

 <p>THE UNIVERSITY OF QUEENSLAND AUSTRALIA CREATE CHANGE</p>	<p>UQ Animal Ethics Committee - Standard Operating Procedure Institutional author: School of Veterinary Science, UQ VETS CAN_006 - Blood Collection - Cephalic Venepuncture in Dogs (Expiry Dec 2025) AEC Reviewed & Approved: December 2022 SOP Expiry: December 2025</p>	Version #1
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CAN_006 - Blood Collection - Cephalic Venepuncture in Dogs (Expiry Dec 2025)

I. OBJECTIVE

To collect a sample of blood from the cephalic vein of a dog.

II. COMMENTS / RECOMMENDATIONS

- As indicated within “conditions” (see the document’s footer), this procedure must only be performed by, or under the direct supervision of, a trained and competent person.
- Assess the demeanour of the dog before attempting this procedure.
- Check you have the required in-house testing kits required before performing this procedure.
- Dispose of used needles into the yellow sharp’s containers immediately after use.
- If collecting blood from a greyhound this procedure should be performed with the dog on the ground in a standing position or in a lateral position on a comfortable table.
- Do not apply Vet Wrap too tightly around the limb. This procedure should only be completed by trained staff members or by students under direct supervision of trained staff members.

III. EQUIPMENT

- Collar and lead for safe restraint
- 1 operator and 1 handler
- Nitrile Gloves
- Clippers with #40 blade
- Kidney dish
- 5% chlorhexidine (Hexacon™) and Methylated spirits solution (Alcoholic chlorhexidine).
- 5% Chlorhexidine Scrub solution
- 70% Methylated Scrub solution
- Gauze swab
- Vet Wrap
- Appropriately sized needle for dog size and for sampling requirements
- Appropriately sized syringe for volume of blood required
- Required blood collection tube(s) or testing kit(s)
- High reward treats **unless fasting is required**

IV. PROCEDURE

- 1) Ensure all necessary equipment is prepared before retrieving the dog for this procedure.
- 2) Handler assesses the dog’s demeanour before attempting this procedure and maintains control of the dog at all times.

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- 3) Handler wears gloves and gently restrains the dog in sitting, lying or standing position as per the following S.O.P.s:
 - a. If performing this procedure in a standing position on the ground please refer to the S.O.P for canine cephalic restraint ¹
 - b. If performing this procedure in lateral recumbency² please refer to the S.O.P. for a two-person lift.
 - c. If performing this procedure on a smaller dog on a table please refer to the S.O.P for small dog table restraint³
 - d. Ensure the dog is restrained correctly for a cephalic venepuncture.⁴
- 4) Handler gently extends the front leg forward and places thumb over anterior aspect of the proximal forelimb, rolling the cephalic vein laterally to stabilise and occlude it
- 5) Operator wears gloves, identifies cephalic vein on dorsal antebrachium
- 6) Operator clips a 3-4cm area over the dog's cephalic vein using a #40 clipper bade.
- 7) Operator aseptically prepares venepuncture site using chlorhexidine scrub, alcohol chlorhexidine and then methylated scrub solution.
- 8) Operator aseptically connects the needle and syringe, ensuring the bevel of the needle is in line with the increments on the syringe.
- 9) Operator gently holds dog's extended foreleg at the carpus, further stabilising the cephalic vein by placing thumb to the side of the vessel
- 10) Operator inserts needle with syringe attached, bevel up, through skin and into vein, ensuring needle is in vein by observing flash of blood in the needle hub
- 11) Operator applies negative pressure to syringe by pulling syringe plunger back to draw required amount of blood
- 12) Operator removes needle from vein, handler applies gentle manual pressure over puncture site with clean gauze swab for one minute then places a light leg bandage using clean gauze swab and vet wrap to minimise bruising and haematoma formation and visually ensures venipuncture site has stopped bleeding
- 13) Operator detaches needle from syringe and places blood sample into blood collection tube(s) or testing kit(s) as needed
- 14) Operator disposes of sharps in sharps collection bin
- 15) Handler rewards dog with high reward treats (unless fasting is required)
- 16) Handler rechecks the venepuncture site regularly for signs of bruising or swelling and removes vet wrap after 1-2 hours

V. REFERENCE INFORMATION

Table 1. Guidance relative to blood collection volumes, based on a dog's live body weight (NHMRC 2008).

- *Disease conditions (and other physiological stressors such as pregnancy, obesity, and age) will usually reduce the total blood volume (TBV) relative to body weight. This must be taken into consideration.*

¹ [Z:\SVS\Teaching\CSC\S.O.P Gatton\SOP Clinical Studies Centre- Canine\Canine SOPs Amy updated 2020](#)

² [Z:\SVS\Teaching\CSC\S.O.P Gatton\SOP Clinical Studies Centre- Canine\Canine SOPs Amy updated 2020](#)

³ [Z:\SVS\Teaching\CSC\S.O.P Gatton\SOP Clinical Studies Centre- Canine](#)

⁴ [Z:\SVS\Teaching\CSC\S.O.P Gatton\SOP Clinical Studies Centre- Canine\Canine SOPs Amy updated 2020](#)

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- In the clinical setting, the volume of blood collected from dogs rarely results in any noticeable physiological impact (i.e. usually <5mL is collected, which is well tolerated, even in a small-sized dog).*
- Repeat blood collections, however (over a short period), must be calculated cumulatively to appreciate the total loss of blood volume, ensuring this will be well tolerated (physiologically).*
- Dogs which undergo large blood volume collections (e.g. for transfusion) may require physiological support (e.g. intravenous crystalloid fluid replacement).*
- Animals must be clearly identifiable to ensure accurate calculation of total blood volume loss, relative to any previous blood collection.*

Body weight	Total Blood Volume (TBV) [approximately 6-7% of body weight]	Minor Bleed (7.5% of TBV)	Moderate Bleed (<7.5-10% of TBV)	Major Bleed (<10-15% of TBV)
Recovery period required (minimum), relative to blood volume collected:		1 week	2 weeks	4 weeks
5kg	350mL	26mL	26 – 35mL	35 – 52mL
10kg	700mL	52mL	52 - 70mL	70 – 105mL
15kg	1050mL	78mL	78 – 105mL	105 – 157mL
20kg	1400mL	105mL	105 – 140mL	140 – 210mL

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Revision	Date	Author/s	Amendments
1.0	25/05/2020	Amy Edwards	Links to handling SOPs, equipment, procedure, and precaution additions
2.0	21/10/2022	Katie Nash	Added further details on vein occlusion and phlebotomy, reworded sample handling following collection, added recommendation re students
3.0			

Version #	Reviewing AEC (note: all other relevant AECs ratify the approval)	AEC Review Date	Approval To Date
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1	PCA	December 2022 SOP Expiry: December 2025	14/12/2025

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