Causes of Fluid-filled Bumps on the Skin of Dogs

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Small bumps on the skin which are filled with pus are called 'pustules.' Larger bumps filled with pus are abscesses. If small bumps contain a clear fluid, they are called 'vesicles.' There are many conditions which can cause these lesions, and most of them are included in the table below. The number of conditions is extensive, so you can understand why a quick diagnosis may be difficult to make and various diagnostic tests may need to be performed. The most common conditions causing these fluid-filled bumps are color-coded gray in the table (some may be more common in certain geographical areas).

Condition	Description	Symptoms	Diagnosis	Treatment
Abscesses	Accumulation of pus; may or may not be caused by an infection; in cats, often due to bite wounds	These may appear as firm or fluid-filled nodules of varying shapes and sizes; if due to infection, the animal may have fever, loss of appetite, depression; may open and drain	History, physical exam, needle aspirate	Surgically open, drain, and flush; if infected, administer appropriate antibiotics
Allergic and irritant contact dermatitis	An allergic reaction following exposure to antibiotics applied to the skin; metals such as nickel; materials such as rubber, wool, and plastic; and chemicals such as dyes and carpet deodorizers; or inflammation caused by irritating substances such as poison ivy. Generally requires multiple exposures.	Red skin and small bumps or blisters on the areas of skin that are sparsely haired and directly exposed to the offending substance, itching; hair loss in chronic conditions	Patch test, exclusion trials	Restrict exposure to the allergen or contact irritant in the dog's environment; steroids, antihistamines

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Apocrine sweat gland cyst	Common	Single, round, smooth nodules with no hair; may appear bluish; usually filled with a watery liquid; most common on head, neck, and limbs	Physical exam; biopsy	Surgical removal is optional
Bacterial Infection (Pyoderma) *See Impetigo, Folliculitis, Staph hypersensitivity, Pyoderma-deep*	Often occurs as a result of another condition such as a parasite, allergic, or hormonal condition			
Canine distemper (hard pad disease)	With vaccinations, canine distemper has become rare in many areas; foot pad lesions are common in this disease	Puppies may develop impetigo; thickening of the end of the nose and foot pads; also see other signs of illness associated with distemper	History of no vaccination; physical exam; blood tests to detect antibody response to viral infection	Supportive treatment; may be fatal or result in permanent problems
Cutaneous mucinosis	Secondary to other diseases; more common in young Shar-Peis	Vesicles filled with thick fluid	Biopsy	Treat underlying disease; Shar-Peis usually outgrow condition; severe cases - prednisone
Demodectic mange (red mange, puppy mange)	Infection with the *Demodex* mite - occurs when the immune system is deficient	Hair loss, scaliness, redness, pustules, ulcers, sometimes itching, darkening of the skin	Skin scraping and microscopic examination	NO Steroids Amitraz (Mitaban) dips
Erythema multiforme	Hypersensitivity reaction to infections or drugs; may also be caused by	Hair loss, 'bull's-eye' lesions, and vesicles often around mouth,	History, clinical signs, rule out other diseases	Treat or remove underlying cause

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	cancer or other diseases	ears, groin, and axilla; in some instances, ulcers develop; depression, fever	causing similar signs; skin biopsy	
Folliculitis	Infection of the hair follicles, often with staph bacteria; symptoms usually appear on skin with less hair, such as the abdomen (belly)	Pustules form in follicles and break open to form 'bull's-eye,' 'annular,' and 'target lesions,' which have crusty centers and red or darkening on the periphery, and 'epidermal collarettes,' which appear as rings of scaly skin; itching may occur; short-coated breeds may develop small tufts of hair which are lost; breeds with long coats may have seborrhea	Skin scraping; culture; biopsy	Antibiotics for at least 4 weeks - continue antibiotics 10 days beyond the apparent cure; if recurs, look for underlying problem such as allergy or hormonal imbalance
Hematoma	Localized collection of blood that has leaked out of blood vessels; often occurs in dogs with ear infections and pendulous ears	These may appear as firm or fluid-filled nodules of varying shapes and sizes	Needle aspirate	Depending on location and size may resolve on their own, or need drainage (e.g.; on ear flap)
Impetigo	Usually affects puppies less than one year of age; often a *Staph* infection	Localized area of small pustules - especially on the abdomen crusts, circular areas of scaling	History and physical exam; bacterial culture; skin scraping	Topical hydrogen peroxide; chlorhexidine or benzoyl peroxide shampoos; antibiotics, if serious; puppies usually outgrow it

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Lupus erythematosus	Autoimmune disease affecting many body systems including joints, kidneys, muscles, nervous system	Skin lesions may include thickening or ulcers of the foot pads, scaling, and recurring bacterial infections with pustules	Special blood tests (LE test); biopsy	Prednisone and other immunosuppressive drugs; treat underlying infections
Nasal pyoderma (furunculosis)	Deep infection of the bridge of the nose	Papules, pustules, deep ulcers, draining tracts; often results in scarring	Skin scraping; bacterial and fungal culture; biopsy; look for underlying cause, e.g., 'rooting around' with nose	Clip and clean area; long-term antibiotics; prevent further trauma (e.g; Elizabethan collar); NO Steroids
Pemphigus, bullous pemphigoid	Rare autoimmune condition, most often seen in Collies and Doberman Pinschers	80% of dogs have oral lesions; vesicles in groin area and underneath front legs	History, physical exam, biopsy	Steroids and other immunosuppressants
Pemphigus erythematosus	Less severe form of pemphigus foliaceus, an autoimmune disease; exposure to sunlight may play a role in its development	Pustules, drainage, and crusts; usually on face and ears	History, physical exam, skin scraping and biopsy	Topical and oral steroids; other immunosuppressives
Pemphigus foliaceus	The most common form of pemphigus in the dog; an autoimmune disease; some breeds are at increased risk	Often affects feet and head; starts with pustules and progresses to severe crusting; depigmentation of the nose is common;	History, physical exam, skin scraping and biopsy	Corticosteroids, other immunosuppressive therapy, gold injections

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		itching may occur; if footpads and nails affected often see lameness; symptoms wax and wane; severely affected animals may have fever and loss of appetite		
Pemphigus vulgaris	A rare form of pemphigus, an autoimmune disease; pemphigus vegetans is a milder form of this disease seen in dogs	Large vesicles which break open, ulcerate, and develop thick crusts; lesions often found in the mouth	Biopsy	Poor prognosis; prednisolone and other immunosuppressants
Pyoderma-deep (bacterial infections of skin and underlying tissue)	Often secondary to another skin disease such as self-inflicted trauma, wounds, acral lick granulomas, allergies, seborrhea	Ulcerated pustules or nodules, draining tracts, crusts, thickened skin	Skin scrapings, biopsy, culture	Clip and cleanse area; antibiotics, prevent self-trauma (licking, scratching), NO Steroids
Pyoderma-superficial *See Impetigo, Folliculitis, Staph hypersensitivity*				
Ringworm	Infection with several types of fungus	Hair loss, scaliness, crusty areas, pustules, vesicles, some itching; can develop a draining nodule called a 'kerion'	Culture	Miconazole, lime sulfur dips; oral griseofulvin or itraconazole

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Staph hypersensitivity	Rare disease in dogs caused by an allergic reaction to the bacteria *Staphylococcus*; often occurs in the presence of other skin diseases	Red skin, pustules, vesicles, severe itching, and sometimes crusts	Culture, biopsy, intradermal allergy test	Treat any underlying disease; antibiotics
Superficial necrolytic dermatitis of Miniature Schnauzers	Skin reaction to shampoos (usually insecticidal or medicated)	Papules, pustules, and ulcers with drainage; develop 2-3 days after exposure to the shampoo; may also see fever and depression	Breed, history of exposure, clinical signs	Treat symptomatically
Toxic epidermal necrolysis	Severe immune reaction to infections or drugs; may also be caused by cancer or other diseases	Vesicles, erosions, ulcers, and crusts over large areas of the body, especially mouth and feet; may look like a severe burn	History, clinical signs, skin biopsy	Prognosis is poor; treat underlying condition; give supportive care, corticosteroids may be helpful
Ulcerative dermatosis of Collies and Shetland Sheepdogs	May be a type of dermatomyositis; cause unknown; seen in middle-age or older dogs	Large vesicles and ulcers on groin, axilla, eyelids, ears, genitals, anus, and foot pads; painful	Breed, physical exam, biopsy	Avoid trauma; antibiotics if secondary infection; Vitamin E, fatty acids, short-term use of prednisone, oxpentoxifylline

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