

Pet Chickens Care

January 1, 2011 (published)

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Vital Statistics	
Life span	10–11 years
Average weight	283–510 g (10–18 oz)
Range of weights	50–2000 g, depending on breed
Respiratory rate	12–37 breaths per min
Heart rate	220–360 beats per min
Rectal temperature	41.2°C (106.1°F)
Sexual maturity	4.5–5 months (begin laying; sexually mature by 1 year)

Breeds / Physical Attributes

- Various chicken breeds have developed from domestication of the red junglefowl (*Gallus gallus, forma domesticus*) for different purposes: egg laying (leghorns), meat (Cornish) or meat and eggs (Plymouth rocks, Rhode Island reds and New Hampshire), as well as for exhibition.

Leghorn



Rhode Island Red



Laws and Permits

- Maintaining, breeding, treating or commercially dealing with chickens may be regulated by laws that govern the protection of animals, property rights, exchange of goods, liability, epornitics, food for human consumption, hunting and transport of animals.
- Voluntary federal and state programs, such as the National Poultry Improvement Plan (NPIP), provide testing for specific diseases to facilitate transport of fowl.
- Local laws and city codes must be consulted for specific management guidelines (e.g., possibly limiting the number of roosters on a given amount of land).
- The recommendations in this section apply to individual chickens or small flocks that are maintained as pets or for egg laying.
- Numerous online resources are available for management of small flocks (e.g., www.ces.ncsu.edu/depts/poulscitech_manuals/small_flock_resources.html).

Behavior

- Chickens seem to be the fowl to which owners most easily bond and for which they are willing to seek veterinary attention when needed.
- They are usually gentle but during the breeding season can be aggressive, especially males.
- Chickens are easier to carry than other fowl, have less messy stool and produce fresh eggs for consumption.

Captive Housing for Adults

- Chickens are usually housed in groups outdoors where they can eat grass and peck for bugs.
- Studies of chickens kept in cages clearly show that without appropriate foraging material, feather pecking and other behavioral problems are common.
- Chicken coops provide shelter and safety for sleeping and laying eggs.
- Coops should be made of strong materials, be easy to clean and be dry and well ventilated.
- A shaded portion is essential, especially in summer, and supplemental heat may be necessary in winter climates.
- To prevent access by predators, wire sides or sheet metal should be extended underground, and the top should be covered with wire mesh.
- Indoor/outdoor aviaries should be as large as possible (with extra height for roosting).
- Roosts should be placed so that the tail or wing of a roosting bird does not touch the sides of the aviary.
- Natural turf surfaces are best, with an area designated for dust/sand baths.

- Appropriate indoor substrates include shavings, sawdust, straw or recycled paper pellets to a depth of 6–8 inches (15–20 cm).
- The substrate should be changed routinely to prevent ammonia buildup.
- Clean nesting material, such as wood shavings, should be provided in the nests at all times.
- Many pet chickens reside in the home, with an area in a kitchen or laundry room sectioned off by gates.
- The substrate often consists of layers of newspaper with straw or hay, although towels, blankets or other types of cloth bedding may be provided in a small box for a roost.
- Pet chickens with access to carpet and upholstery fabric may entangle their nails, leading to injury, or may ingest these materials, leading to impactions or other gastrointestinal disorders.
- Pet chickens may peck and ingest other household items, such as rubber bands, small trinkets, jewelry, grouting, window/door insulation materials and even foam shoe insoles, which can also lead to gastrointestinal problems.
- Although many pet chickens appear to get along well with other household pets, such as dogs, cats or ferrets, they should not be left unattended.
- Sleeping boxes or pen areas should be well-secured at night or when owners are not home so that these other pets do not have access to the chickens.
- Pet chickens should be offered some daily access to the outdoors and dust/sand areas for grooming.



Chickens are usually housed in groups outdoors where they can forage. (Karin Kanton, DVM)



Coops provide shelter and safety for chickens. (Karin Kanton, DVM)

Captive Housing for Chicks

- Until baby chickens are 10 weeks old they may need supplemental heat in a draft-free area.
- For 1-week-old chicks, the room temperature should be 90°F (32°C) with a gradual dropping of 5°F (3°C) per week until the temperature is 70°F (21°C).
- At 4 weeks of age the floor space should be one-half square foot per chick, gradually enlarging to 5 ft² (0.5 m²) per chick at 21 weeks of age.
- One waterer should be provided for every 25–50 chicks.
- The water and food containers should be placed outside the edge of the hover brooders.



As chicks mature the room temperature can be gradually reduced. (Karin Kanton, DVM)

Diet for Adults

- Many disorders of captive poultry are directly or indirectly related to malnutrition.
- As with other birds, a seed diet is not a complete diet, nor is chicken scratch or cracked corn.
- Commercial formulated diets are available for domestic fowl and include chick starter, layer, broiler and adult maintenance, with considerable variation in the levels of calcium, protein and energy among the rations.
- It is best to feed commercial diets without coccidiostats, antiflagellates or antimicrobials.
- Extra-label use of medicated feed for production purposes is not allowed.
- The availability of fresh green plants to the diet provides the birds with nutritional diversity.
- Owners should refrain from offering their chickens table scraps, bakery goods and human foods in general.
- As an occasional treat, commercial mealworms or earthworms are relished.
- Because obesity is a major problem in pet chickens, portions of commercial poultry food should be measured.
- Birds that are not allowed to freely roam should have access to grit. The grit container should be emptied and refilled regularly with various sizes of grit because birds select only stones that are suitable for their body mass.
- Pellets or complete rations have an adequate supply of calcium and should not be supplemented with lime or crushed shell.
- Fresh, clean water must be available at all times.

Diet for Chicks

- For the first 6 weeks of age, a 20% protein starter mash should be offered, which can be gradually changed to a 16% protein formula after 8 weeks of age.
- Feed should be provided to newly hatched chicks on a large, flat plate on which they can move around and practice picking.
- By 5–7 days of age, food can be offered in larger containers.
- Shallow bowls should be used for water, as small chicks may drown in large water containers.
- Reducing drinker depth by placing stones or glass marbles in the container will reduce losses.



Baby chicks may need supplemental heat until they are 10 weeks old. (Karin Kanton, DVM)



Juvenile chickens are able to forage on their own.

Sexing and Reproduction

- Most chicken breeds show a marked sexual dimorphism.
- The size (height and width), body mass (weight), color of the plumage, shape of certain feathers, presence of spurs and the length and color of the tail feathers assist in gender determination between adults.
- Highly skilled individuals can determine gender by examining the cloaca in 1-day-old chicks or in adults.
- Behavioral clues, like dominance and certain mating rituals, may suggest a gender but are not always indicative.
- Endoscopic examination of the gonads provides definitive determination of gender in species with similar morphologic characteristics.
- The laying pattern is nondeterminant (the hen continues to lay if eggs are removed).
- The clutch size is 5–8 chicks, and the incubation period is 19–22 days

Mother Hen with her Chicks



Sexual dimorphism is evident in most breeds of chickens.

Restraint

- The face and eyes of handlers should be protected from possible injury from spurs (cocks) or beaks.
- A hooked long stick can be used to gently catch chickens in an aviary.
- The legs of chickens should be restrained first and then the abdomen supported from below.
- A large bird can be restrained by placing it under one arm and pressing it gently against one's body.
- Birds can be calmed by placing a loose-fitting lightweight cotton sock over the head to reduce vision.
- Some chickens may go into a "hypnotic" state for noninvasive procedures by having their head placed under a wing and rocking them side to side.
- Chickens that are housed exclusively outdoors may become overheated during the trip to the veterinary clinic and subsequent examination.
- The examination room should be as cool as possible. If the chicken appears agitated and begins panting, the examination should be suspended until the panting stops.
- Midazolam (0.5 mg/kg IM) may alleviate anxiety and struggling, thereby decreasing the potential for overheating.
- The calming effect may greatly facilitate a thorough examination.

Anesthetic Protocols

- As with other birds, anesthetic protocols should include a balanced approach: anti-anxiety/sedation, analgesia and then anesthesia or loss of consciousness.
- The use of midazolam (0.25–0.5 mg/kg IM) coupled with the analgesic butorphanol (0.2–0.5 mg/kg IM) may be adequate for diagnostic procedures, such as radiography and ultrasonography.
- Anesthesia may then be induced with isoflurane via face mask and maintained via intubation.
- Chickens should have a pre-anesthetic blood pressure (systolic) value obtained using the wing and should be monitored during anesthesia with ECG and blood pressure measurements.
- Respiratory apnea to inhalant anesthetics is less likely if sufficient pre-anesthetic sedation and analgesia have been provided.
- Local anesthetic injection or infiltration using lidocaine 2% will not only provide local analgesia, but in combination with the pre-anesthetic medications, allow for lower concentrations of inhalant anesthetic gases to be used.

Vaccination Program

- The goal in small chicken collections should be disease prevention by avoiding entry of disease organisms onto the premises.

- Vaccines for fowl are readily available for commercial use but not for smaller collections.
- Diseases commonly considered for vaccination, if endemic or if virulent strains are of concern in the area, include Marek's disease, infectious laryngotracheitis, pox, Newcastle's disease and infectious bursal disease.
- Chickens sold by feed stores or large suppliers may have already been vaccinated.

Health Certificates

- The Veterinary Services Area Office for the specific state must be contacted for instructions on testing animals being transported to another country.
- Health certificates usually require testing for mycoplasma, salmonella (specifically the poultry-specific *Salmonella pullorum*) and influenza species.

Grooming

- Most chickens take baths in dust or sand rather than water.
- The use of these abrasive materials on the plumage may function to lightly abrade and polish the edges of the feathers and may help reduce the number of external parasites as long as the sand itself is not contaminated.
- Insect powders should be used only if they are nontoxic and only if the birds in fact have parasites.
- Beak trimming is not recommended in chickens raised for hobby or for pets.
- When performed improperly, this procedure may interfere with the bird's ability to eat, may result in infection and even affect the bird's social ranking in the flock.
- Owners of pet roosters may have the veterinarian blunt the tips of the spurs, which can be performed with a Dremel sanding tool.
- The veterinarian should wear appropriate mask and face protection to prevent inhalation of dust. The procedure should be monitored for potential bleeding, as with all birds.
- Trimming of the flight feathers can be performed, as with psittacines, to prevent birds from escaping from open aviaries or to reduce the mobility of an aggressive cock during the breeding period.
- A sufficient amount of wing feathers should remain to prevent damage to the keel if the bird should try to fly and instead crash.

Blood Collection Sites

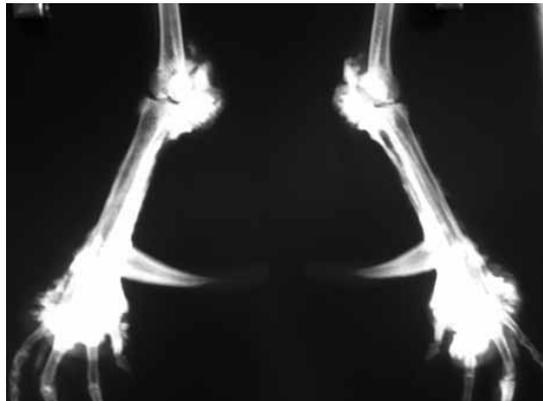
- Jugular vein
- Wing (brachial) vein
- Tarsal/metatarsal vein

Most Common Disorders

- Pet chickens are susceptible to a wide variety of viral, bacterial, mycoplasmal, parasitic, chlamydial, rickettsial and fungal agents.
- Cannibalism may be expressed as vent picking, feather pulling, toe picking, head picking and egg eating. Overcrowding, incorrect feeding, an inappropriate daylight cycle, high light intensity, poor housing conditions (e.g., high proportion of toxic gases in the air), genetic predisposition and other factors may all promote cannibalism.
- Common internal parasites may include coccidia, roundworms and capillaria.
- External parasites commonly found on chickens are lice, fleas, flies, mosquitoes, midges and ticks.
- Aging chickens develop atherosclerosis, cardiomyopathy, arthritis, gout, obesity and renal disease.
- Reproductive system diseases include chronic infections and neoplasia.



A chicken was presented with an overgrown beak, presumably due to malnutrition (it had been fed cat food). The beak was successfully trimmed with a Dremel tool, the diet was changed to commercial poultry feed and the overgrowth did not recur. (Cathy A. Johnson-Delaney, DVM, Dipl ABVP—Avian)



Radiograph of a 9-year-old rooster with severe gout/arthritis. (Cathy A. Johnson-Delaney, DVM, Dipl ABVP—Avian)



Ultrasound from an eggbound hen with oviductal adenocarcinoma. (Cathy A. Johnson-Delaney, DVM, Dipl ABVP—Avian)

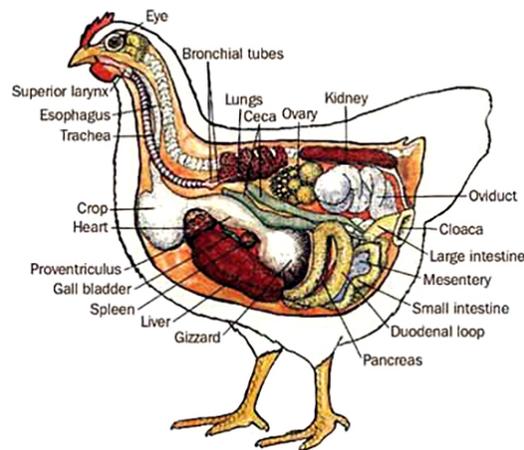
Primary Zoonotic Potentials

- Colibacillosis (*Escherichia coli*)—ingestion
- Erysipelas (*Erysipelothrix insidiosa*)—contact
- Tuberculosis (*Mycobacterium avium*)—ingestion, inhalation
- Salmonellosis (*Salmonella pullorum*)—ingestion
- Chlamydiosis (*Chlamydia psittaci*)—inhalation, aerosol

Common Diagnostic Tests

- CBC, serum chemistries
- Culture, sensitivity (state diagnostic lab)
- Fecal parasite examination (flotation, direct smear, centrifugation)
- Fecal Gram's stain
- Necropsy (state diagnostic lab)

Anatomy



(Used with permission of the Department of Poultry Science of Mississippi State University.)



An ECG was performed on this rooster with congestive heart failure. (Cathy A. Johnson-Delaney, DVM, Dipl ABVP—Avian)

Therapeutic Considerations

- Therapeutics appropriate for chickens are listed in the literature and must be approved for use in “food” animals whether the animals are actually consumed or not.
- Off-label usage for food animals is more strict than for traditional companion animals: 1) there must be a proper veterinarian/client relationship; 2) the veterinarian must supply a scientifically based withdrawal time; 3) there must be a medical rationale for the drug noted in the record; and 4) if scientific information on the human food safety aspect of the drug is not available, the veterinarian must take appropriate measures to ensure the animal and its food products do not enter the human food supply.
- If eggs from a bird being treated are consumed, the owner should be advised in writing of the withdrawal times for any and all medications used during the veterinary examination and therapy.
- Fluoroquinolone products may no longer be sold, distributed or administered to chickens whether they are pets or livestock.

- Other extra-label prohibitions include: diethylstilbestrol (DES), chloramphenicol, nitroimidazoles (including dimetridazole, metronidazole and ipronidazole), clenbuterol, dipyrone, glycopeptides (e.g., vancomycin), nitrofurans (including nitrofurazone, furazolidone, topical use prohibited as well), and gentian violet.
- One may access the Food and Animal Residue Avoidance Databank for prohibited drugs at www.FARAD.org.



(Angela Lennox)

Selected Online Resources

- Cooperative Extension Service (check local telephone directory)
- The Game Bird Gazette (hobbyist magazine) www.gamebird.com
- Journal of the American Association of Avian Pathologists (Avian Diseases) www.aaap.info
- Journal of the Wildlife Diseases Association www.wildlife.org
- Journal of the Poultry Science Association www.poultryscience.org
- Avian Pathology www.tandf.co.uk/journals/titles/03079457.asp
- National Poultry Improvement Plan www.aphis.usda.gov/vis/npip
- www.farad.org
- FDA Center for Veterinary Medicine Extra-Label Use of Medicated Feeds www.fda.gov/cvm/CVM_Updates/CPGExtraLabelUse.htm (VIN editor: link could not be accessed as of 10-5-15)
- <http://madcitychickens.com>
- www.chickendiapers.com
- www.backyardchickens.com
- www.mypetchicken.com
- www.henspa.com
- www.wikihow.com/Keep-Chickens-in-a-City
- www.the-scientist.com/news/display/53190
- www.msstate.edu/dept/poultry/pub1276.htm (VIN editor: link could not be accessed as of 10-5-15)
- <http://extension.missouri.edu/explore/agguides/poultry> (VIN editor: link could not be accessed as of 10-5-15)
- <http://poultryextension.psu.edu/Management.html>
- www.ext.vt.edu/pubs/poultry/factsheets/designs.html (VIN editor: link could not be accessed as of 10-5-15)
- www.mcmurrayhatchery.com

References and Further Reading

1. Butcher GD: Clinical management of captive Galliformes. In Harrison GJ, Lightfoot TL (eds): Clinical Avian Medicine. Spix Publishing, 2006.
2. Carpenter JW: Exotic Animal Formulary 3rd ed. Elsevier, 2005.
3. Echols S: Captive Foraging DVD. Zoological Education Network, 2006.
4. Johnson-Delaney CA: Exotic Companion Medicine Handbook. Zoological Education Network, 2000.
5. Schales C, Schales K: Galliformes. In Ritchie BW, Harrison GJ, Harrison LR (eds): Avian Medicine: Principles and Application. Brentwood, TN, HBD Intl, 1999.
6. Spenser EL: Compounding, extralabel drug use, and other pharmaceutical quagmires in avian and exotics practice. Sem Avian & Exotic Pet Med 13(1):16–24, 2004.

Adapted in part from Johnson-Delaney C: Exotic Companion Medicine Handbook. Zoological Education Network, 2000.

URL: <https://www.vin.com/doc/?id=6929435&pid=12071>