Development of the lung can be divided into two phases, lung growth (structural development) and lung maturation (functional development). Lung growth can be influenced by a host of physical factors. Lung maturation and the achievement of functionality is primarily a biochemical process and

is under the control of a number of different hormones. Lung growth proceeds through gestation. There is progressive branching of the airways and finally development of alveolar spaces capable of gas exchange in the last trimester. The surfactant system, composed of phospholipids that decrease surface tension within the alveoli and prevent alveolar collapse during exhalation, develops in the last trimester, and reaches maturity by approximately 36 weeks. Lung growth continues after birth as alveolar number continues to increase. The end result of the development of the lung is an organ with a tremendously large surface area that is approximately 50-100 m2, capable of exchanging oxygen and carbon dioxide across a very thin membrane.

The primordium of the primitive stomach is visible about the end of the fourth week. It is initially oriented in the median plane and suspended from the dorsal wall of the abdominal cavity by the dorsal mesentery or mesogastrium. During development the stomach rotates 90 in a clockwise direction along its longitudinal axis, placing the left vagus nerve along its anterior side and the right vagus nerve along its posterior side. Rotation of the stomach creates the omental bursa or lesser peritoneal sac.

As early as the fourth week of development, the esophagus of the human embryo is merely a sphincter or constricted part of the primitive foregut, situated between the pharynx and stomach, as observed by Keith8

During the sixth and seventh weeks of gestation, the esophagus undergoes rapid elongation as cephalic development separates the head and neck from the thorax. The elongation is facilitated by development of the lungs and pleural cavities, which push the stomach dorsally and inferiorly ). Keith suggests that the esophagus is of dual origin, with an upper retrotracheal part originating from the pharyngeal portion and an intratracheal part originating from the pregastric segment of the foregut. During the sixth week of development, the esophagus is only 2 mm long, but at birth it extends to 100 mm. Its superior limit is marked by the inferior cricopharyngeal portion of the inferior pharyngeal constrictor. Fyke and Code3 note that the cricopharyngeal part of the inferior pharyngeal constrictor relaxes suddenly during swallowing and simultaneously lengthens the vocal folds of the larynx. The lower limit of the esophagus is marked by its entrance to the stomach, in a region that constitutes a barrier to reflux of gastric contents, but it is not marked by an anatomically recognizable sphincter. Basmajian1 has indicated that, at lower thoracic levels, the esophagus is supported away from the aorta, azygos vein, and body of the vertebrae, which permits advancement of the esophagus away from the vertebral column. As the lungs approach each other in an erect subject during inspiration, a retroesophageal window may be noted on radiographs