



## THE DANGERS OF CUTTING WEIGHT AND DEHYDRATING

Unhealthy and dangerous weight loss practices continue to be a serious problem in combat sports. One recent study found that 39% of MMA fighters were entering competition in a dehydrated state. Heat illness and death in athletes have already happened in the sports of wrestling and MMA. It's been shown that excessive weight loss, rapid weight loss, and repeated cycling of weight gain/loss causes decreased performance, hormonal imbalance, decreased nutrition, and increased injury risk. Other life-threatening problems associated with improper weight loss and dehydration include:

- **Decreased Muscle Strength and Endurance:** Decreased blood flow to muscles makes them work less well.
- **Decreased Heart and Cardiovascular Function:** The heart works harder *and* less efficiently.
- **Reduced Energy Utilization, Nutrient Exchange and Acidosis:** With decreased blood flow to tissues nutrients don't get delivered, and the body's waste products do not get removed as well. A buildup of acid occurs which changes cells' functions in the body.
- **Heat Illness:** This takes on four forms: heat cramps, heat syncope (loss of consciousness), heat exhaustion, and heat stroke (which may be fatal). Dehydration results in decreased blood flow to skin and muscles. This is followed by decreased ability to regulate body temperature. The ability to sweat becomes impaired and core body temperature can rise. This increases the threat of all of these to poorly hydrated athletes doing strenuous workouts.
- **Decreased Kidney Function:** Dehydration leads to decreased kidney blood flow and decreased kidney function. This contributes to the problems listed in the points here, in addition to decreased urine output, concentrated urine, and leakage of protein into the urine. (It is not known if these changes can result in permanent kidney damage.)
- **Electrolyte Problems:** Decreased kidney function results in imbalances of electrolytes such as unhealthy increases in potassium and sodium.
- **Mood Swings and Mental Changes:** All of the above contribute to increased mood swings, poor concentration and focus, disorientation and other mental changes.
- **Eye Trouble:** Dehydration can cause blurred vision and dry eyes.
- **Increased Risk of Brain Injury:** There are likely increased risks of brain bleeding and concussion.

### ***DON'T:***

- Don't use extreme methods for making weight such as excessive heat methods (rubberized suits, steam rooms, saunas), excessive intense bouts of exercise, vomiting, laxatives and diuretics.
- Don't use dehydration as a mainstay of making weight. In addition to the above, it puts you at risk of improper rehydration techniques — when, in reality, proper re-hydration takes several hours to days. (Many cases of intravenous fluids being used for rehydration after weigh-ins have been reported – this is a doping violation with several organizations.)

### ***DO:***

- Commit to year-round proper diet and training for proper weight control and body composition.
- By maintaining your weight year round near an appropriate competition weight and not competing in a weight class outside your appropriate weight class you will help avoid large swings in weight.
- Maintain a good state of hydration by drinking fluid throughout the day and staying hydrated during workouts.
- Follow nutritional programs that meet your needs for adequate amounts of calories from a balanced diet high in healthy carbohydrates, the minimum requirement of fat, and appropriate amounts of protein.
- Be wary of nutritional supplements as they are not regulated by the FDA and some have been shown to be harmful.