Ideal Body Weight And Obesity
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Citation

Abstract
As anesthesiologists calculation of drugs is vital as most of them are administered on the basis of total body weight(TBW) . With a surge in bariatric surgery these calculations are very vital for the anesthesiologist because certain class of drugs with poor lipophilicy and narrow therapeutic index , when administered on the basis of total body weight (TBW) can lead to overdosage and drug toxicity. The aim of bariatric surgery is to reduce the patients weight to as close to the ideal body weight . The formula used to calculate the body mass index is readily available BMI(body mass index) = weight in kilograms / height in square meters Ideal BMI is between 22-26 . Therefore weight in kilograms = Ideal BMI ie 26 (higher range of ideal BMI) multiplied by height in square meters.

INTRODUCTION
As anesthesiologists calculation of drugs is vital as most of them are administered on the basis of total body weight(TBW) . With a surge in bariatric surgery these calculations are very vital for the anesthesiologist because certain class of drugs with poor lipophilicy and narrow therapeutic index , when administered on the basis of total body weight (TBW) can lead to overdosage and drug toxicity.

METHOD
In view of the increased sensitivity of obese patients Wada et al. have suggested that the dose of thiopentone should be adjusted according to the lean body mass. For propofol though minimal data is available on the pharmacokinetics of propofol administered on the basis of administered as bolus, a dose based on ideal body weight is advised. For benzodiazepines the loading dose should be administered on the basis of ideal body weight, Neuromuscular blockers are polar hydrophilic drugs with no significant changes in the pharmacokinetics in obese patients , However dosing of these drugs based on actual body weight results in a longer duration of action, suggesting that ideal rather than the TBW should be used to calculate the dosing regimen in obese patients. Regarding narcotics though there has been no difference in the pharmacokinetics of fentanyl in obese and non obese patients, one would still like to judiciously titrate and give appropriate doses.

Routinely, we assume a ideal body weight eg 60 kilograms or so and then titrate the drugs. For morbidly obese patients who are significantly larger than ideal body weight (IBW) drug dosages should be scaled to IBW or IBW plus some fraction of the difference between TBW and IBW.

CONCLUSION
Various normograms and formulas are available to calculate IBW but these are not readily available in the operation theatres.

The aim of bariatric surgery is to reduce the patient's weight to as close to the ideal body weight. The formula used to calculate the body mass index is readily available BMI (body mass index) = weight in kilograms / height in square meters

So weight in kilograms = BMI multiplied by height in square meters

Ideal BMI is between 22-26 .

Therefore weight in kilograms = Ideal BMI ie 26 (higher range of ideal BMI) multiplied by height in square meters.

This formula is easier to calculate in the operation theatres and thus there is no need to assume the ideal body weight.
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References
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