PREMIUM PERFORMANCE TRAINING INC.

Health & Fitness Newsletter

VOLUME 9, ISSUE 2

PREFACE

This is a quarterly publication of Premium Performance Training Inc. aimed at providing general information regarding current health and fitness trends.

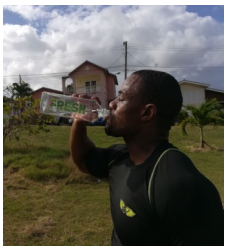
Quote to Remember:

"Time and health are two precious assets that we don't recognize and appreciate until they have been depleted"

Denis Waitley

INSIDE THIS ISSUE:

Hydration Matters



Our body has a built-in temperature regulator as it uses perspiration (sweating) as a means of helping cool itself down when it becomes too warm. Perspiration results in a loss of water as well as electrolytes (eg. sodium, chloride, potassium, magnesium, calcium) from your body. How much you perspire during exercise depends on various factors such as temperature, humidity, and the nature and length of your activity. During exercise, without replenishing this water loss, you can lose as much as 2% of your body weight through sweating, which can have a negative impact on your performance. Thirst, or the feeling of being thirsty, can be used as a guide to if you need to replenish your liquids; however, you should not be waiting until you feel thirsty to drink. A constant intake of fluids helps to keep your muscles working optimally, and to avoid fatigue. Subsequently, it is extremely important to drink plenty of liquids before, during and after your physical activity. The use of the 'pee chart' is a good method of ensuring that you are well hydrated as your urine colour will give you a good indication of how hydrated you are. A urine colour of pale yellow (light lemonade) is an indication that you are well hydrated, while a darker colouration signals that you are dehydrated, and a lighter one that you are over-hydrated.

Drink Up - Before, During and After Exercise

Pre-Exercise

You should begin your workouts in a hydrated state. Thus you should be consuming liquids throughout the day:

- 4 hours before exercise drink 250 ml to 500 ml (1 to 2 cups) of fluids
- 2 hours of less before exercise drink 125 ml to 375 ml (½ to 1½ cups) of fluids

Use the pee chart as a guide to monitor your hydration status and if you are dehydrated sip fluids until your pee colour returns to the desired colour.

During Exercise

The amount of fluid lost during exercise is completely individual and therefore there is no one size fits all amount of fluid to drink during exercise. Many factors play a role in the rate of fluids lost as mentioned before, therefore if you are working out at a higher intensity or in hotter or more humid conditions you should be consuming an larger amount of fluids during exercise due to a higher rate of fluid loss through sweat.

Post-Exercise

Replenish your hydration needs by drinking 100% of the fluids lost during exercise, with this rate being increased to 150% of the fluids lost if the exercise was of particularly long duration, or in warmer conditions. The best method to calculate the amount of fluids lost during exercise would be to use the pre-and post-weighing method to determine rate of sweat loss (see page 4). Electrolytes lost during exercise can also be replenished by consuming non-fluid sources such as salty snacks or a meal.

Continues on Page 4

Desk Stretches To Prevent Pain

Do you have a desk job? Do you sit in front of a computer for 8 or more hours a day? Do you constantly suffer from back pain or have tight, tense shoulders? Unexplained headaches?

Your desk job may largely be responsible for these ailments!

Sitting for long periods during the day severely compromises your posture, creating rounded shoulders, weak upper back muscles, tight hip flexors and hamstrings, lack of circulation and more. The good news is that there are things that we can do during the day to counteract these problems.

Below are some stretches that can be done while at your desk.

1. Seated Hamstring Stretch

1. Come to the edge of your chair and extend your right leg, placing your heel on the floor, pulling your toes toward your shins.
2. Sit up tall and hinge forward from your hips, taking your lower tummy toward your thigh. Try not to round your spine as you hinge forward.
3. Repeat on the opposite side.

2. Spinal Twist

1. With both feet on the floor and sitting up tall, place your left hand on your right knee.
2. Take your right hand behind you (maybe holding onto your chair handle) and twist your body around to look over your right shoulder. Keep your core engaged and your spine lengthened throughout the twist
3. Repeat on the opposite side

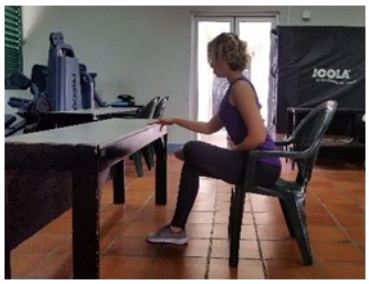
3. Thoracic Spine Extension

1. Slide your chair arm's length distance away from your desk.
2. Place your palms about shoulder width apart on your desk and lean forward, pressing your chest towards the floor, feeling a slight arch happen through your thoracic spine.

6. Chest Stretch

1. Come to the edge of your chair and place your hands behind you, holding on to the seat of your chair.
2. Draw your shoulder blades towards one another and gently arch through your upper back, lifting your chest towards the sky.

5. Seated Pigeon Pose

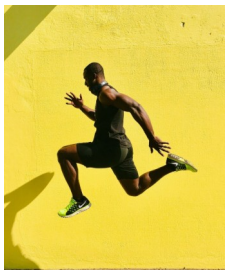


1. Sitting up tall, cross your right ankle over your left knee
2. Hinge forward from your hips, taking your lower tummy towards your lap
3. Lengthen through your spine and press your right knee towards the floor as you hinge forward
4. Repeat on the opposite side.

For More Yoga Information Like and Follow KGFitt on Facebook and @kerrileeg1122 on Instagram

Research the Facts

Train Explosively for Maximum Gains in Strength, Power and Size



High-intensity, explosive training turns on biochemical pathways that build strength and power, trigger muscle hypotrophy and mobilize fat-burning hormones. A study by Jim Steele and his co-workers from Southampton Solent University in the UK found that recreational weight trainers practicing high-intensity explosive training twice a week for ten weeks gained more strength, power and muscle size than a group practicing high volume training at lower speeds. Thus they concluded that high-intensity, explosive training can be a key tool to rapid gains in aerobic capacity, muscle mass, strength, power and fat loss. However, the study did note that such results might not apply to experienced bodybuilders or power athletes.

(Biology of Sport, 33: 241-249, 2016)

Brain Fatigue Could Be Slowing You Down

Most fatigue studies conducted emphasize muscle changes, often overlooking the body's control centre - the brain and nervous system, During exercise, the central nervous system selects which motor units to activate and the time they are activated. This decision–making considers the task at hand as well as the metabolic health of the body. A literature review led by Janet Taylor from Neuroscience Research Australia concluded that central nervous system fatigue contributes to deteriorating performance during intense exercise as communication between the brain and peripheral nervous system slows down. Her findings showed that with central nervous system fatigue the spillover from the neurotransmitter serotonin inhibits motor neuron communication, repetitive motor unit activation alters brain-muscle communication, and progressively increasing feedback from peripheral sensors in the muscles, tendons and blood vessel alters cardiovascular function and breathing.

(Medicine Science Sports Exercise, 11:2294-2306, 2016)

Prolonged Use of Green Tea Extract Promotes Fatty Liver Disease

Green tea is a popular weight-loss supplement that also improves blood sugar regulation. Chemicals, such as caffeine and catechins speed up metabolism and fights fat. However, too much green tea can be unhealthy according to a study led by Nina Hirsch, from the Hebrew University in Jerusalem. Her study found that chronic use of green tea extract in mice resulted in liver oxidative stress, inflammation and liver injury. This study's results matched that of a similar study in adult women which showed that high doses of Green tea (600 to 1800mg) also caused liver problems.

(Molecular Nutrition & Food Research, 60: 2542-2553, 2016)

Ask Yourself Answers

1. **True**
2. **True**
3. **False - Almond milk (unsweetened) contains less calories (40 compared to 80) BUT more fat (3g to 0g) compared to skim milk (comparison based on 8 fl oz)**
4. **True**
5. **False - the soles of your feet contain more sweat glands and more pressure-sensitive nerve endings per square inch than any other part of your body**

Hydration Matters

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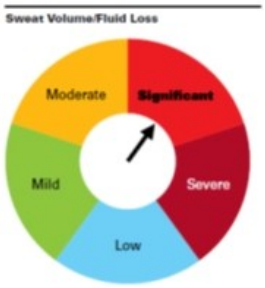
Determining Your Sweat Rate (Rate of Sweat Loss)



In order to recover your hydration status after exercise it is recommended that you calculate your individual sweat rate as this would give you a better idea of how much fluid you need to drink during your workouts to stay on top of your hydration. The below formula can be used to determine the amount of sweat loss and subsequent amount of fluids that need to be replaced post workout since 1 g of weight loss is equal to 1 ml of sweat loss.

Sweat Loss (g) = (body weight before exercise(g) - body weight after exercise(g)) + amount of fluid intake during exercise (ml)

Example: A individual was 100 kg before exercise, 98 kg after exercise and drank 750 ml of water during exercise

Sweat loss = 100 kg - 98 kg = 2 kg lost
= 2000 g lost
= 2000 g + 750 ml
= 2750 g

Water vs Fitness Waters vs Sports Drinks

What to drink during exercise has been a highly commercialized topic with the introduction and promotion of many different types of fitness waters & sports drinks into the market, all claiming to be the best option for hydration during exercise. Each option has its individual benefits however, and it depends on the duration and intensity of the physical activity, and how much you sweat which best determines the best hydration option for your individual exercise.

Water

As mentioned previously when we sweat we not only lose water but also electrolytes which need to be eventually replaced. Water alone lacks ability to replace the electrolytes lost through sweat, however during exercise it isn't necessary to replace these immediately unless you are exercising for prolonged periods of over 60 minutes, or in extremely hot or humid climates, where the rate of sweat loss would be higher than normal. Therefore water is the best and most efficient means of rehydration for activities which are shorter than 60 minutes in length. In this regard as well chilled water maybe a better option compared to room temperature as not only does a colder liquid help to decrease your body's temperature quicker studies have also shown that persons drink more water regularly if they are cooled.

Continues on Page 5

ASK YOURSELF ..... True or False ?

Score: _____ out of 5

1. 1 calorie is the amount of energy it would take to raise the temperature of 1 kg of water by 1 degree Celcius	**TRUE**	**FALSE**
2. Energy balance (the balance between energy in and energy out) determines weight gain /weight loss	**TRUE**	**FALSE**
3. Almond milk (unsweetened) contains less calories and fat compared to Skim (Cow) milk	**TRUE**	**FALSE**
4. Any footrace longer than the traditional marathon length (42.1 km) is considered an ultramarathon	**TRUE**	**FALSE**
5. The tips of your fingers contain more sweat glands and more pressure-sensitive nerve endings per square inch than any other part of your body	**TRUE**	**FALSE**

Answers can be found on the bottom of page 3

Hydration Matters

….Continued from Page 4

Fitness Waters

Fitness Waters are lightly flavored bottled waters which have added vitamins, minerals, and electrolytes to their content. Fitness waters fall somewhere in-between sports drinks and plain water as they contain fewer calories and in most cases fewer electrolytes than sports drinks but offer more taste than plain water. In recent times however with a battle in the fitness water market many companies have begun to increase their 'electrolyte content' in their fitness water line therefore now resulting in their Fitness water lines containing the same quantity of electrolytes as various Sports Drinks. Thus providing the same electrolyte replenishment, and taste, benefits as Sports Drinks but with the zero calorie benefits of water. As it relates to the consumption timing, similar to water, Fitness Waters are most efficient for activities which are shorter than 60 minutes in length, however the added electrolyte replenishment does give it an edge over water once the activity begins to exceed that 60 minute threshold.

Sports Drinks

For exercises lasting longer than 60 minutes in length or for high intensity activities, especially in hot or humid weather, sports drinks such as the popular Gatorade or Powerade, are the best hydration option. Studies have shown that under those circumstances athletes can stave off fatigue 37% longer if they drink sports drinks compared to water. This is due to not only the electrolyte replacement they can provide but also due to the additional carbohydrates they supply, as this additional supply of carbohydrates becomes vital if, or when, your stored fuel levels drop to low levels. You should beware however that not all sports drinks are created equally and when choosing a sports drink you should aim for one that provides generally between 13 - 19g of carbohydrates per 8 oz serving, and at least 80 - 110 mg of sodium. For really extreme length sports, multiple high intensity sporting events in one day or for persons who lose a lot of salt in their sweat (and therefore require more sodium) these quantity requirements may even be higher.

Make Your Own Homemade Custom Sports Drink

Sports drinks can also be created at home as a 'do it yourself' option, as while there are many different options and ingredients that can be added to adjust taste and flavor (eg. Honey) of a sports drink two main ingredients, once included in appropriate quantities, are essential to ensuring that the homemade sports drink can provide you with the results you desire. The 2 ingredients are:

- Carbohydrate source - Freshly pressed juices such as lemon, lime, or orange or a combination of 100% fruit juices
- Electrolyte source - Salt is a common source for electrolytes and minerals

Eg. 'Do It Yourself' Homemade Orange Twists Sports Drink Ingredient List

- 3-4 cups water (depending on the concentration you prefer)
- 3/4 cup freshly squeezed orange juice (about 2-3 oranges)
- 1/4 cup freshly squeezed lemon juice
- 1/4 teaspoon sea salt or real salt
- 2 tablespoons raw honey or maple syrup

Healthy & Great Recipe

Eating healthier does not have to mean eating boring. In our 'Healthy & Great' recipe section we will introduce you to some incredible recipes which are lower in sugar, fat and calories compared to their 'traditional' counterparts but are still full of flavour.

Chicken Caesar Wrap

MAKES 4 SERVINGS

- 2 tablespoons olive oil
- 2 tablespoons lemon juice
- 2 tablespoons plain low-fat yogurt
- 3 tablespoons grated Parmesan cheese
- 2 teaspoons Dijon mustard
- 1 teaspoon Worcestershire sauce
- 1 ½ teaspoon minced garlic
- ½ teaspoon black pepper or to taste
- 6 cups shredded romaine lettuce
- 2 cups shredded cooked skinless chicken breast
- 4 (9-inch) reduced carbohydrate high-fiber tortillas
- 4 teaspoons grated Parmesan cheese

Method

1. In a small bowl, whisk together the olive oil, lemon juice, yogurt, Parmesan cheese, mustard, Worcestershire sauce, and minced garlic. Add black pepper to taste and set aside.

2. In a large bowl, toss together the romaine and chicken. Pour the dressing on top and toss together.

3. To assemble the wraps, heat 1 tortilla in the microwave for 15 seconds to soften. Spoon about 3/4 cup of the chicken salad mixture onto the middle of the wrap. Top with 1 teaspoon Parmesan cheese. Fold the bottom 1 ½ inches of the wrap upward to cover filling and then fold the sides. Place a toothpick in the center of the wrap to hold it shut. Repeat with the remaining ingredients.

NUTRITIONAL INFORMATION PER SERVING (½ cup)

Calories: 350 / Carbohydrates: 22g (Sugars: 2g) / Total Fat: 12g (Saturated Fat: 3g) / Protein: 36g / Fiber 13g/ Cholesterol: 70mg / Sodium: 490mg

Recipe obtained from "Eat What You Love" - By Marlene Koch

Contains more than 300 incredible recipes which are low in sugar, fat and calories and are great for weight loss & diabetic diets

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