

COLLECTING BLOOD SAMPLES FROM THE WING VEIN OF CHICKENS

4 mm Goldenrod Animal Lancet, collection vials and gauze

Blood Collection

Wing Vein

The cutaneous ulnar and brachial veins (the 'wing veins') are superficial and easily visualized, making them readily accessible for venipuncture. Consequently, sampling from these veins is usually the simplest and most effective method of obtaining blood from turkeys, chickens and most other fowl under field conditions. This method is particularly suitable when the bird is to be returned to the flock.

Expose the vein by plucking a few feathers from the ventral surface of the humeral region of the wing. The vein will be seen lying in the depression between the biceps brachialis and triceps humeralis muscles. It is easier to see if the skin is first dampened with 70% alcohol or another colorless disinfectant. To facilitate venipuncture, extend both wings dorsally by gripping them firmly together in the area of the wing web with the left hand. Using the right hand, puncture the vein in the right wing with a 4 mm Goldenrod Animal Lancet. When blood emerges from the puncture site, collect the sample in a collection tube.

The medial metatarsal vein is analogous to the caudal tibial vein and runs along the medial aspect of the tarsometatarsus. It is easily accessed for venipuncture using a 4 mm Goldenrod Animal Lancet in chickens or turkeys weighing 300 g or more. Hematoma formation is usually minimal in this area, especially when using the Goldenrod Lancet. This also emphasizes the importance of not reusing the lancet, as its cutting edge becomes less sharp with each use.

The animal care and guidelines for research animals require blood collection to be limited to no more than 10% of the bird's blood volume. Blood volume as a percentage of body weight averages 7%. A convenient calculation is to draw 1% of the body weight (i.e. 1 mL from a 100 g chick). Birds are more tolerant of blood loss than mammals because rapid volume replacement occurs by resorption of tissue fluids. Ducks and pigeons are even more tolerant, probably because of baroreceptor reflexes. Chickens do not have carotid sinus baroreceptors.

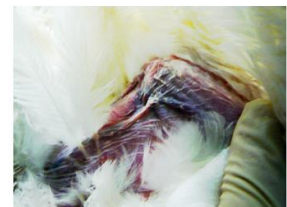
For further information on avian haematology, see Veterinary Hematology, 5th edn (Lippincott Williams & Wilkins, 2008).



Restraint



4 mm Goldenrod Animal Lancet,
Collection Vials, and Gauze



Wing Vein



Venipuncture using a 4 mm Goldenrod
Animal Lancet



Blood Collection