

Depigmenting Dermatoses

(Skin Disorders Characterized
by Loss of Pigment)

Basics

OVERVIEW

- Disease or cosmetic condition involving loss of pigmentation of the skin and/or hair coat either by lack of pigmentation or by melanocyte damage; “melanocytes” are cells that produce pigment in the skin or hair
- Normal pigment in the skin and hair coat is melanin
- “Leukotrichia” is the medical term for whitening of the hair, without indication of location of the whitened hairs
- “Poliosis” is the medical term for whitening of the hair on the head and/or face
- “Leukoderma” is the medical term for whitening of the skin

SIGNALMENT/DESCRIPTION OF PET

Species

- Dogs
- Cats

Breed Predispositions

- Mucocutaneous pyoderma (bacterial skin infection involving areas of the lips, eyelids, nostrils)—German shepherd dogs
- Systemic lupus erythematosus (auto-immune disease in which the body attacks its own skin and other organs)—German shepherd dogs; discoid lupus erythematosus (auto-immune disease involving the skin only, usually the face)—collies, Shetland sheepdogs, German shepherd dogs, Siberian Husky
- Pemphigus foliaceus (auto-immune disease involving the skin, characterized by inflammation with crusting and lesions containing pus)—chow chows, Akitas
- Uveodermatologic syndrome (a rare syndrome in which the pet has inflammation in the front part of the eye, including the iris [condition known as “anterior uveitis”] and coexistent inflammation of the skin [known as “dermatitis”], characterized by loss of pigment in the skin of the nose and lips)—Akitas, Samoyeds, Siberian huskies
- Vitiligo (condition characterized by symmetrical lack of pigment in the skin and white hair coat, especially involving the face and nose) in dogs—Belgian Tervuren, German shepherd dogs, Doberman pinschers, Rottweilers, German shorthaired pointer, Old English sheepdog, and dachshund



- Seasonal nasal hypopigmentation (loss of pigment in the tough, hairless skin of the nose [known as the “nasal planum”] that occurs seasonally)—Siberian huskies, Alaskan malamutes, yellow Labrador retrievers, and golden retrievers
- Epitheliotropic lymphoma (Synonym: mycosis fungoides)
- Proliferative arteritis of the nasal philtrum (inflammation of the arteries of the nasal philtrum, the juncture between the sides of the upper lip extending to the nose)—Saint Bernard, giant schnauzers
- Vitiligo in cats—Siamese
- Periocular leukotrichia (whitening of the hair coat around the eyes) in cats—Siamese
- Chediak-Higashi syndrome (an inherited disorder that affects many tissues in the body; causes lack of pigment in the skin and eyes)—Persian

Mean Age and Range

- Vitiligo (condition characterized by symmetrical lack of pigment in the skin and white hair coat, especially involving the face and nose) in dogs—usually less than 3 years of age
- Epitheliotropic lymphoma (a type of skin cancer; also known as “mycosis fungoides”)—typically dogs over 10 years of age

SIGNS/OBSERVED CHANGES IN THE PET

- White hair (known as “leukotrichia”)
- Partial or total lack of pigment in the skin (known as “leukoderma”)
- Lightening of the pigment in the skin, often seen as a “graying” or “browning” of previously pigmented areas
- Reddening of the skin (known as “erythema”)
- Loss of the top surface of the skin (known as an “erosion” or “ulceration,” based on depth of tissue loss)

CAUSES

- Mucocutaneous pyoderma (bacterial skin infection involving areas of the lips, eyelids, nostrils)
- Systemic lupus erythematosus (auto-immune disease in which the body attacks its own skin and other organs)
- Discoid lupus erythematosus (auto-immune disease involving the skin only, usually the face)
- Pemphigus foliaceus (auto-immune disease involving the skin, characterized by inflammation with crusting and lesions containing pus)
- Pemphigus erythematosus (auto-immune disease involving the skin of the face and ears, characterized by reddening of the skin [erythema] and lesions containing pus)
- Uveodermatologic syndrome (a rare syndrome in which the pet has inflammation in the front part of the eye, including the iris [anterior uveitis] and coexistent inflammation of the skin [dermatitis], characterized by loss of pigment in the skin of the nose and lips)
- Contact hypersensitivity (increased sensitivity or reaction in the skin to the presence of a foreign agent that comes in contact with the skin)
- Vitiligo (condition characterized by symmetrical lack of pigment in the skin and white hair coat, especially involving the face and nose)
- Seasonal nasal depigmentation (loss of pigment in the tough, hairless skin of the nose [known as the “nasal planum”] that occurs seasonally)
- Albinism (inherited disorders characterized by lack of pigment in the skin, hair, and/or eyes, due to abnormal production of melanin)
- Schnauzer gilding syndrome (young, gray miniature schnauzers develop golden hair color, primarily on the body)
- Hormonal disorders
- Drug reaction
- Erythema multiforme (skin disorder caused by reaction to medications, infections, or other diseases)
- Proliferative arteritis of the nasal philtrum (inflammation of the arteries of the nasal philtrum, the juncture between the sides of the upper lip extending to the nose)
- Loss of pigment in the skin and/or hair following skin inflammation
- Dermatophytosis (fungal infection on the surface of the skin)

RISK FACTORS

- Sun exposure—systemic lupus erythematosus (auto-immune disease in which the body attacks its own skin and other organs), discoid lupus erythematosus (auto-immune disease involving the skin only, usually the face), and pemphigus erythematosus (auto-immune disease involving the skin of the face and ears, characterized by reddening of the skin [erythema] and lesions containing pus)
- Certain drug exposures (Erythema multiforme)

Treatment

HEALTH CARE

- Outpatient, except for systemic lupus erythematosus (auto-immune disease in which the body attacks its own skin and other organs), erythema multiforme (skin disorder caused by reaction to medications, infections, or other diseases), and lymphoma of the skin (a type of skin cancer), when multiple organ dysfunction is present
- Reduce exposure to sunlight—systemic lupus erythematosus (auto-immune disease in which the body attacks its own skin and other organs), discoid lupus erythematosus (auto-immune disease involving the skin only, usually the face) and pemphigus erythematosus (auto-immune disease involving the skin of the face and ears, characterized by reddening of the skin [erythema] and lesions containing pus)
- Immune system suppressors for some of these conditions
- Remove contact with topical drugs that might have triggered a reaction
- Replace plastic or rubber dishes—particularly if roughened edges cause abrasions
- Application of water-resistant sun-block ointments or gels (with a SPF UVA and UVB greater than 30) to depigmented areas exposed to sun
- Uveodermatologic syndrome—management by a veterinary ophthalmologist is usually done
- If pyoderma, appropriate antibiotics
- If fungal infection, appropriate antifungal therapy
- Vitiligo and nasal depigmentation—no treatment

ACTIVITY

- Restrict outdoor activity to minimize exposure to sunlight—systemic lupus erythematosus, discoid lupus erythematosus and pemphigus erythematosus

SURGERY

- Skin biopsy

Medications

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered as all inclusive

- Vary based on underlying cause
- Systemic lupus erythematosus—immunosuppressive therapy with steroids (such as prednisolone or dexamethasone) and chemotherapy drugs (such as azathioprine [dogs] or chlorambucil [cats])
- Tetracycline and niacinamide—to treat pemphigus erythematosus and discoid lupus erythematosus in dog
- Epitheliotropic lymphoma—multiple treatment protocols
- Steroids applied to the skin directly (known as “topical steroids”) for pemphigus erythematosus, discoid lupus erythematosus
- Cyclosporine (oral) for autoimmune disorders
- Tacrolimus or Pimecrolimus (topical gels)

Follow-Up Care

PATIENT MONITORING

- Varies with specific disease and treatment prescribed

PREVENTIONS AND AVOIDANCE

- Restrict outdoor activity to minimize exposure to sunlight—systemic lupus erythematosus, discoid lupus erythematosus and pemphigus erythematosus

POSSIBLE COMPLICATIONS

- Systemic lupus erythematosus (auto-immune disease in which the body attacks its own skin and other organs)—scarring
- Squamous cell carcinoma (a type of skin cancer) in cases of sun-damage to the skin, associated with loss of skin pigment

EXPECTED COURSE AND PROGNOSIS

- Vary with specific disease