and Pickering, that the primary function of milk PMNs is as defense of the mammary tissue per se and not to impart maternal immunocompetence to the newborn. This may explain the presence of large numbers of PMNs that are relatively hypofunctional early and then disappear over time.

**Lymphocytes**

Both T- and B-lymphocytes are present in human milk and colostrum and are part of the immunologic system in human milk. They synthesize IgA antibody. Human milk lymphocytes respond to mitogens by proliferation, with increased macrophage-lymphocyte interaction and the release of soluble mediators, including MIF. Cells destined to become lymphopoietic cells are derived from two separate influences, the thymus (T) and the bursa (B) or bursal equivalent tissues. The population of cells called B cells comprises the smaller part of the total. The term B cell is derived from its origination in a different anatomic site from the thymus; in birds, it has been identified as the bursa of Fabricius. The B cells can be identified by the presence of surface immunoglobulin markers. The B cells in human milk include cells with IgA, IgM, and IgG surface immunoglobulins. B cells transform into plasma cells and remain sessile in the tissues of the mammary gland.

**T-cell system**

More rapid mitotic activity occurs in the thymus gland than in any other lymphatic organ, yet 70% of the cells die within the cell substance. Thymosin has been identified as a hormone produced by thymic epithelial cells to expand the peripheral lymphocyte popu-