Lab Learning Tool – Determining the IVIG Dose

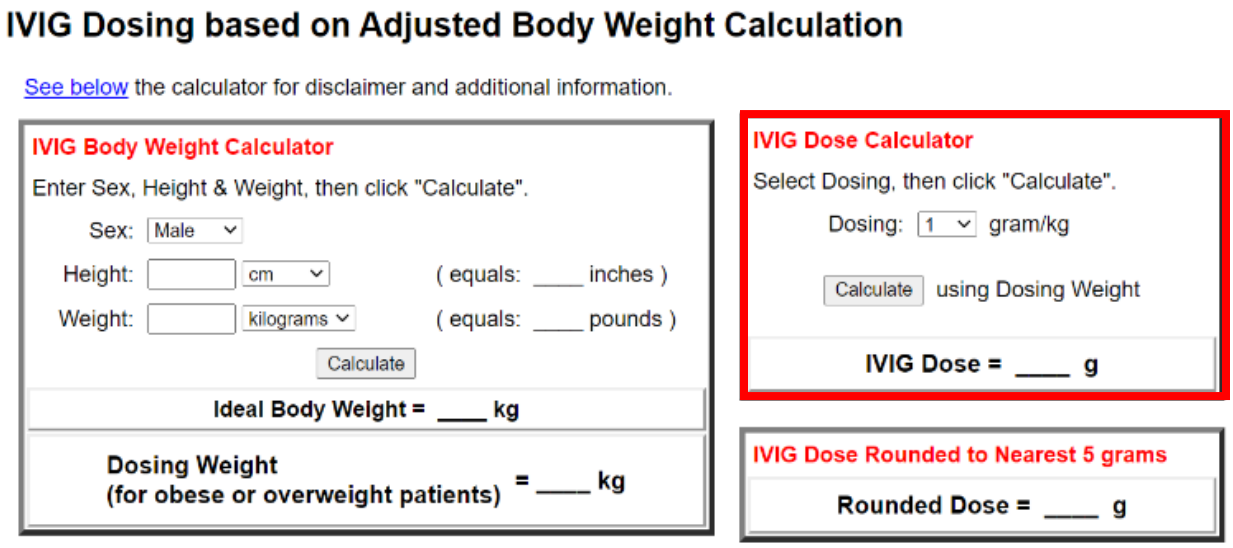
Where can I find the IVIG Adjusted Body Weight Calculator?

- Saskblood
  - Scroll down to 'What's Popular'. Click on 'Body Weight Calculator'.
  - Click on 'Programs'. Click on 'Saskatchewan Immune Globulin Stewardship Program'. Click on 'Body Weight Calculator'.
  - Click on 'Physicians' **OR** 'Nursing' **OR** 'Laboratory'. On the right hand side, under 'What's Popular', click on 'Body Weight Calculator'.
- https://www.albertahealthservices.ca/webapps/labservices/IVIG_Dosing_Calculator.htm
- Link to IVIG Adjusted Body Weight Calculator is on the Physician Order Set.

The IVIG Adjusted Body Weight Calculator- requires the patient's sex, actual height, and actual weight to calculate the dose. If information is missing on the order set, please contact the prescribing physician or the nursing unit. Estimated height and weight is **NOT** acceptable.

Please refer to Lab Learning Tool – Determining the Dosing Weight. Once familiar with determining the dosing weight, familiarize yourself with calculating the IVIG dose.

Try your skills. Open the Adjusted Body Weight Calculator. During this learning tool, we will concentrate on the IVIG Dose calculation.

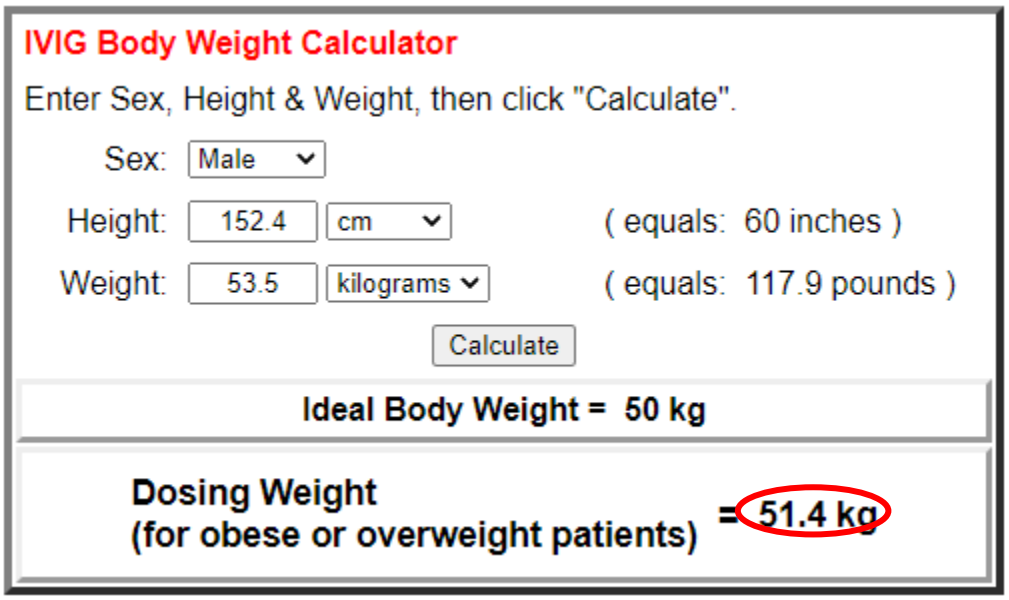


Note: You have determined the dosing weight, now we move to the dose calculator highlighted in red.

Example #1

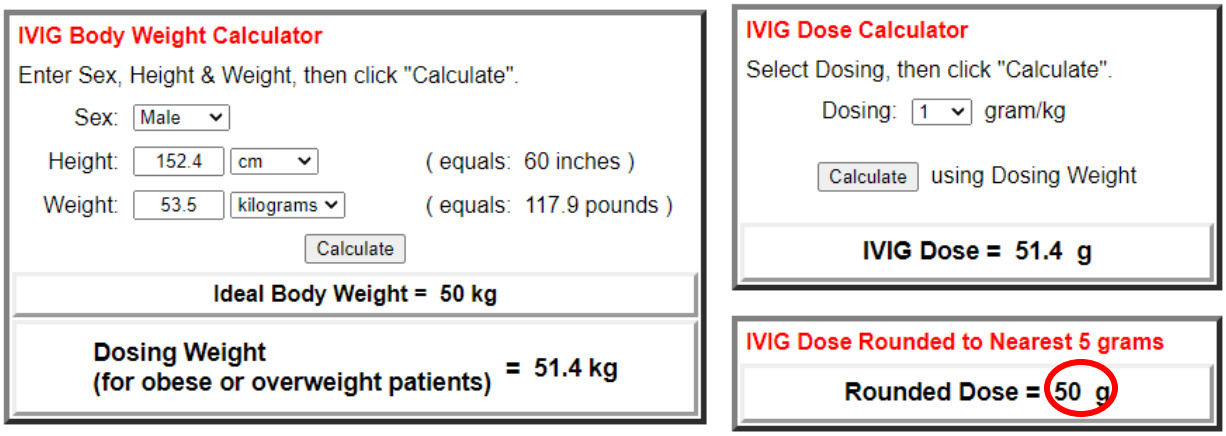
We had entered the following information in the previous learning tool to determine the dosing weight of 51.8 kg:

- Sex: Male
- Height: 152.4cm
- Weight: 53.5Kg



Now we would put in the gram/kg determined by the prescriber. The dose concentration should follow the *Criteria for the Clinical Use of Immune Globulin*'s recommendation. If it does not, please contact the TMP on call for direction.

✓ Feto-maternal/neonatal alloimmune thrombocytopenia (FMAIT/NAIT)	
Do Recommendation	IVIG is recommended for preventing or treating fetal or neonatal thrombocytopenia or hemorrhage. Treatment should be under the direction of a specialist with expertise in high-risk obstetrics.
Dose	Maternal: 1 g/kg weekly throughout pregnancy, with starting time tailored to individual risk profile and history. Neonatal: Single dose of 1 g/kg. Occasionally more than one dose is required if thrombocytopenia persists.
Qualifying Criteria	Clinical suspicion of FMAIT/NAIT in the antenatal or neonatal setting based on clinical and laboratory features, including: 1. Thrombocytopenia or spontaneous hemorrhage in the fetus; OR 2. Thrombocytopenia with or without hemorrhage in the neonate; OR 3. Unexplained fetal death in a previous pregnancy and the presence of maternal platelet-specific alloantibodies that are known or suspected to cause this condition (most commonly anti-HPA-1a or anti-HPA-5b).
Review Criteria	Patient response should be documented according to objective measures of effectiveness established at the outset of treatment.
Evidence Source	SR (G1); G (G2); EO (G36)



The calculator will round the dose to the nearest 5 grams. In this example the patient should receive 50 g of IVIG.

Example #2

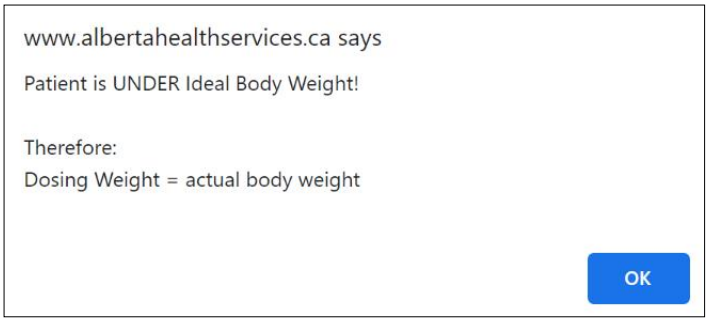
We had entered the following information in the previous learning tool to determine the dosing weight

Enter the following information:

- Sex: Female
- Height: 68.4 inches
- Weight: 120 pounds

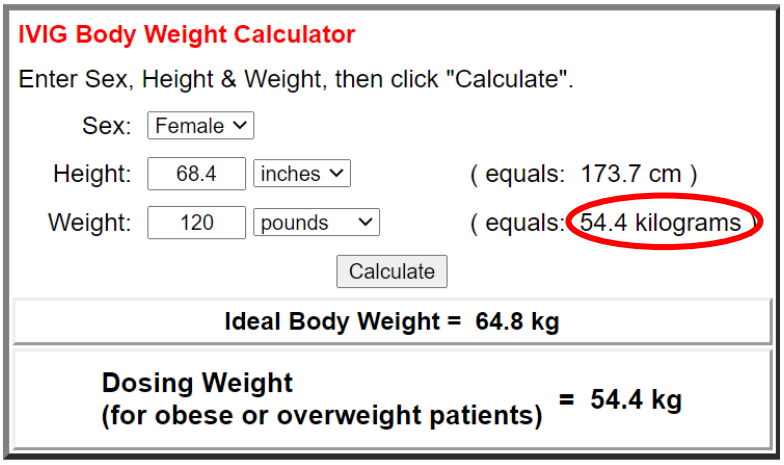
Click the '*Calculate*' button.

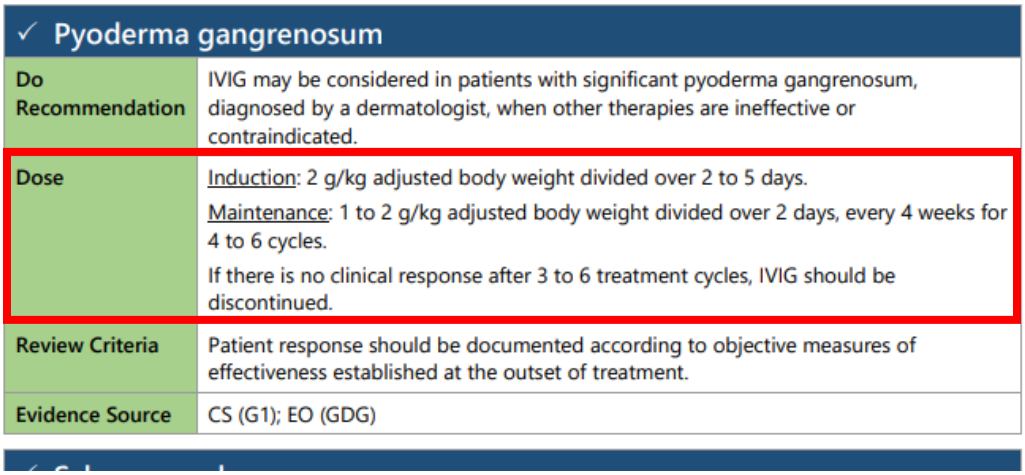
The below alert will appear. The patient is **under** their ideal body weight.



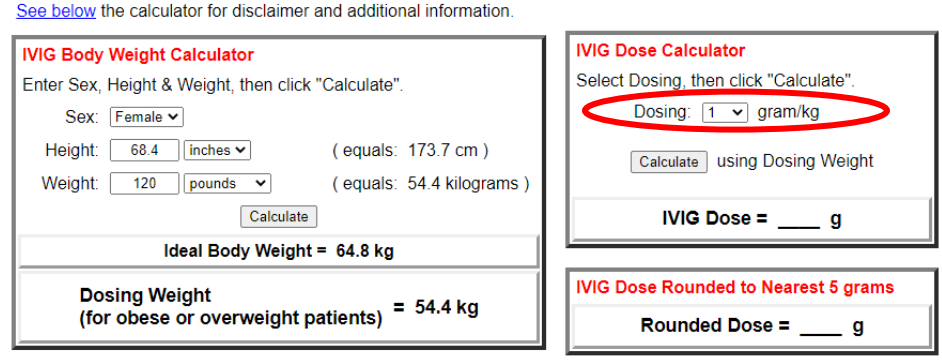
Click the '*OK*' button.

The weight used to determine the dose will be the patient's actual body weight (54.4 kg).

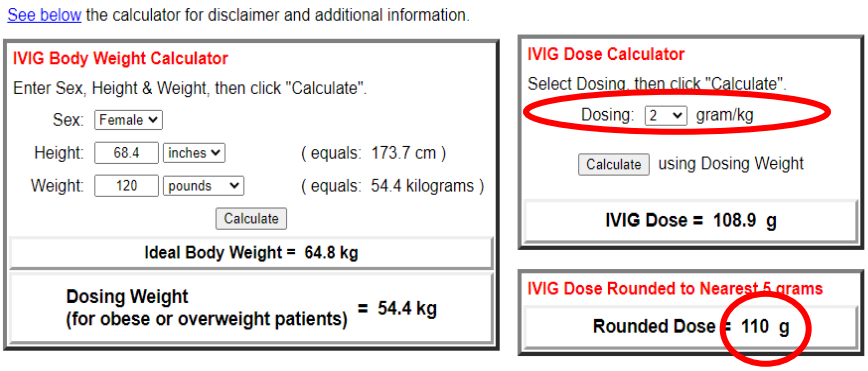




The prescriber has indicated a 2 gram/kg dose. Change the dosing calculator to 2, then press calculate.



IVIG Dosing based on Adjusted Body Weight Calculation



The Rounded Dose is 110 g.

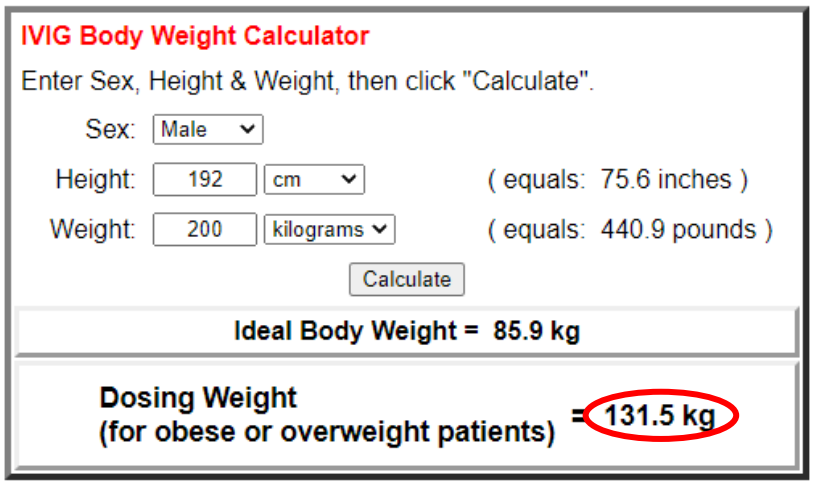
Example #3

We had entered the following information in the previous learning tool to determine the dosing weight.

Enter the following information:

- Sex: Male
- Height: 192 cm
- Weight: 200 kg

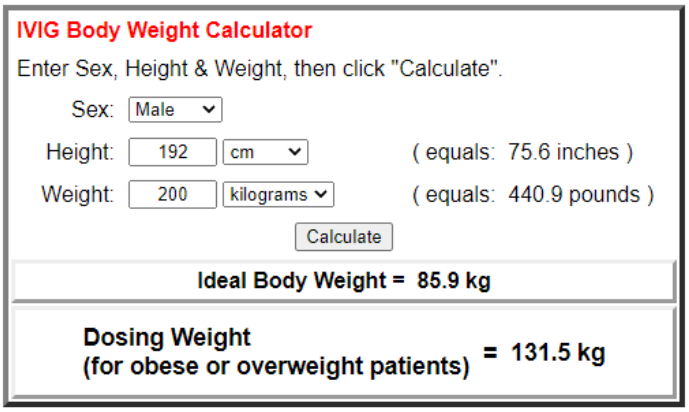
Click the '*Calculate'* button.

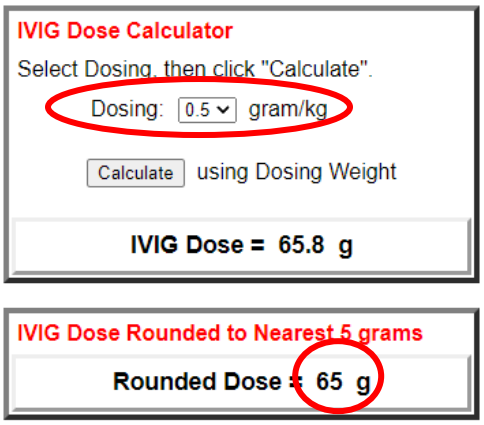


This patient's dosing weight is 131.5 kg.

The prescriber has indicated a 0.5g/kg dose. Change the dosing calculator to 0.5.

✓ Pure red cell aplasia (PRCA)	
Do Recommendation	IVIG is recommended for viral PRCA associated with proven parvovirus B19 in immunocompromised patients. IVIG may be considered for patients with immunological PRCA who have not responded to other therapies.
Dose	0.5 g/kg adjusted body weight weekly for 4 weeks.
Review Criteria	Patient response should be documented according to objective measures of effectiveness established at the outset of treatment.
Evidence Source	G (G1, G2)





The Rounded dose is 65 g.

Example #4

We had entered the following information in the previous learning tool to determine the dosing weight.

Enter the following information:

- Sex: Male
- Height: 180 cm
- Weight: 75 kg

Click the '*Calculate'* button.

IVIG Body Weight Calculator

Enter Sex, Height & Weight, then click "Calculate".

Sex: Male

Height: 180 cm (equals: 70.9 inches)

Weight: 75 kilograms (equals: 165.3 pounds)

Calculate

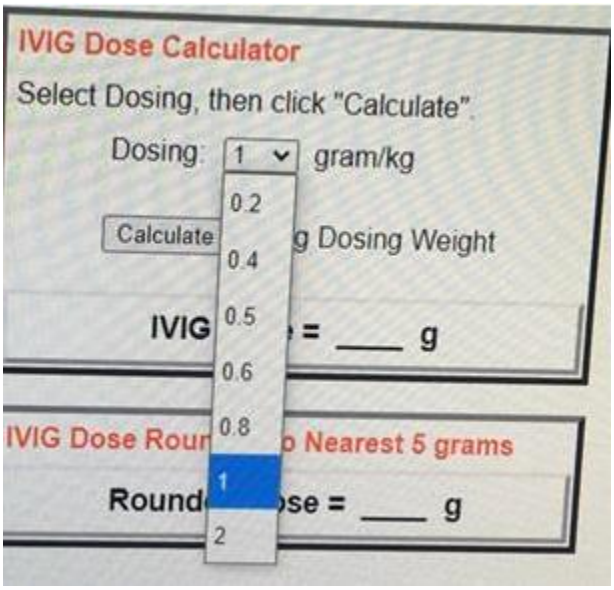
Ideal Body Weight = 75 kg

Dosing Weight (for obese or overweight patients) = 75 kg

This patient's actual weight equals his ideal body weight. 75 kg will be used to determine his dose.

✓ Solid organ (other than kidney), antibody-mediated rejection (ABMR)	
Do Recommendation	IVIG is recommended in addition to plasma exchange. Where appropriate, biopsy evidence of rejection should be sought.
Dose	0.1 g/kg adjusted body weight after each plasma exchange, to a maximum dose of 2 g/kg total.
Review Criteria	Patient response should be documented according to objective measures of effectiveness established at the outset of treatment.
Evidence Source	CS (G1); EO (G36, GDG)

The precriber is requesting 0.1g/Kg. Unfortunately, the calculator does not have a 0.1g/kg available.



Put in 0.2g/kg and then divide by 2 manually for the dose. Making it 7.5 grams. Check with TMP on dose and calculation.

IVIG Dosing based on Adjusted Body Weight Calculation

See below the calculator for disclaimer and additional information.

IVIG Body Weight Calculator

Enter Sex, Height & Weight, then click "Calculate".

Sex: Male

Height: 180 cm (equals: 70.9 inches)

Weight: 75 kilograms (equals: 165.3 pounds)

Calculate

Ideal Body Weight = 75 kg

Dosing Weight (for obese or overweight patients) = 75 kg

IVIG Dose Calculator

Select Dosing, then click "Calculate".

Dosing: 0.2 gram/kg

Calculate using Dosing Weight

IVIG Dose = 15 g

IVIG Dose Rounded to Nearest 5 grams

Rounded Dose = 15 g