

ABG Made Easy

Arterial blood gas (ABG) helps us to assess the present acid base status of the body in an intensive care setup. Many nomograms are available for easy interpretation of ABG but confusing and are not user friendly. We have devised a simple user-friendly nomogram (Fig. 1) for pediatric age group for use in an intensive care setting.

This nomogram has been derived using the normal range of pH (7.36-7.44), $p\text{CO}_2$ (36-44 mmHg), HCO_3^- (22-26) and the formula that an increase in 10 mmHg of $p\text{CO}_2$ will decrease in pH by 0.08.

The steps in using the nomogram are:

1. Is the pH normal or <7.36 or >7.44 ?
2. Then is $p\text{CO}_2$ normal or <36 or >44 mmHg? Depending on the area it falls the

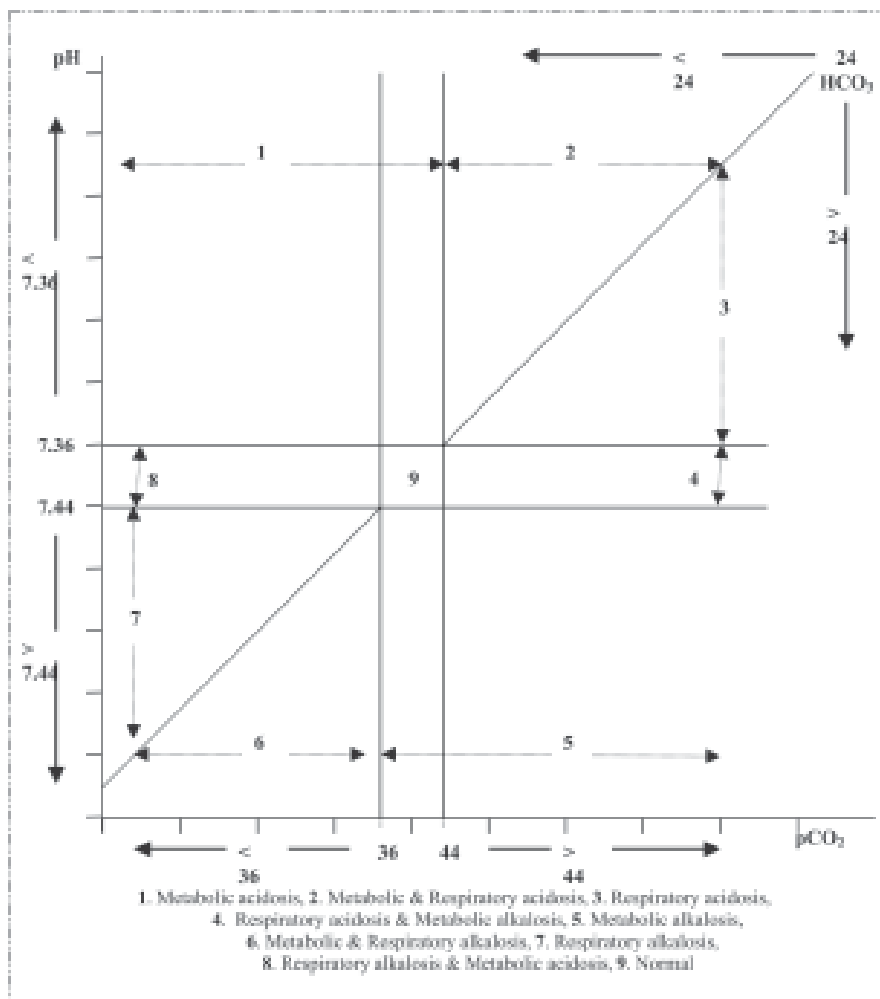


Fig. 1. ABG nomogram.

- interpretation is done as shown in *Fig. 1*.
3. If the values fall in areas 2, 3, 6 & 7. See if HCO_3 is < 24 or > 24 . If the HCO_3 value is between 22-26 the results are always isolated respiratory disturbance.

Advantages of this nomogram are, it is user friendly, there is no need of even a scale to plot the values and all ABG values have an interpretation. This nomogram could be used in ICU setting for quick reference and can be

used by beginners to check their interpretation on ABG.

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