Is everyone stressed these days? According to Kenneth Pelletier, PhD, author of *Mind as Healer, Mind as Slayer* (Stanford University Press, 2002), between 80 and 90 percent of all illnesses are linked to stress, and 75 to 90 percent of all visits to the doctor are for stress and anxiety-related concerns.

**Excess stress, excess pounds**

When we are constantly stressed, we end up elevating our stress hormones—especially cortisol. During stress, cortisol can easily dominate other hormones in the body, and since it is produced along the same biochemical pathways as sex hormones, it usually robs the body of the very substances needed to keep sex hormones at healthy levels.

For instance, cortisol can compete with the sex hormone testosterone (one of the reasons our libidos are almost nonexistent during times of stress), which is also needed for the repair and replacement of muscle tissue. To a large extent, your muscle tissue controls the rate of your overall metabolism. One of the reasons your metabolism declines with age is because of a loss of lean body mass or muscle. But how does excess stress relate to your waistline? The more muscle you carry, the greater your ability to burn body fat.

Cortisol also competes with dehydroepiandrosterone (DHEA), the antiaging hormone, which is why people seem to age before your eyes when they are under stress for long periods. DHEA is also needed to maintain a healthy metabolism. Research at the University of Wisconsin, Madison has shown that derivatives of DHEA help induce thermogenesis (the burning of body fat) and, thereby, may be able to decrease the incidence of obesity. One of the most important roles DHEA plays in the body is balancing the effects of cortisol, and this may be key to its metabolism-enhancing effects.

**Metabolic mood booster**

The good news is that DHEA levels can be naturally enhanced by altering your moods. Research presented in the journal *Psychoneuroendocrinology* showed that total...
mood disturbance and perceived stress over time negatively affected the cortisol-to-DHEA ratio (cortisol went up and DHEA came crashing down). When test subjects lowered their stress levels through an intervention called cognitive-behavioural stress management, their DHEA (measured as DHEA-S) levels rose in concert with changes in their moods. In another study performed at the California Institute of HeartMath, 30 test subjects using techniques designed to eliminate negative thought patterns and promote a positive emotional state showed a 23-percent reduction in cortisol and an impressive 100-percent increase in DHEA/DHEA-S levels.

Since healthy DHEA/cortisol ratios are so important to a healthy metabolism, it makes good sense to practise stress reduction, maintain a positive attitude, and lose the belly fat. Research presented in the journal Diabetes (June 2002) indicates that abdominal fat can substantially contribute to increased levels of cortisol.

Other ways to reduce cortisol and raise DHEA include exercising regularly, maintaining a regular sleep schedule, eating meals regularly—unbalanced blood-sugar raises cortisol levels—and supplementing with high-alpha whey protein, which reduces stress by increasing brain levels of the mood-enhancing chemicals, tryptophan and serotonin. a

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