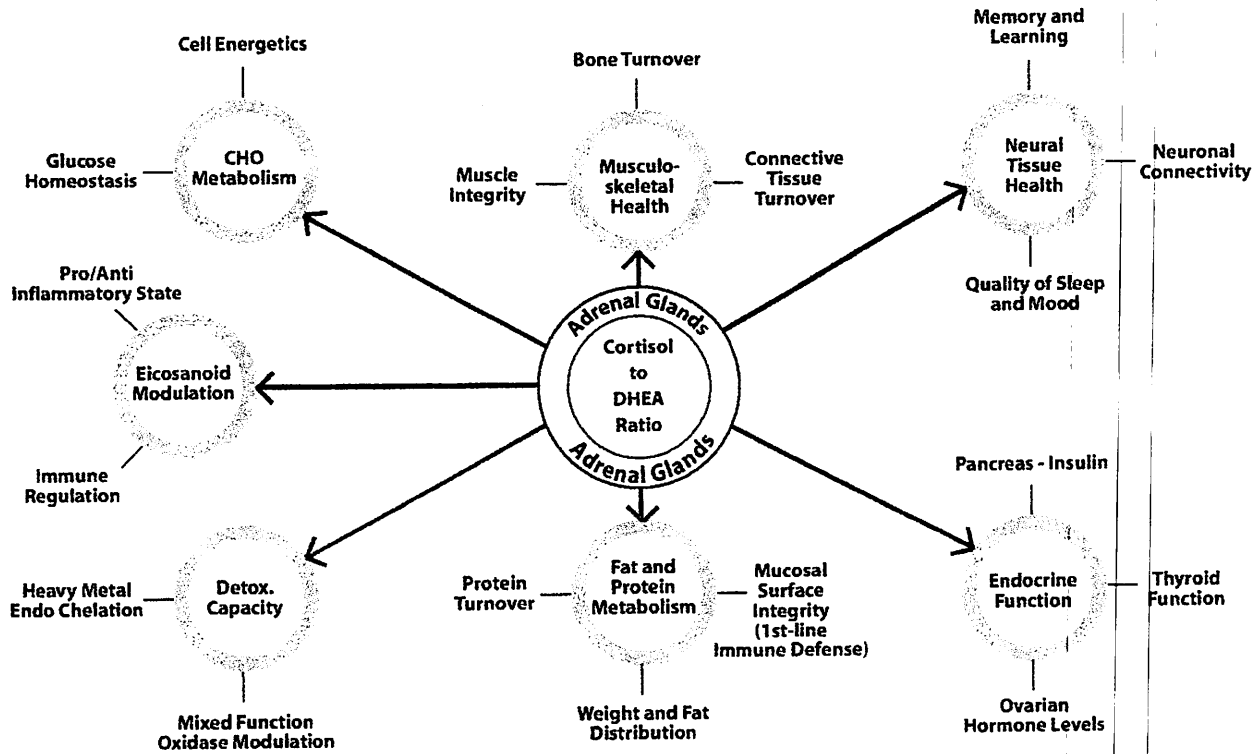


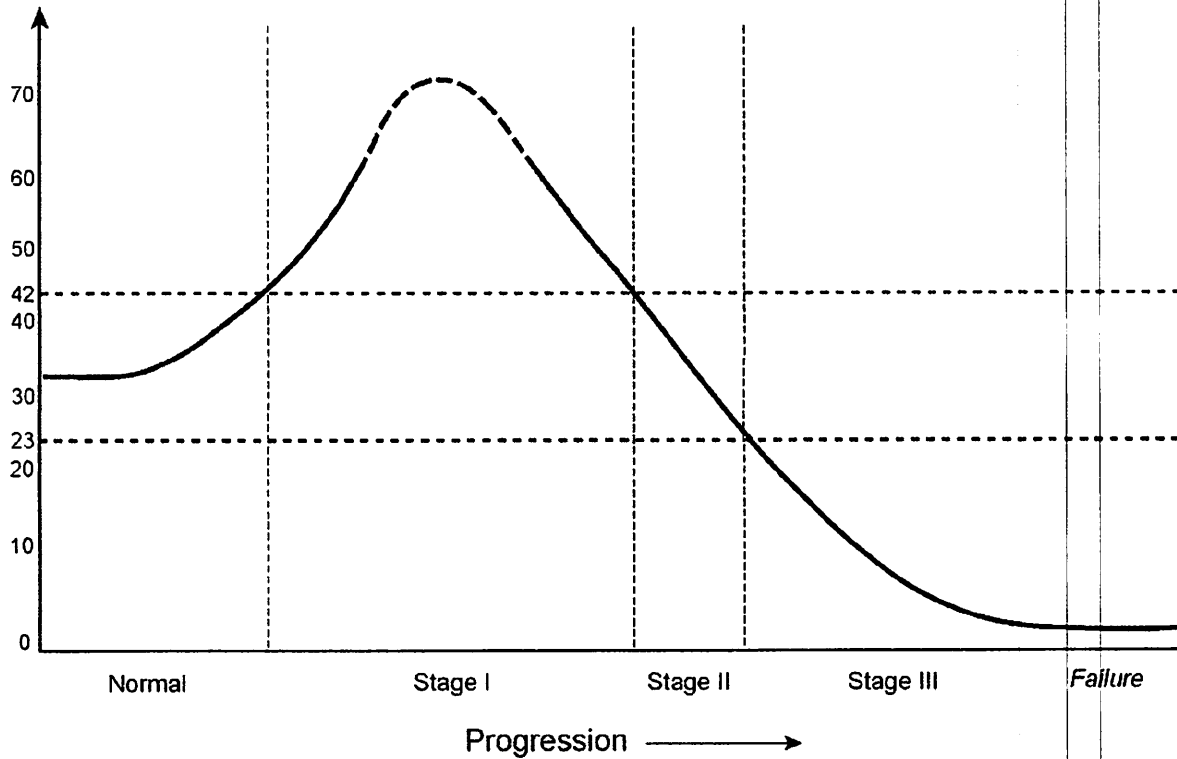
## Physiological Aspects of Cortisol and DHEA

*(The Adrenal Glands' Roles in Body  
Function Modulation)*



Cortisol is the primary hormone that directs immune function and is involved in virtually all aspects of body function. Both cortisol and DHEA have genetic influences (refer to page 140 for Cortisol Control of Gene Transcription). When cortisol and DHEA work together in harmony (maintaining a normal ratio between cortisol and DHEA), the body is then said to be in a normal state of adaptation to stress. When unable to maintain this normal state of adaptation the body can now enter into a state of maladaptation to stress. This is now referred to as a chronic stress response, i.e. pregnenolone steal/cortisol escape/elevated cortisol to DHEA ratio. The longer one stays in a state of chronic stress the more compromised all aspects of body function become. This can ultimately result in hormone, immune and metabolic systems breakdown.

## Progression of Stages of Adrenal Exhaustion



Note: The length of time in each stage is highly variable; the maximum reported cortisol sum is in excess of 2,000 nM

It is important to note that in all stages of adrenal exhaustion (stages 1, 2, and 3) continued hyperstimulation of the adrenal glands is the common denominator. It is this ongoing hyperstimulation that keeps the body in a state of chronic stress response ("pregnenolone steal" or "cortisol escape"). This is always indicated by an elevated cortisol to DHEA ratio.