

CHALLENGE RESPONSE

Mental, emotional and physical toughness are closely linked to learned patterns of arousal. To be tough is to respond physiologically to life events in a highly specific way.

Tough individuals are consistently able to perceive stressful situations as opportunities for growth, an attitude leading to what might best be referred to as the challenge response. The perception of challenge leads to a complex chain of biochemical events that mobilize the body to cope successfully with the stressor.

The physiological mobilization process associated with the perception of challenge is called *positive arousal*. Individuals lacking toughness are prone to perceive difficult life events as threatening and potentially harmful. The perception of threat leads to a condition of *negative arousal*, which is experienced as unpleasant and unenjoyable.

Evidence exists linking negative arousal with the stress hormone cortisol, which is produced by the adrenal cortex. Cortisol has been associated with feelings of anxiety, tension, helplessness, depression, and loss of control. Positive arousal, which is typically experienced as pleasant and enjoyable, has been linked to two powerful hormones produced by the adrenal medulla called epinephrine and norepinephrine. These hormones, referred to as the catecholamines, appear to be the principal physiological activators of the challenge response so typical of toughened individual.

