Provincial Blood Coordinating Program

Standardized Pediatric (1-20 kg) IVIG Infusion Rate Tables

Newfoundland Labrador

Gammagard Liquid 10%®

For complete product information please refer to product monograph.

Rate mL/kg/hr	Patient Weight in Kilograms																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Infusion Rate mL/hr																			
0.5	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
1.0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2.0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
*4.0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80
MMN only **5.4	5	10	16	21	27	32	37	43	48	54	59	64	70	75	81	86	91	97	102	108
6.0	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
8.0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160

*Check with prescriber to ensure the rate may be increased above 4.0 mL/kg/hr for each specific patient as those at risk of renal failure or thrombosis may require lower dosages and/or infusion rates. Recommended maximum infusion rate for first infusion.

**Maximum infusion rate for treatment of Multifocal Motor Neuropathy (MMN) is 5.4 mL/kg/hr .

If weight falls between two increments, round down and use rates specified for that weight or calculate hourly infusion rates by using the following formula: Rate (mL/kg/hr) x Weight (kg) = Hourly infusion rate (mLs/hr). Perform a **DOUBLE CHECK** of all calculations.

Perform assessment including vital signs at a ***minimum***: pre-infusion, 15 minutes after infusion initiated, with each rate increase, upon completion, and then 30-60 minutes post infusion (**minimum** observation period of 20 minutes post completion of administration). RHA/site/unit policy may dictate more frequent monitoring during administration of IVIG.

For **first infusion or if greater than 8 weeks** since last treatment, it is recommended to initiate infusion at 05 mL/kg/hr for 30 minutes. Gradually increase rate every 15-30 minutes, **as tolerated**, according to steps in table. It is **not** recommended to advance to the maximum rate with the **first infusion**.

If tolerated well, for **subsequent infusions** follow the same process beginning at 0.5 mL/kg/hr rate and increase every 15-30 minutes as tolerated. For recipients who have received IVIG previously for **at least 3 doses, without incident**, the prescriber may order a personalized rate and/or protocol for future infusions.

Recipients who are overweight, immobilized, have a history of hypertension, cardiovascular disease, previous thrombotic events, and/or dehydration are at high risk for thromboembolic events. ***Recipients with acute renal failure should be administered IVIG products at the minimum concentration and the minimum rate of infusion practical.***

Many of the adverse effects associated with IVIG are rate related so simply reducing the infusion rate may minimize or eliminate these adverse effects. If adverse effects persist, a change in product from one manufacturer of IVIG to another may also increase tolerability. Administration of pre-medications may also minimize adverse effects. Ensure the recipient is adequately hydrated prior to initiation as dehydration can predispose to headaches, thromboembolic events and other adverse reactions.

Provincial Blood Coordinating Program

Standardized Pediatric (1-20 kg) IVIG Infusion Rate Tables

Newfoundland Labrador

Gamunex®, IGIVnex®, and Octagam®
(All 10% IVIG solutions)

For complete product information please refer to product monograph.

Rate mL/kg/min	Patient Weight in Kilograms																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Infusion Rate mL/hr																			
0.01	0.6	1.2	1.8	2.4	3	3.6	4.2	4.8	5.4	6	6.6	7.2	7.8	8.4	9	9.6	10.2	10.8	11.4	12
0.02	1.2	2.4	3.6	4.8	6	7.2	8.4	9.6	10.8	12	13.2	14.4	15.6	16.8	18	19.2	20.4	21.6	22.8	24
0.04	2.4	4.8	7.2	9.6	12	14.4	16.8	19.2	21.6	24	26.4	28.8	31.2	33.6	36	38.4	40.8	43.2	45.6	48
0.06	3.6	7.2	10.8	14.4	18	21.6	25.2	28.8	32.4	36	39.6	43.2	46.8	50.4	54	57.6	61.2	64.8	68.4	72
*0.08	4.8	9.6	14.4	19.2	24	28.8	33.6	38.4	43.2	48	52.8	57.6	62.4	67.2	72	76.8	81.6	86.4	91.2	96
0.10	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
0.12	7.2	14.4	21.6	28.8	36	43.2	50.4	57.6	64.8	72	79.2	86.4	93.6	100.8	108	115.2	122.4	129	136	144
0.14	8.4	16.8	25.2	33.6	42	50.4	58.8	67.2	75.6	84	92.4	100	109	117	126	134	142	151	159	168

*Check with prescriber to ensure the rate may be increased above 0.08 mL/kg/min for each specific patient as those at risk of renal failure or thrombosis may require lower dosages and/or infusion rates. Recommended maximum infusion rate for **first** infusion.

If weight falls between two increments, round down and use rates specified for that weight or calculate hourly infusion rates by using the following formula: Rate (mL/kg/min) x Weight (kg) x 60 min/hr = Hourly infusion rate (mLs/hr). Perform a **DOUBLE CHECK** of all calculations.

Perform assessment including vital signs at a **minimum**: pre-infusion, 15 minutes after infusion initiated, with each rate increase, upon completion, and then 30-60 minutes post infusion. RHA/site/unit policy may dictate more frequent monitoring during administration of IVIG.

For **first infusion or if greater than 8 weeks** since last treatment, it is recommended to initiate infusion at 0.01 mL/kg/min for 30 minutes. Gradually increase rate every 15-30 minutes, **as tolerated,** according to steps in table. It is **not** recommended to advance to the maximum rate with the **first infusion**.

If tolerated well, for **subsequent infusions** follow the same process but begin at 0.02 mL/kg/min rate and increase every 15-30 minutes as tolerated. For recipients who have received IVIG previously for **at least 3 doses, without incident,** the prescriber may order a personalized rate and/or protocol for future infusions.

Recipients who are overweight, immobilized, have a history of hypertension, cardiovascular disease, previous thrombotic events, and/or dehydration are at high risk for thromboembolic events. ***Recipients with acute renal failure should be administered IVIG products at the minimum concentration and the minimum rate of infusion practical.***

Many of the adverse effects associated with IVIG are rate related so simply reducing the infusion rate may minimize or eliminate these adverse effects. If adverse effects persist, a change in product from one manufacturer of IVIG to another may also increase tolerability. Administration of pre-medications may also minimize adverse effects. Ensure the recipient is adequately hydrated prior to initiation as dehydration can predispose to headaches, thromboembolic events and other adverse reactions.

Panzyga 10%®

For complete product information please refer to product monograph.

Rate mL/kg/min	Patient Weight in Kilograms																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Infusion Rate mL/hr																			
0.01	0.6	1.2	1.8	2.4	3	3.6	4.2	4.8	5.4	6	6.6	7.2	7.8	8.4	9	9.6	10.2	10.8	11.4	12
0.02	1.2	2.4	3.6	4.8	6	7.2	8.4	9.6	10.8	12	13.2	14.4	15.6	16.8	18	19.2	20.4	21.6	22.8	24
0.04	2.4	4.8	7.2	9.6	12	14.4	16.8	19.2	21.6	24	26.4	28.8	31.2	33.6	36	38.4	40.8	43.2	45.6	48
0.06	3.6	7.2	10.8	14.4	18	21.6	25.2	28.8	32.4	36	39.6	43.2	46.8	50.4	54	57.6	61.2	64.8	68.4	72
*0.08	4.8	9.6	14.4	19.2	24	28.8	33.6	38.4	43.2	48	52.8	57.6	62.4	67.2	72	76.8	81.6	86.4	91.2	96

*Check with prescriber to ensure the rate may be increased to 0.08 mL/kg/min for each specific patient as those at risk of renal failure or thrombosis may require lower dosages and/or infusion rates.

If weight falls between two increments, round down and use rates specified for that weight or calculate hourly infusion rates by using the following formula: Rate (mL/kg/min) x Weight (kg) x 60 min/hr = Hourly infusion rate (mLs/hr). Perform a **DOUBLE CHECK** of all calculations.

Perform assessment including vital signs at a ***minimum***: pre-infusion, 15 minutes after infusion initiated, with each rate increase, upon completion, and then 30-60 minutes post infusion (**minimum** observation period of 20 minutes post completion of administration). RHA/site/unit policy may dictate more frequent monitoring during administration of IVIG.

For **first infusion or if greater than 8 weeks** since last treatment, it is recommended to initiate infusion at 0.01 mL/kg/min for 30 minutes. Gradually increase rate every 15-30 minutes, **as tolerated**, according to steps in table. It is **not** recommended to advance to the maximum rate with the **first infusion**.

If tolerated well, for **subsequent infusions for Primary Immune Deficiency and Secondary Immune Deficiency** recipients increase rate every 15-30 minutes as tolerated as per the following rate increments (0.01, 0.04, 0.08 mL/kg/min). Please refer to link for further instructions Octapharma Product Monograph.

Recipients who are overweight, immobilized, have a history of hypertension, cardiovascular disease, previous thrombotic events, and/or dehydration are at high risk for thromboembolic events. ***Recipients with acute renal failure should be administered IVIG products at the minimum concentration and the minimum rate of infusion practical.***

Many of the adverse effects associated with IVIG are rate related so simply reducing the infusion rate may minimize or eliminate these adverse effects. If adverse effects persist, a change in product from one manufacturer of IVIG to another may also increase tolerability. Administration of pre-medications may also minimize adverse effects. Ensure the recipient is adequately hydrated prior to initiation as dehydration can predispose to headaches, thromboembolic events and other adverse reactions.

Privigen 10%®

For complete product information please refer to product monograph.

Rate mL/kg/hr	Patient Weight in Kilograms																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Infusion Rate mL/hr																			
0.3	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3	3.3	3.6	3.9	4.2	4.5	4.8	5.1	5.4	5.7	6
0.6	0.6	1.2	1.8	2.4	3	3.6	4.2	4.8	5.4	6	6.6	7.2	7.8	8.4	9	9.6	10.2	10.8	11.4	12
1.2	1.2	2.4	3.6	4.8	6	7.2	8.4	9.6	10.8	12	13.2	14.4	15.6	16.8	18	19.2	20.4	21.6	22.8	24
2.4	2.4	4.8	7.2	9.6	12	14.4	16.8	19.2	21.6	24	26.4	28.8	31.2	33.6	36	38.4	40.8	43.2	45.6	48
3.6	3.6	7.2	10.8	14.4	18	21.6	25.2	28.8	32.4	36	39.6	43.2	46.8	50.4	54	57.6	61.2	64.8	68.4	72
*4.8	4.8	9.6	14.4	19.2	24	28.8	33.6	38.4	43.2	48	52.8	57.6	62.4	67.2	72	76.8	81.6	86.4	91.2	96
6.0	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
7.2	7.2	14.4	21.6	28.8	36	43.2	50.4	57.6	64.8	72	79.2	86.4	93.6	100.8	108	115.2	122.4	129	136	144

*Check with prescriber to ensure the rate may be increased above 4.8 mL/kg/hr (0.08 mL/kg/min) for each specific patient as those at risk of renal failure or thrombosis may require lower dosages and/or infusion rates. Recommended maximum infusion rate for **first** infusion.

If weight falls between two increments, round down and use rates specified for that weight or calculate hourly infusion rates by using the following formula: Rate (mL/kg/hr) x Weight (kg) = Hourly infusion rate (mLs/hr). Perform a **DOUBLE CHECK** of all calculations.

Perform assessment including vital signs at a ***minimum***: pre-infusion, 15 minutes after infusion initiated, with each rate increase, upon completion, and then 30-60 minutes post infusion. RHA/site/unit policy may dictate more frequent monitoring during administration of IVIG.

For **first infusion or if greater than 8 weeks** since last treatment, it is recommended to initiate infusion at 0.3 mL/kg/hr for 30 minutes. Gradually increase rate every 15-30 minutes, **as tolerated**, according to steps in table. It is **not** recommended to advance to the maximum rate with the **first infusion**.

If tolerated well, for **subsequent infusions** follow the same process but begin at 0.6 mL/kg/hr rate and increase every 15-30 minutes as tolerated. In recipients who have received IVIG previously for **at least 3 doses**, **without incident**, the prescriber may order a personalized rate and/or protocol for future infusions. The product monograph suggests that *"initial infusion rate for patients who have previously received Privigen® for three or more consecutive infusions can be individualized based on the rate the patient previously tolerated."* http://labeling.cslbehring.ca/PM/CA/Privigen/EN/Privigen-Product-Monograph.pdf (p. 20).

Recipients who are overweight, immobilized, have a history of hypertension, cardiovascular disease, previous thrombotic events, and/or dehydration are at high risk for thromboembolic events. ***Recipients with acute renal failure should be administered IVIG products at the minimum concentration and the minimum rate of infusion practical.***

Many of the adverse effects associated with IVIG are rate related so simply reducing the infusion rate may minimize or eliminate these adverse effects. If adverse effects persist, a change in product from one manufacturer of IVIG to another may also increase tolerability. Administration of pre-medications may also minimize adverse effects. Ensure the recipient is adequately hydrated prior to initiation as dehydration can predispose to headaches, thromboembolic events and other adverse reactions.