

Blood Culture Volume Guidelines with References, Abstracted from Phlebotomy Procedures PHL-6 and PHL-12

For general Nursing guidelines see collection instructions and protocol N-03.020 and relevant pediatric guidelines.

Pediatric Patients: Microbiology requires a minimum of 1mL per year of age. Phlebotomists are welcome to use the alternate chart below, as long as the Microbiology minimum is met.

> 120 lb (55 Kg) = 10 mL
90-120 lb (40.5 Kg-54.5 Kg) = 7.5 mL
60-90 lb (27.5 Kg-40 Kg) = 5 mL
30-60 lb (13.5 Kg-27 Kg) = 2.5 mL
19-30 lb (8.5 Kg -13 Kg) = 1.5 mL
< 19 lb (8 Kg) = 1.0 mL

Divide the blood drawn into the aerobic and anaerobic bottles unless only aerobic is ordered.

This information does not apply to neonates or babies weighing less than 2500 gm or 6 pounds.

WARNING: When other tests are also ordered, consider the total amount of blood drawn vs. the baby's weight. See the Pediatric Blood Volume Guidelines as follows.

PROCEDURE: The following chart states the maximum blood volume for pediatric draws based on 2 mL/kg. Pounds are listed in the second column.

Kilograms	Pounds	Max. Blood Volume		Kilograms	Pounds	Max. Blood Volume
2	4.4	4 mL		27	59.52	54 mL
3	6.61	6 mL		28	61.72	56 mL
4	8.81	8 mL		29	63.93	58 mL
5	11.02	10 mL		30	66.13	60 mL
6	13.22	12 mL		31	68.34	62 mL
7	15.43	14mL		32	70.54	64 mL
8	17.63	16 mL		33	72.75	66 mL
9	19.84	18mL		34	74.95	68 mL
10	22.04	20 mL		35	77.16	70 mL
11	24.25	22 mL		36	79.36	72 mL
12	26.45	24 mL		37	81.57	74 mL
13	28.66	26 mL		38	83.77	76 mL
14	30.86	28 mL		39	85.98	78 mL
15	33.06	30 mL		40	88.18	80 mL
16	35.27	32 mL		41	90.38	82 mL
17	37.47	34 mL		42	92.59	84 mL
18	39.68	36 mL		43	94.79	86 mL
19	41.88	38 mL		44	97	88 mL
20	44.09	40 mL		45	99.2	90 mL
21	46.29	42 mL		46	101.41	92 mL
22	48.5	44 mL		47	103.61	94 mL
23	50.7	46 mL		48	105.82	96 mL
24	52.91	48 mL		49	108.02	98 mL
25	55.11	50 mL		50	110.23	100 mL
26	57.32	52 mL				

Maximum blood volume for pediatric patients is 2 mL/kg. Reference: Email from Department of Pediatrics 10/27/2007, 8/28/2010 and 6/17/2014.

REFERENCES:

1. The University of Iowa Department of Pathology [Laboratory Services Handbook](#). Read online 7/9/2014.
2. Children and Women’s Services (CWS)/Pediatric Standards of Practice/03-Diagnostic Procedures and Test; Blood Culture Collection, Pediatric N-CWS-PEDS - 03.060; Revised 12/2013; Read online 7/9/2014.
3. Phlebotomy Essentials, Ruth E. McCall, Cathee M. Tankersley, Lipincott Williams & Wilkins, Fourth Edition, 2008.
4. CLSI Guidelines, Principles and Procedures for Blood Cultures; Approved Guidelines.M47-A, Vol. 27 No. 17, May 2007.