

Unit One: Intro to the Human Body Human Body Structure 7033ag Human beings are arguably the most complex organisms on this planet. Imagine billions of microscopic parts, each with its own identity, working together in an organized manner for the benefit of the whole. The human body is a single structure but it is made up of billions of smaller structures of four major kinds: Cells The basic unit of life Cells have long been recognized as the simplest units of living matter that can maintain life and reproduce themselves. The human body, which is made up of numerous cells, begins as a single, newly fertilized cell group of a single cell working together. Tissues Tissues are somewhat more complex units than cells. By definition, a tissue is an organization of many similar cells with varying amounts and kinds of nonliving, intercellular substance between them. Organs Organs are more complex units than tissues. An organ is an organization of several different kinds of tissues so arranged that together they can perform a special function. For example, the stomach is an organization of muscle, connective, epithelial, and nervous tissues. Muscle and connective tissues form its wall, epithelial and connective tissues form its lining and nervous tissue extends throughout both wall and its lining. Systems Systems are the most complex of the component units of the human body. A system is an organization of varying numbers and kinds of organs so arranged that together they can perform complex functions for the body. Ten major systems compose the human body: Skeletal 1 Muscular 2 Nervous (peripheral) 3 Endocrine 4 Cardiovascular 5 Lymphatic 6 Respiratory 7 Digestive 8 Urinary (genital) 9 Reproductive