

The Nature of Fatigue

The condition of fatigue is so familiar that explanations concerning it hardly seem necessary, but since the term is often indefinite and inexact in its use a brief review of the topic and of the meaning employed in this report is attempted.

Simply stated, fatigue is that condition induced by work which results in a diminished capacity for work. The mass of scientific data dealing with the types of fatigue; the symptoms and causes; organic and chemical changes which take place in the body; and the effects of such factors as disease and environment is too lengthy and complex for comprehensive presentation here. As a background, though, it seems wise to summarize some of the general facts proved by careful investigators in the field.

1. Regardless of the type of work undertaken, the fatigue which results from it is both specific and general. Not only are the muscles and organic systems actively engaged in the effort strongly affected, but the whole individual becomes involved, including all of his body and his mental processes as well.

2. As fatigue products increase due to continued work, all voluntary muscular contraction becomes slower and less intense.

3. Extension of the work period ultimately develops fatigue products of an amount sufficient to cause complete cessation of the effort. Should one possess enough will power or emotional drive to attempt continuation of work after maximum fatigue is reached exhaustion or collapse ensues and all voluntary muscular control ceases. Collapse, however, may be likened to a fuse in an electrical circuit in that it cuts off the flow of energy before damage to more important installations can be done. In other words, fatigue is one of nature's most effective mechanisms of self-preservation because it institutes inhibitions well within the bounds of safety.

4. The onset of fatigue is postponed; its inhibitions reduced; and recovery hastened when one is conditioned to the task. This means, of course, that frequency and regularity of vigorous activity builds organic and muscular systems which both resist the onset of fatigue and allow quicker recuperation from its effects.

5. Rest is the best and only certain cure for fatigue. Prolonged rest, though, tends to counteract the conditioning developed by exercise. A capacity to perform hard work over an extended period of time is the goal of physical fitness programs. It is achieved by