



Subtract noted percent of body weight for amputees.

Figure 1. As indicated, you will subtract the noted percent of body weight for the portion of a limb missing from the amputee. For example, if a patient has a below-the-knee amputation (BKA), you will subtract 6% of the body weight. If an above-the-knee amputation (AKA), you would subtract 15%. If the entire leg has been amputated then 19% of IBW would be subtracted.

Doses for patients with decreased kidney function

Many drugs are cleared by the kidney (i.e. cleared "renally"). In order to dose medications cleared by the kidney in patients whose kidneys are not working well, you will need to first figure out how well their kidneys are working, then apply that estimation of function to dosing. The most commonly-used measurement method for determining kidney function utilizes an endogenous compound called "creatinine," which is a by-product of muscle breakdown. Serum creatinine is measured using blood drawn out of a patient. You will need to identify the patient's weight and gender. You will use all of this information to determine a patient's "creatinine clearance" (CrCl). CrCl units are milliliters/minute

Cockcroft-Gault equation

$$\text{CrCl} = \frac{(140 - \text{age})(\text{IBW})}{(\text{gender factor})(S_{cr})} \text{ Memorize this equation.}$$

where

- age = age in years
- IBW in kg; ABW can be used when the patient is less than 110% of IBW
- gender factor = 72 for males, 85 for females
- S_{cr} = the patient's serum creatinine in mg/dL

Note: Canceling the units will *not* work with this equation (you'll go nuts if you try to make them cancel), so this is the exception to the rule of always being sure that your units cross out.

Now that you know how to determine creatinine clearance, you can use it to follow any given renal dosing guidelines.

example: A 62yo, 160lb, 5'6" female patient with pneumonia is admitted to hospital and the decision is made to begin therapy with piperacillin, an antibiotic. Her measured serum creatinine is 1.4 mg/dL. Standard dosing for patient with good kidneys is 4g IV q6h. This is decreased to 4g IV q8h for patients with CrCl between 20 and