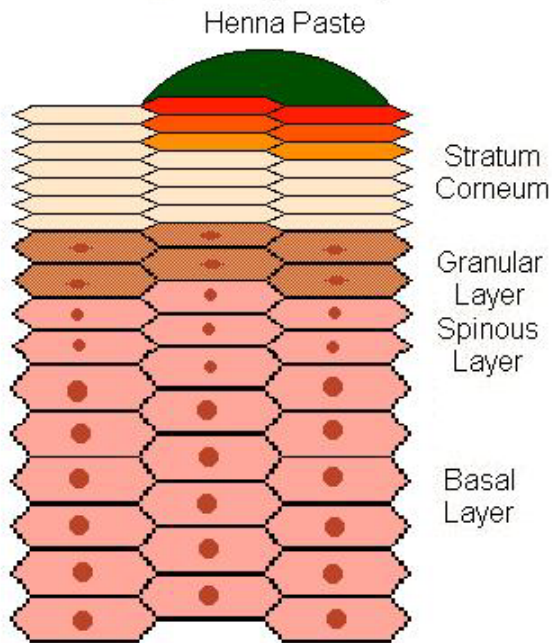
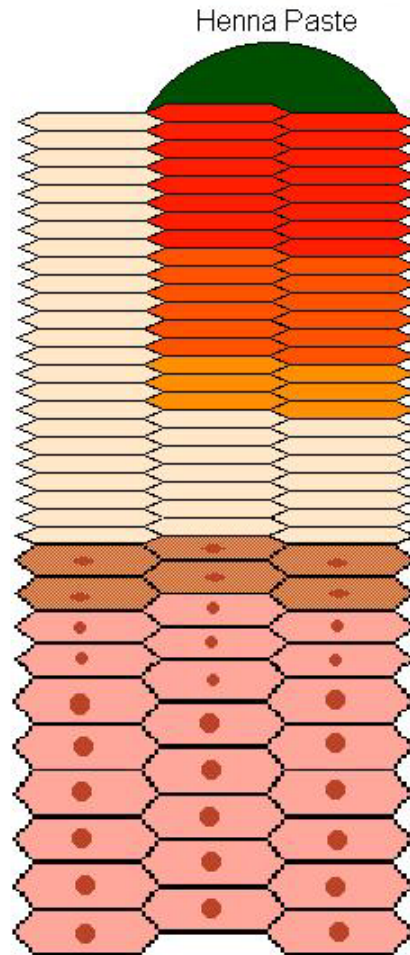


Diagram of Dorsal Hand Skin: Stratum Corneum about 22 layers deep



- Corneocyte: cell in Stratum Corneum
- Granular Skin Cell
- Spinous and Basal Skin Cells
- Nucleus of Living Skin Cell
- Low Lawsone Saturation
- Moderate Lawsone Saturation
- High Lawsone Saturation
- Henna Paste

Diagram of Hennaed Skin 24 Hours After Application:  
Paste Removed and Stain Partially Oxidized

Diagram of Ear Skin: Thin Corneocyte Layer Absorbs Less Lawsone

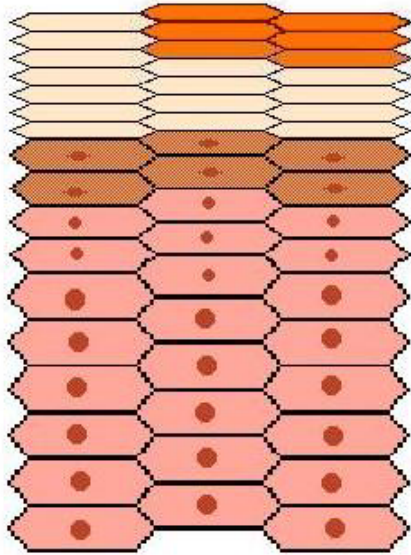
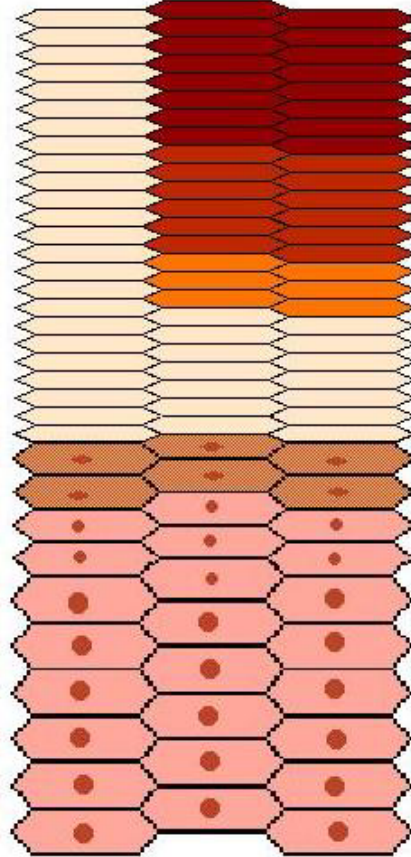


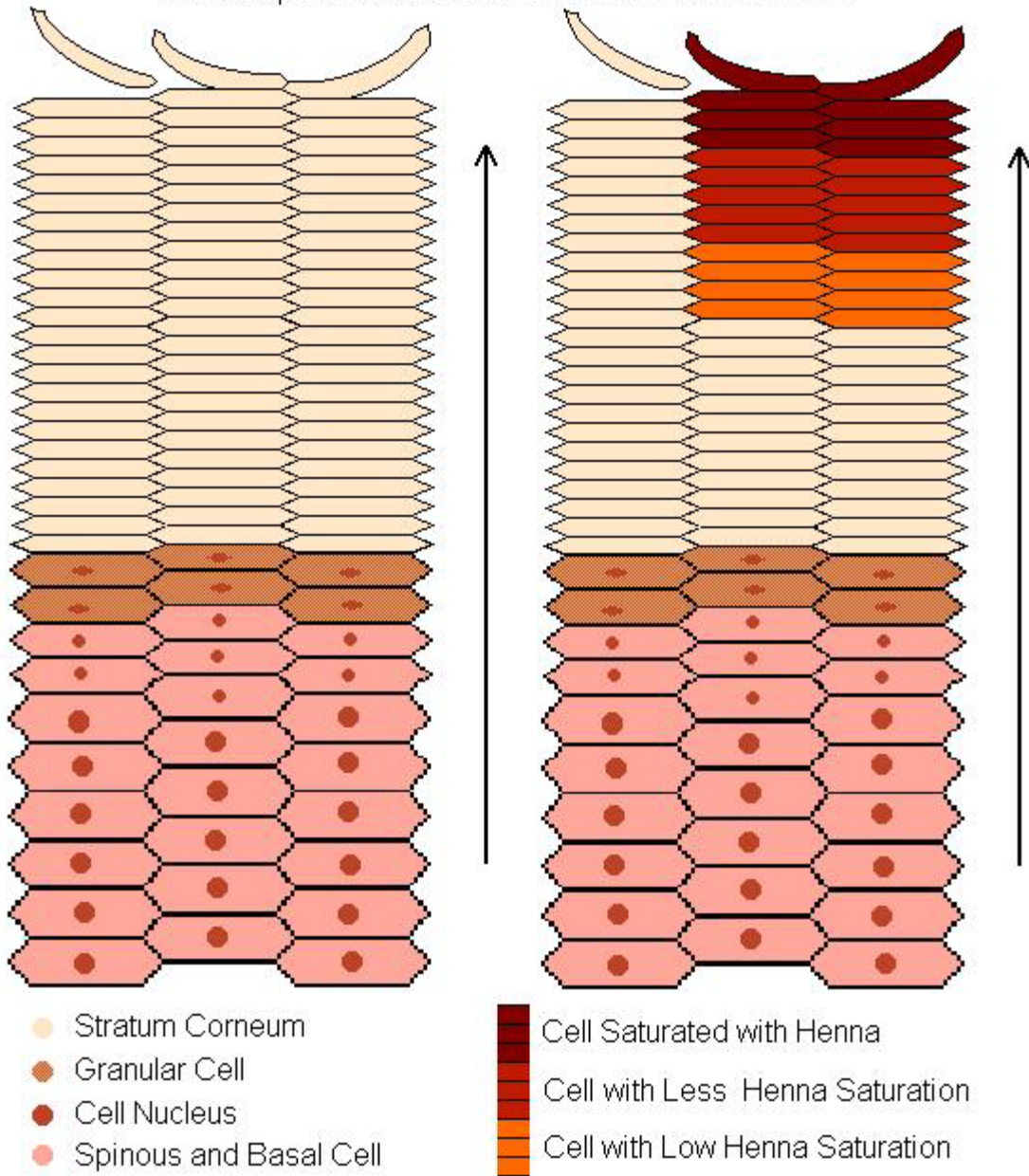
Diagram of Dorsal Hand Skin:  
Lawsone Saturation and Oxidation  
Highest Near Hennaed Surface



- Corneocyte: cell in Stratum Corneum
  - Granular Skin Cell
  - Spinous and Basal Skin Cells
  - Nucleus of Living Skin Cell
- 
- Low Lawsone Saturation, No Oxidation
  - Moderate Lawsone Saturation, Some Oxidation
  - High Lawsone Saturation, High Oxidation



Exfoliation and Regeneration: Each night, a new skin cell layer grows under the skin. Each day, the oldest cell layer sheds at the top of the skin. The cells proceed to the surface in interlaced columns



Catherine Cartwright-Jones c 2003 for The Henna Page

Henna has a tannin dye molecule, *Lawson*, or hennotannic acid, which is small enough to penetrate a skin cell. If you put henna paste on skin, the dye molecules will penetrate down the columns of skin cells. They don't spread out, as ink would on blotter paper, they go straight down as ink would on corrugated cardboard. That is why the pattern stays clear and in place till the last day of exfoliation.

The skin cells closest to the henna paste will have the greatest dye saturation. The skin cells farthest from the henna paste will have the least dye saturation.

Very thin stratum corneum will never take henna stain as well as very thick stratum corneum. In thin areas of stratum corneum, cells go quickly from being living, flexible skin cells to shedding from the surface as dead cells. These cells do not have time to become corneated. Your eyelid has a very thin layer of stratum corneum, and that skin is soft and flexible. Your heel has a very thick layer of stratum corneum and that area becomes hard and dry. Your heels may be highly corneated. Henna does not stain thin, moist, living tissue well. It stains hard, thick, dry, dead, corneated cells. Therefore, henna will never stain dark, or last long on areas of thin stratum corneum.

**The thinnest areas of stratum corneum are:**

Foreheads, eyelids, cheeks, noses, lips, ears, scalps and necks.  
These areas have, on average, 6 to 12 cell layers of stratum corneum.  
Henna stains in these areas last a few days to a week and will never be very dark.

**Medium areas of stratum corneum are:**

Shoulder, chest, back, buttock, back, belly, and upper arm.  
These areas have, on average, 12 to 14 cell layers of stratum corneum.  
Henna stains in these areas will last 7 to 10 days, and may have medium rusty color.

**Thick areas of stratum corneum are:**

Thighs, lower legs and lower arms.  
These areas have, on average, 14 to 18 cell layers of stratum corneum.  
Henna stains will last 10 days to two weeks and may get to a chocolate color.

**Thicker layers of stratum corneum are:**

"*dorsum*", backs, of hands, and "*dorsum*", tops, of feet.  
These areas have, on average, 25 to 30 cell layers of stratum corneum.  
Henna stains on the *dorsum* of hands and feet may get to a dark chocolate color, and last nearly three weeks.

