illness

Ill health or disease; the opposite of wellness. Illness reflects imbalanced body functions and can thus be regarded as a change away from the healthy state, in which all systems function within normal limits (homeostasis).

An illness may be localized, in which a limited region of the body is affected, or it may be systemic, in which several parts of the body or the whole body are affected. Pain is often associated with illness, although pain is not equivalent to disease. Pain generally indicates that an imbalance exists in the body. The imbalance could reflect an unhealthy lifestyle, such as dietary excess or deficiency, or it could be associated with infection and inflammation.

Most illnesses are self-limiting, meaning that the body generally can cure itself when given the opportunity. It is now clear that the body's systems work together to maintain health. Particularly important are the immune system, the nervous system, and the endocrine system (hormone-producing system). An imbalanced immune system affects the brain, and the brain alters immunity and hormone production. Hormones in turn affect nerve function. As an example, perceived stress can trigger a fight-or-flight response by the brain. The stress response is modified by hormones, and sustained, elevated adrenal hormones due to prolonged stress affect the immune system and decrease the immune response to foreign invaders.

Whether or not an individual becomes ill depends on a complex interplay of many factors, broadly categorized according to medical history and environmental influences. Family history reflects patterns of inheritance, over which one has no control. Genetic predisposition thus increases the risk of many chronic, degenerative diseases of aging, such as osteoporosis, heart disease and stroke, high blood pressure, and diabetes. Health history can have a profound effect on susceptibility to illness. Thus, prior injury, deficiency, or illness can set the stage for a subsequent illness. For example, arthritis can begin at the site of a former injury, and prolonged treatment with a broad-spectrum antibiotic can destroy beneficial gut bacteria and promote a yeast infection. Prior drug treatment can alter the body's ability to destroy alcohol, and pretreatment with alcohol can alter the body's ability to degrade many drugs. In terms of public health, immunization against polio, flu, or tetanus reduces the risk of these diseases. At the beginning of the 20th century, niacin deficiency caused widespread pellagra and associated mental illness in the South. The enrichment of bread and grain products with the B vitamin niacin in the 1920s essentially eliminated pellagra as a public health issue in the

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