

Ask your Nephrologist: What is happening to my skin and nails?

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There is a broad range of skin manifestations when having to depend on dialysis. Skin disorders can affect a patient's quality of life and can negatively impact their mental and physical health.

Itching (uremic pruritus) is by far the most common complaint that patients suffer. But dry skin (xerosis cutis) and skin discoloration are also common complaints in patient with severe loss of kidney function. Dry skin is caused by reduction in the size of sweat glands and atrophy of sebaceous or oil producing glands. Dry skin increases the susceptibility to infections and this is aggravated by delayed wound healing of the skin.

Alterations in the color of your skin, in particular darkening of the palms and soles and membranes in your mouth can be seen relatively early during progression of the disease.

Other aspects of the skin for CKD patients include increased susceptibility to low temperatures, increased hair growth on the cheeks and thickening of the eyebrows. The blood flow to your skin is significantly reduced in dialysis patients which results in half and half nails, also called Lindsay's Nails which are typical findings in dialysis patients. This leads to a white discoloration in the half of your nails closest to your body and red/brownish color of the outer aspect of the nails. The discoloration comes from melanin deposition within the nail and excessive development of connective tissue between the nail and bone that reduces blood supply. This usually remains unchanged after

dialysis but may disappear after a kidney transplant.

Hyperpigmentation and pallor are commonly seen in dialysis patients.

Over time, many patients develop a yellowish hue, which has been attributed to retained urochromes and carotene which are substances that are usually excreted by the kidneys. When they accumulate they become deposited in the epidermis and subcutaneous tissues. A brownish hyperpigmentation is also common, mostly in sun-exposed areas. This hyperpigmentation results from an

increase in melanin production because of an increase in poorly dialyzable melanocyte stimulating hormone.

Patients with this condition tend to have a grayish, almost metallic color skin.

Another discoloration can be uremic frost which is a fine white-to-yellow crystalline powder like appearance on the skin surface after sweat dries. When the blood urea nitrogen (BUN) level is very high, the concentration of urea in sweat is increased significantly. Evaporation from sweat results in the deposition of urea crystals on the skin. Uremic frost is commonly found in the beard, face, neck, and trunk. This can be very concerning and must be brought to the attention of your caregivers to insure you are getting adequate dialysis.



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