



Backyard Chicken Care

A Veterinary Guide for Healthy, Happy Pet Chickens

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Keeping pet chickens can be a rewarding experience for individuals and families. With proper housing, nutrition, biosecurity, and veterinary care, chickens can live long, productive lives and remain healthy companions. Chickens are considered food animals, even when kept as pets, and owners must follow specific legal and medical guidelines.

Observation is one of the most important tools in maintaining a healthy flock. Subtle changes in behavior are often the first sign of illness.



Laws, Regulations, and Responsibilities

- Local and state laws regarding chicken ownership vary. Always confirm zoning and flock limits.
- Chickens are considered food animals, even if eggs are not consumed.
- Medication use is restricted in poultry. Many drugs commonly used in pets are illegal in chickens.
 - Buying antibiotics online and giving them to your chickens is illegal and can cause medical issues in humans
- Egg withdrawal times must be followed for any medication used.
 - If the withdrawal time is unknown, eggs should not be consumed for at least 30 days.
- Certain poultry diseases are reportable to state authorities.

Acquiring Chicks Safely

- Chicks are commonly shipped through the U.S. Postal Service, which works well because shipments are tracked and require same-day pickup.
- Purchase chicks only from reputable hatcheries. Purchase from NPIP certified flocks.
- Ensure chicks are vaccinated for Marek's disease before purchase.

Find your state NPIP office

Official NPIP website:

<https://www.uspoultry.org/programs/npip/>

From there, you can:

- Locate your state NPIP coordinator
- Review testing requirements
- Learn about flock certification programs

Vaccination

- Marek's disease is the only routinely recommended vaccine for backyard chickens.
 - It is administered in the egg or on day one of life.
 - Additional vaccines may be required for show birds or specific state regulations.
 - Coccidiosis vaccination may be used in chicks depending on management style.
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Housing and Coop Design

A well-designed coop is essential for health and disease prevention.

Space Requirements

- Minimum 3–5 square feet per bird inside the coop
- Outdoor run space should be generous to reduce stress and pecking
- Overcrowding increases aggression, cannibalism, and disease

Ventilation and Moisture Control

- Good airflow is critical year-round
- Prevent ammonia buildup from droppings
- Control moisture to reduce respiratory disease and frostbite
- Use droppings boards beneath roosts for easier cleaning

Temperature and Weather

- Chicks start at 95°F, decreasing by 5°F per week
 - Adult chickens are most comfortable at 70–75°F
 - Heat stress occurs above 95°F
 - Shade and airflow are critical in summer
 - Insulation is helpful in winter, but heat lamps should be used very cautiously
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Nesting, Roosting, and Behavior

- 1 nest box per 4 birds
- Roosts should provide 6 inches per bird
- Position roosts so wings and tails do not hit coop walls
- Chickens prefer to sleep off the ground

Pecking Order Management

- Pecking order is normal, but excessive aggression is not
 - Bully birds may need temporary or permanent removal
 - Peepers, nose bits, or blinders can reduce injurious pecking
 - Red lighting may reduce cannibalism in chicks
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Substrate and Flooring

Acceptable substrates include:

- Pine shavings (not cedar)
- Straw
- Recycled paper
- Washed concrete sand (not fine sand)

Sand benefits:

- Drains well
- Reduces odor
- Allows birds to self-regulate grit intake

Avoid wet or compacted bedding.

Feeding and Nutrition

Daily Diet

- 90% complete crumble or layer feed
- 10% vegetables and enrichment foods

Treats and Supplements

- Mealworms
- Sunflower seeds
- Scratch grains (especially in winter)
- Hang fresh produce for enrichment

Grit and Calcium

- Chickens on sand often need less supplemental grit
- Offer oyster shell free-choice for laying hens

Water

- Fresh water must be available at all times
 - Nipple waterers are excellent and sanitary
 - Chickens learn quickly but must be shown how to use them
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Transitioning Chicks to the Coop

- Move chicks to the coop when night temperatures exceed 50°F
 - Confine chicks to the henhouse for 2 weeks
 - Keep run and nest boxes closed
 - Feed and water only inside the coop
 - This trains birds that the coop is “home”
 - Afterward, allow supervised access to the run
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Egg Production

- Hens begin laying around 6 months of age
- Peak production occurs in the first 2 years



- Hens may lay 5–6 eggs per week
 - Molting and shorter daylight reduce egg production
 - 12–14 hours of light daily supports year-round laying
 - Removing light and keeping chickens in the dark for 12-14 hours in winter shuts down egg laying and allows the reproductive tract to rest
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Common Medical Conditions

- Respiratory disease
- Bumblefoot and joint disease
- External parasites (mites, lice)
- Gastrointestinal disease and parasites
- Reproductive disorders (egg binding, soft-shelled eggs)
- Marek's disease
- Heart disease in older hens

Routine fecal testing and parasite management are recommended.

Signs of Illness – Seek Veterinary Care

- Eye or nasal discharge
 - Sneezing or coughing
 - Distended crop or abdomen
 - Pale comb or wattles
 - Open-mouth breathing
 - Lethargy or sudden behavior change
 - Drop in egg production
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Zoonotic Disease and Human Health

Chickens can carry diseases transmissible to humans.

Salmonella

- Common and serious
- Highest risk: children under 5, elderly, immunocompromised individuals
- Follow CDC hygiene recommendations
- Handwashing is critical

Other zoonotic diseases include:

- E. coli
- Erysipelas
- Avian tuberculosis
- Chlamydiosis
- Avian influenza

The CDC provides printable salmonella handouts for chicken owners.

Avian Influenza (HPAI)

- H5N1 detected in wild birds and poultry across the U.S. since 2022
 - Signs include:
 - Sudden death
 - Neurologic signs
 - Blue or swollen comb and wattles
 - Respiratory distress
 - Decreased egg production
 - Suspected cases must be reported immediately to the state veterinarian
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Transport and Health Certificates

- Chickens cannot cross state lines without a USDA health certificate
 - Additional testing may be required depending on destination
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Preventive Care

- Annual veterinary exams
 - Twice yearly parasite screening
 - Biosecurity practices
 - Ongoing observation of individual birds
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Final Notes

Chickens are intelligent, social animals that thrive with proper space, nutrition, enrichment, and medical oversight. Thoughtful husbandry reduces disease risk and improves welfare for both birds and owners.

Educational Credit

Portions of this handout incorporate teaching points from a poultry medicine lecture by Dr. Laurie Hess, DVM, Diplomate ABVP (Avian Practice), whose work has contributed significantly to backyard poultry education.





Chicken Lice Treatment and Home Care Guide

Your chicken has been diagnosed with lice, a common external parasite in backyard poultry. The good news is that lice are treatable and most birds recover quickly once treatment begins.

Lice are small insects that live on the chicken's skin and feathers. They feed on feather material and skin debris. While they are irritating for chickens, they do not infect people, dogs, or cats. Lice spread easily between birds, so it is important to treat all chickens and the coop environment.



What Signs Do Chickens With Lice Show?

Common signs include:

- Itching or excessive preening
- Feather damage or missing feathers
- Debris or tiny moving insects near the vent or under the wings
- White clusters of lice eggs attached to feather shafts
- Restlessness
- Decreased egg production

Lice often gather around the vent, under the wings, and at the base of the tail.

Treatment for Your Chicken

Your chicken has been treated or prescribed treatment for lice. Because lice live on the bird, every chicken in the flock should be treated even if they do not appear affected.

The most common treatment is permethrin poultry dust or spray.

How to treat your chickens:

1. Wear gloves.
2. Apply the dust or spray to each bird.
3. Focus on areas where lice live:
 - around the vent
 - under the wings
 - along the back and neck
 - base of the tail
4. Work the powder down to the skin.

Repeat treatment in 7 to 10 days.

This second treatment is important because it kills lice that hatch from eggs after the first treatment.

Keep permethrin away from cats and human eyes and skin.

Treating the Coop and Environment

Treating the environment helps prevent reinfection.

Steps to clean the coop:

1. Remove all bedding and nesting material.
2. Dispose of the bedding in a sealed trash bag.
3. Thoroughly clean the coop, nesting boxes, and roosts.
4. Apply permethrin poultry dust or spray to:
 - nesting boxes
 - roosts
 - cracks and crevices in the coop
5. Allow the coop to dry before adding fresh bedding.
6. Replace with clean bedding.

Environmental treatment should also be repeated in 7 to 10 days.

Provide Dust Baths

Chickens naturally control parasites by taking dust baths.

Providing a dust bath helps prevent future lice problems.

A simple dust bath can contain:

- dry soil
- sand
- wood ash

Place the dust bath in a dry area of the coop or run.

Monitoring Your Flock

Check your birds again in 10 to 14 days.

Look around the vent and under the wings for:

- moving insects
- clusters of eggs attached to feathers
- persistent feather damage

Most infestations resolve after two treatments when both the birds and the coop are treated.

When to Contact the Veterinarian

Please contact us if:

- lice are still present after two treatments
- your chicken becomes weak or stops eating
- you notice severe feather loss or skin irritation
- egg production drops dramatically

Early treatment and good coop hygiene help keep your flock healthy and comfortable.

If you have any questions about your chicken's care, please contact our hospital.



Soft-Shelled Eggs in Chickens

What They Mean and What You Can Do

Melissa Magnuson, DVM • Alexandra Kilgore, DVM

Finding a soft-shelled or shell-less egg can be alarming, but in many cases the cause is manageable. Eggshell quality depends on nutrition, environment, and a hen's overall health. Below are the most common reasons soft-shelled eggs occur and how to address them.

Common Causes of Soft-Shelled Eggs

1. Not Enough Calcium

Hens need large amounts of calcium to form strong eggshells. If their diet does not provide enough calcium—or if absorption is poor—shells may be thin or soft.

What to do:

- Feed a complete layer feed designed for laying hens
- Offer free-choice oyster shell or crushed eggshells in a separate dish at all times



2. Vitamin D Deficiency

Vitamin D is essential for calcium absorption. Without it, even a calcium-rich diet may not be effective.

What to do:

- Ensure access to natural sunlight
- If birds are housed indoors, discuss vitamin D3 supplementation with your veterinarian

3. Age-Related Changes

- Young hens (pullets) just starting to lay may produce soft or irregular eggs
- Older hens nearing the end of their laying life may also have shell quality issues

What to do:

- Be patient
- Focus on excellent nutrition and overall care

4. Stress

Stress can interrupt normal egg formation. Common stressors include:

- Loud noises
- Predator pressure
- Overcrowding
- Sudden changes in routine or environment

What to do:

- Provide a calm, safe, and predictable environment
- Ensure adequate space and shelter

5. Heat Stress

Hot weather can reduce appetite, which lowers calcium intake.

What to do:

- Provide shade and good ventilation
- Offer cool, fresh water at all times
- Consider wetting feed or offering water-rich treats (like cucumber or watermelon)

6. Reproductive Tract Problems

Persistent soft-shelled eggs may indicate issues such as:

- Internal laying
- Oviduct inflammation or infection
- Egg binding

What to do:

- Contact your veterinarian if soft-shelled eggs continue or your hen seems uncomfortable

7. Illness

Certain diseases (such as infectious bronchitis) can affect the egg-laying system and shell quality.

What to do:

- Watch for respiratory signs or sudden changes across the flock
- Report concerns promptly to your veterinarian

What You Can Do at Home

- Feed a high-quality layer pellet with 3.5–4% calcium
- Offer oyster shell free-choice
- Ensure sunlight exposure or appropriate indoor lighting
- Limit low-calcium treats (corn, scratch, table scraps)
- Keep the coop clean, cool, and low-stress

When to Call Your Veterinarian

Contact your veterinarian if:

- Your hen stops laying altogether

- The same hen repeatedly lays soft-shelled eggs
 - She appears lethargic, fluffed up, or stops eating
 - You suspect egg binding or internal laying
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The Bottom Line

Healthy hens lay healthy eggs. Most soft-shelled eggs can be corrected with proper nutrition, environment, and care. If the problem persists or your hen shows signs of illness, veterinary guidance is important.

If you have questions or concerns, we're here to help.



Egg Yolk Peritonitis in Chickens

Information for Backyard Flock Owners

Melissa Magnuson, DVM • Alexandra Kilgore, DVM

What Is Egg Yolk Peritonitis?

Egg yolk peritonitis (EYP) is a common and potentially serious condition in laying hens. It occurs when egg yolk material ends up inside the abdominal cavity instead of traveling normally through the reproductive tract.

Egg yolk outside the oviduct acts like a foreign substance, triggering inflammation and often bacterial infection of the abdominal lining (peritonitis). Without treatment, the condition can progress and become life-threatening.

Why Does Egg Yolk Peritonitis Happen?

Several factors can contribute, including:

- **Internal laying**
The yolk fails to enter the oviduct and is released into the body cavity.
 - **Egg rupture inside the body**
Fragile or malformed eggs may break before being laid.
 - **Reproductive tract disease**
Infection, inflammation, tumors, or scarring of the oviduct can interfere with normal egg passage.
 - **Hormonal or production stress**
Hens bred for high egg production are at increased risk.
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Signs You May Notice at Home

Egg yolk peritonitis often develops gradually. Common signs include:

- Abdominal swelling or bloating
- Lethargy or sitting fluffed up
- Decreased appetite or refusal to eat
- Sudden drop or stop in egg production
- Weight loss with a wide-based or “penguin-like” stance
- Labored or rapid breathing due to abdominal pressure

In some cases, fluid may be felt in the abdomen during gentle handling.

How Is Egg Yolk Peritonitis Diagnosed?

Your veterinarian may recommend one or more of the following:

- Physical examination to assess abdominal fluid or discomfort
 - Ultrasound or X-rays to evaluate fluid buildup or egg material
 - Bloodwork to assess infection, inflammation, or organ stress
 - Abdominal fluid sampling to confirm yolk material and infection
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Treatment Options

Treatment depends on how advanced the condition is and the hen's overall health.

Possible treatments include:

- **Supportive care**
Fluids, warmth, pain control, and nutritional support
- **Antibiotics and anti-inflammatory medications**
To control infection and reduce discomfort
- **Abdominal fluid drainage**
Can provide temporary relief from pressure but is not a cure
- **Hormonal therapy (such as a deslorelin implant)**
May reduce or stop egg production and decrease recurrence
- **Surgery (spay / salpingohysterectomy)**
A permanent solution, but often risky and not always feasible in backyard hens

Your veterinarian will help determine which options are appropriate for your bird.

Prognosis

- Mild cases may respond to medical management, but recurrence is common
 - Severe or repeated cases often carry a guarded to poor prognosis
 - The goal is often to improve comfort and quality of life rather than achieve a cure
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Can Egg Yolk Peritonitis Be Prevented?

While not all cases can be prevented, risk may be reduced by:

- Providing balanced nutrition with appropriate protein and calcium
- Monitoring egg production and behavior for early changes
- Avoiding breeding or selecting for extreme egg production
- Seeking early veterinary care when abnormalities are noticed

Heritage or lower-production breeds may have fewer reproductive complications than commercial layers.

When to Call Your Veterinarian

Contact a veterinarian experienced with poultry if your hen shows:

- Sudden lethargy or loss of appetite
 - Abdominal swelling or bloating
 - Unexpected cessation of egg laying
 - Labored breathing or abnormal posture
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Take-Home Message

Egg yolk peritonitis is common, serious, and often progressive, but early recognition and veterinary care can improve comfort and, in some cases, extend a hen's quality of life. Thoughtful flock management and prompt attention to changes are key.

If you have concerns about your hen or flock, your veterinarian is here to help.



State Laboratory and NPIP Resources for Poultry Owners

Early testing and proper reporting protect your flock, neighboring flocks, and public health. The resources below help you find trusted testing laboratories, state poultry officials, and disease control programs quickly if concerns arise.

State Veterinary Diagnostic Laboratories

Every U.S. state has a state-approved veterinary diagnostic laboratory that can test poultry samples for infectious, nutritional, parasitic, and toxic conditions.

What state labs can help with

- Diagnostic testing for sick or deceased birds
- PCR testing for reportable diseases
- Necropsy (post-mortem examination)
- Guidance on sample submission and shipping
- Coordination with state animal health officials

How to find your state lab

Search online for:

“**[Your State]** Veterinary Diagnostic Laboratory”

or ask your veterinarian to submit samples on your behalf.

Many state labs require:

- Advance notification before submission
 - Specific packaging and labeling
 - Refrigeration (not freezing) of samples unless instructed otherwise
-

National Poultry Improvement Plan (NPIP)

The National Poultry Improvement Plan (NPIP) is a federally coordinated program that works with each state to monitor and control poultry diseases.

Why NPIP matters to backyard flock owners

- Each state has an NPIP officer
 - NPIP officers coordinate:
 - Disease testing
 - Certification programs
 - Reporting of regulated diseases
 - NPIP guidance is especially important if:
 - Birds are being sold or moved
-

- New birds are added to a flock
- A serious disease is suspected

Find your state NPIP office

Official NPIP website:

<https://www.uspoultry.org/programs/npip/>

From there, you can:

- Locate your state NPIP coordinator
- Review testing requirements
- Learn about flock certification programs

Reportable Poultry Diseases

Some poultry diseases must be reported immediately to state or federal authorities.

Common reportable diseases include

- Avian Influenza (AI)
- Newcastle Disease (NCD)

If you suspect a reportable disease

- Sudden death in multiple birds
- Severe respiratory signs
- Neurologic symptoms
- Rapid spread through the flock

Do not move birds, eggs, or equipment.

Contact:

- Your veterinarian
- Your state diagnostic laboratory
- Your state NPIP officer

Early reporting protects everyone.

Sample Submission Tips for Owners

- Do not freeze birds unless instructed
- Refrigerate deceased birds (double-bagged)
- Use gloves and wash hands thoroughly
- Label samples clearly
- Follow lab instructions exactly

Your veterinarian can assist with:

- Sample collection
- Paperwork
- Shipping coordination

Salmonella and Human Health

Backyard poultry can carry Salmonella, even when healthy.

The Centers for Disease Control and Prevention (CDC) provides excellent owner-friendly guidance.

CDC Poultry and Salmonella Information:

<https://www.cdc.gov/salmonella/backyardpoultry.html>

Key reminders:

- Wash hands after handling birds or eggs
 - Supervise children closely
 - Do not allow poultry in kitchens or eating areas
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When to Call a Veterinarian First

Contact a veterinarian experienced with poultry if:

- Birds stop eating or drinking
- Egg production drops suddenly
- Respiratory signs appear
- Lameness or neurologic signs develop
- Multiple birds show illness

Veterinarians help determine:

- Whether testing is needed
 - Which lab is appropriate
 - If reporting is required
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Take-Home Message

Knowing where to go before a crisis happens saves time, birds, and heartache.

Keep this information accessible:

- State diagnostic lab contact
- State NPIP officer contact
- Veterinarian phone number

Prepared owners protect healthier flocks.



When to Call the Veterinarian A Decision Tree for Chicken Owners

Use this guide if you are unsure whether your chicken needs veterinary care.

STEP 1: Is Your Chicken Alive and Standing?

✗ NO

Call a veterinarian or state lab immediately

- Sudden death
- Multiple birds dead within 24–48 hours
- No warning signs before death

⚠ Do not move birds or equipment if multiple deaths occur.
This may indicate a reportable disease.

✓ YES

Continue to Step 2

STEP 2: Is More Than One Bird Affected?

✗ YES

Call a veterinarian promptly

- Multiple birds acting sick
- Sudden drop in egg production across the flock
- Widespread respiratory signs

⚠ Flock-wide illness spreads quickly and may require testing.

✓ NO

Continue to Step 3

STEP 3: Are Any of These Emergency Signs Present?

✗ YES to any below → **CALL THE VET TODAY**

- Severe lethargy (won't stand or move)
 - Labored or open-mouth breathing
 - Collapse, seizures, or inability to walk
 - Bloody droppings or blood from mouth or nostrils
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- Severe head swelling or closed eyes
- Sudden neurological signs (circling, head tilt)
- Prolapse
- Egg bound signs (straining, swollen abdomen, distress)

⚠ Chickens hide illness well. These signs often mean advanced disease.

✓ **NO**

Continue to Step 4

STEP 4: Are These Mild but Concerning Signs Present?

If **YES** → Monitor closely for 24–48 hours OR call the vet sooner if worsening

- Reduced appetite
- Decreased egg production in one bird
- Mild lameness
- Weight loss or muscle wasting
- Mild diarrhea
- Feather loss outside of normal molt
- Pale comb or wattles
- Mild nasal discharge or sneezing

✚ **Call sooner if:**

- Signs persist more than 48 hours
- Bird becomes isolated from flock
- Condition worsens at any time

✓ **NO** - Continue to Questions Below

Is This Likely Normal?

These signs may be normal if the bird is otherwise bright, eating, and active:

- Seasonal egg drop (especially winter)
- Normal molting
- Short-term stress after weather changes
- Temporary changes in behavior after flock reorganization

✓ Continue routine care and observation.

Special Situations That Always Warrant a Call

Call the veterinarian even if signs seem mild if:

- You recently added new birds
 - A bird is under 6 months old
 - Birds were exposed to wildlife
 - Birds were exposed to moldy feed or bedding
 - You are unsure about medication withdrawal times
 - You are in a state with active Avian Influenza monitoring
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What to Have Ready When You Call

Veterinarians will often ask:

- How many birds are affected?
- How long have signs been present?
- Any recent deaths?
- Age and type of birds (layers vs broilers)
- Diet and supplements
- Recent changes or stressors
- Your state/location
- Photos or videos (very helpful)

IMPORTANT SAFETY REMINDER

If you suspect:

- Avian Influenza
- Newcastle Disease

Do **NOT** transport birds without guidance.

Call your veterinarian or state diagnostic lab immediately.

Bottom Line

Trust your instincts.

If something feels “off,” calling early can save your bird—and your flock.



Scaly Leg Mite in Chickens

(*Knemidocoptes species*)

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What Is Scaly Leg Mite?

Scaly leg mite (*Knemidocoptes*) is a microscopic parasite that burrows underneath the scales of a chicken's legs and feet. As the mites tunnel and reproduce, they cause irritation, inflammation, and abnormal scale growth.

If left untreated, scaly leg mites can lead to pain, infection, deformity of the toes or feet, and difficulty walking.



Signs You May Notice at Home

You may see one or more of the following changes:

- Raised, lifted, or uneven leg scales
- Thickened, crusty, or scabby appearance on the legs or feet
- White, gray, or yellowish buildup under the scales
- Misshapen toes or legs in long-standing cases
- Limping, reluctance to walk, or signs of discomfort

Early cases may be subtle, so regular leg checks are important.

How Scaly Leg Mite Is Treated

Successful treatment focuses on killing the mites, soothing the legs, and preventing reinfestation.

1. Medication to Kill the Mites

- An antiparasitic medication, most commonly ivermectin, is used.
- Treatment is usually repeated every 1 to 2 weeks, depending on severity.
- All chickens in the flock should be treated, even if only one bird shows signs. This prevents reinfestation.

Your veterinarian will guide you on the correct dose and schedule.

2. Comfort Care for the Legs

- Apply a thin layer of petroleum jelly, coconut oil, or mineral oil to the legs daily.
- This helps:

- Smother remaining mites
- Soften crusted scales
- Soothe irritated skin

Do not peel or force scales off.

As treatment works, old scales will gradually loosen and fall away on their own while healthy new scales grow in.

3. Coop and Environment Clean-Up

Although scaly leg mites spend most of their life on the bird, cleaning the environment helps prevent reinfestation.

- Remove and replace bedding
- Clean and disinfect:
 - Perches
 - Nest boxes
 - Flooring and roosting areas
- Keep the coop dry and well-ventilated

What to Expect During Recovery

- Improvement is gradual, not immediate.
- It may take several weeks to months for normal-looking scales to return.
- Early treatment offers the best chance for full recovery.
- In severe or long-standing cases, some leg deformity may remain, but treatment will stop the mites and prevent further damage.

Preventing Scaly Leg Mite

- Check your chickens' legs regularly, especially older birds.
- Quarantine and inspect all new birds before adding them to your flock.
- Maintain a clean, dry coop with good ventilation.
- Address leg changes early before mites become established.

When to Contact a Veterinarian

Please call if you notice:

- Swelling, redness, or signs of pain in the legs or feet
- Open sores or signs of infection
- Limping that worsens or does not improve
- Decreased appetite, activity, or egg production
- Rapid spread of symptoms through the flock

The Bottom Line

Scaly leg mite is common, treatable, and manageable when caught early. With proper medication, leg care, and good coop hygiene, most chickens return to comfort and normal function.

If you have questions or concerns about your flock, your veterinarian is here to help.