Acid –base balance The body's balance between acidity and alkalinity is referred to as acid–base balance.Blood acidity increases when the o Level of acidic compounds in the body rises (through increased intake or production, or decreased elimination) o Level of basic (alkaline) compounds in the body falls (through decreased intake or production, or increased elimination) Blood alkalinity increases when the level of acid in the body decreases or when the level of base increases.Types of acidosis and alkalosis Acidosis and alkalosis are classified depending on their primary cause as o Metabolic o Respiratory Metabolic acidosis and metabolic alkalosis are caused by an imbalance in the production of acids or bases and their excretion by the kidneys.In clinical settings, we evaluate person's acid–base balance by measuring the pH and levels of carbon dioxide (an acid) and bicarbonate (a base) in the blood.Types of Acid–Base Disorders There are two abnormalities of acid–base balance: o Acidosis: The blood has too much acid (or too little base), resulting in a decrease in blood pH. o Alkalosis: The blood has too much base (or too little acid), resulting in an increase in blood pH. Acidosis and alkalosis are not diseases but rather are the result of a wide variety of disorders.The respiratory center regulates the amount of carbon dioxide that is 63 exhaled by controlling the rate and depth of breathing (ventilation).Respiratory acidosis and respiratory alkalosis are caused by changes in carbon dioxide exhalation due to lung or breathing disorders.Controlling pH involves the use of chemical buffer systems, which guard against sudden shifts in acidity and alkalinity.As carbon dioxide accumulates in the blood, the pH of the blood decreases (acidity increases).Compensation for acid–base disorders Each acid–base disturbance provokes automatic compensatory mechanisms that push the blood pH back toward normal.Hemoglobin and oxyhemoglobin, protein and phosphate buffer pairs.The pH buffer systems are combinations of the body's own naturally occurring weak acids and weak bases.The kidneys are able to affect blood pH by excreting excess acids or bases.2.3.