

# RUNNING & FITNEWS®

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## **The Complicated Role of Calcium**

Once common recommendations from multiple organizations for near-universal calcium supplementation in older adults are now coming under much increased scrutiny.

### Calcium and BMD

Increased calcium intake, whether from dietary sources or supplements, is unlikely to have a substantive clinical effect on bone mineral density (BMD) or fracture risk, two analyses in BMJ find.

Researchers recently looked at data from both randomized studies and cohort studies (those of groups with specific shared characteristics). They wanted to examine anew whether calcium increased bone mineral density or lowered fracture risk in people over age 50.

The study authors, reporting in BMJ, found that in the trials, comprising nearly 14,000 participants, BMD showed increases of just 1% to 2% with calcium supplements. Such increases are considered less than clinically meaningful in the reductions of fractures.

Dietary calcium increases, too, were not associated with reduced fracture risk.

The study concludes, “Increasing calcium intake from dietary sources or by taking calcium supplements produces small non-progressive increases in BMD, which are unlikely to lead to a clinically significant reduction in risk of fracture.”

### Calcium and Women

Many people are confused about the benefits and risks of calcium supplementation for midlife and older women.

A recent evidence-based Institute of Medicine (IOM) report provides guidelines to North American women about the amount of calcium they should consume and concludes that this nutrient provides critical bone benefits—but beyond consuming the Recommended Daily Allowance, there is not much to be gained.

The IOM used The Women's Health Initiative (WHI), a randomized trial of the benefits and risks of 1,000 mg of daily calcium supplements in over 36,000 postmenopausal women.

Participants with intakes greater than 1,200 mg daily at baseline did not clearly benefit from the intervention, suggesting that more is not necessarily better. The IOM set the current RDA for calcium (from food plus supplements) at 1,000 mg for women up to age 50 and 1,200 mg for those over age 50. Many women are consuming unnecessarily high doses of supplemental calcium. Instead, they should aim to meet the RDA by eating calcium-rich foods like milk, yogurt, cheese, sardines, salmon, tofu, calcium-fortified juice and cereals, broccoli, collard greens and kale.

Supplements are only appropriate if your diet does not provide the recommended amount of calcium.

Regarding other clinical outcomes in the WHI, a significant 17% increase in risk for kidney stones was noted, but the background intake of calcium was high. It is a good idea, then, to meet the RDA but not exceed it.

#### Calcium and Precancerous Polyps

Calcium and vitamin D, alone or in combination, have no effect on the recurrence of colorectal adenomas, according to a study published in NEJM and funded by the National Cancer Institute.

An adenoma is a type of non-cancerous tumor formed from glandular structures. These are the “polyps” commonly sought after when undergoing colonoscopy. Though benign, they can be considered precursors to colorectal cancer because over time they may transform to become malignant.

Researchers studied over 2,000 patients who had undergone complete colonoscopy during which adenomas had been found and removed. The patients were randomized to receive daily supplementation with calcium, vitamin D3, both or placebo. They then looked at the appearance of adenomas in patients undergoing follow-up colonoscopy at least a year later.

The authors had published a paper in 1999 that suggested a protective effect from calcium. Not so this time: “Daily supplementation with vitamin D3 (1000 IU), calcium (1200 mg), or both after removal of colorectal adenomas did not significantly reduce the risk of recurrent colorectal adenomas over a period of 3 to 5 years.”

#### Calcium and CVD Risk

Though some older studies suggested that calcium supplements have heart health benefits, calcium supplements have come under renewed scrutiny with regard to heart health following a report that men who took more than 1,000 mg of supplemental calcium daily over a 12-year period were 20% more likely to succumb to heart disease than those who didn't take the pills.

Calcium from food does not seem to raise CVD risk, but calcium supplements may raise blood calcium levels more rapidly than dietary calcium, thereby boosting risk for heart disease. It's clearer than ever that supplements—not least of all calcium—should be approached with caution. Far better to get your nutrients from foods, not pills, to the extent possible. In certain cases, supplementation can be considered appropriate but it is important to open a dialog with your doctor before embarking on any kind of supplement regimen beyond, perhaps, a daily multivitamin.

BMJ, 2015;351:h4183

<http://www.bmj.com/content/351/bmj.h4183>

BMJ, 2015;351:h4580

<http://www.bmj.com/content/351/bmj.h4580>

NEJM Journal Watch, 2013, “Vitamin D and Calcium Supplementation in Women: Making Sense of Conflicting Data,” <http://tinyurl.com/CalciumConflicts>

N. Engl. J. Med., 2015; 373:1519-1530

<http://www.nejm.org/doi/full/10.1056/NEJMoa1500409>

## Determine Your “Heart Age”

How old is your heart? That is a question recently being asked by clinicians following the development of multivariable prediction models to predict the risk of cardiovascular disease based on a person's risk factor profile.

The thinking goes that heart age might be an effective way to communicate to people their individual-level risk of developing CVD, with heart age functioning as a wake-up call to improve health.

This new measure of risk for cardiovascular disease was created using data from something called the Behavioral Risk Factor Surveillance System (specifically, from 2011 and 2013). The BRFSS is a “state-based, random-digit-dialed telephone survey that uses a multistage sampling design to select a state-specific sample from noninstitutionalized U.S. civilian adults aged  $\geq 18$  years,” as the CDC's Morbidity and Mortality Weekly Report notes.

Weighted 2011 and 2013 BRFSS data collected from all 50 states and the District of Columbia were combined to obtain stable estimates. Among 981,660 participants, 41% were excluded for either: being less than 30 or over 75 years of age, in order to meet the recommended age range for heart age calculation; already having coronary heart disease, myocardial infarction or stroke at baseline; being pregnant; or missing covariates used for blood pressure prediction. This still left an impressive 578,525 participants for analysis.

Researchers then gathered information on age, smoking status, antihypertensive medication use, diabetes status and BMI for these nearly 600,000 adults aged 30 to 74. Systolic blood pressure was predicted with models, and this information was used to calculate people's Framingham risk score and predicted heart age.

The concept dates back to 2008, when the Framingham Heart Study first introduced the predicted age of the vascular system of a person based on his or her cardiovascular risk factor profile. The comparison of heart age to chronological age represents an alternative way to express a person's risk for having a CVD event and provides information about a person's cardiovascular health that is not clear from the more traditional 10-year risk score alone.

Until now, however, no study has provided population-level estimates of heart age and examined disparities in heart age among U.S. adults.

The heart ages of U.S. men and women are estimated to be 7.8 and 5.4 years older, respectively, than their actual ages. Roughly 44% of U.S. adults were found to have heart ages estimated to be at least 5 years older than their actual ages.

The CDC reports that cardiovascular disease is responsible for nearly 800,000 deaths in the U.S. each year. Studies have identified a number of modifiable CVD risk factors, including high blood pressure, smoking, high blood cholesterol, diabetes and overweight or obesity.

It is therefore useful to both know the alarming nationwide numbers, and also your individual heart age, which you can calculate on your own. To find out your heart age, follow the link here:

<http://tinyurl.com/HeartAgeCalc>. Have handy your systolic blood pressure value, and your BMI, which you can calculate here: [http://www.nhlbi.nih.gov/health/educational/lose\\_wt/BMI/bmicalc.htm](http://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm). MMWR, Vital Signs, 2015, Vol. 64, No. 34, pp. 950-958, <http://tinyurl.com/MMWR-HeartAge>

Framingham Heart Study, Heart Age Predictor, <http://tinyurl.com/HeartAgeCalc>

NIH Body Mass Index Calculator,  
[http://www.nhlbi.nih.gov/health/educational/lose\\_wt/BMI/bmicalc.htm](http://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm)

## **Low Back Pain: What Works**

A new study published in JAMA this month finds that treating low back pain early, with physical therapy, does not lower pain scores or raise quality-of-life scores in patients with back pain for less than 16 days. Although there was a small, statistically significant difference of three points in the mean disability score of those treated with PT and those receiving usual care, it was not considered a clinically meaningful improvement.

### Early PT ineffective

In the study of approximately 200 adults, “usual care” was comprised largely of patient education, including advice to remain active. All of the subjects received usual care; about half also received four physical therapy sessions over three weeks. PT was comprised of spinal manipulation and exercise. Going into the study, patients had registered a disability score of 20 points or higher, on a 100-point scale. All had no symptoms below the knees.

After three months, in addition to the modest, less than meaningful drop in disability scores, the groups mostly did not differ in their need for healthcare, or in pain and quality-of-life scores. The study suggests that there is no value to early PT intervention in patients with low back pain.

### Evidence-based treatment

Several years ago, the American College of Physicians and the American Pain Society jointly published clinical practice guidelines on the diagnosis and treatment of low back pain. Familiarity with these may shed light on what is most effective, and therefore what sufferers of low back pain can look to do to some extent on their own improve outcomes.

The first of the recommendations is, not surprisingly, a thorough patient physical exam including questions about history, including any “psychosocial risk factors” for chronic, disabling back pain.

- A physical exam/history can help categorize the source of your back pain as:
  - Nonspecific: Is it impossible to pinpoint a single cause?
  - Radiculopathy: Is the source of the pain an injured nerve root?
  - Spinal stenosis: Is it a narrowing of the bone channel occupied by the spinal nerves?
  - Other: is it another specific cause?
- Next, your doctor should not routinely obtain imaging or perform other diagnostic tests if your back pain is categorized as nonspecific.
- On the contrary, if serious underlying conditions are suspected, imaging and other relevant diagnostic testing are warranted. Such conditions include any severe or progressive functional abnormality due to a decrease in function of the nerves or muscles.
- It is appropriate for your doctor to schedule an MRI to evaluate persistent pain, radiculopathy or spinal stenosis only when you are being considered for surgery or epidural steroid injection.

- Remain active to the extent your back pain allows.
- Apply superficial heat for relief.
- NSAIDs, including ibuprofen (Advil) can relieve pain and reduce inflammation. Acetaminophen (Tylenol) may be effective too, but is not an NSAID—only an analgesic. Depending on pain severity and physical dysfunction, you may consider taking one or the other as a first-line medication.
- These drugs are not recommended for long-term use.
- Though recently shown to be of negligible effect in the early stages of low back pain, you might have luck with spinal manipulation for acute pain if you don't improve after the initial self-care steps listed above. Exercise therapy, yoga and progressive relaxation techniques may also provide relief.
- If your back pain persists, consider cognitive behavioral therapy to help manage it. CBT can help you adjust your thinking about your chronic pain. Mind-management of pain works by breaking the cycle of negative thoughts—changing “I can't do anything anymore” to “I've gotten through this before and can do it again.”

The recommendations here are based on systematic reviews of the available evidence. The guidelines don't cover the surgical management of low back pain. NEJM Journal Watch notes in its analysis of the recommendations that within these reviews, there is evidence that skeletal muscle relaxants for acute pain may also be effective. Antidepressants may help in severe cases, where CBT has been insufficient to ease the depression and anxiety that can overwhelm people with chronic low back pain.

JAMA, 2015, Vol. 314, No. 14, pp. 1459-1467,  
<http://jama.jamanetwork.com/article.aspx?articleid=2456165>

Ann. Intern. Med., 2007, Vol. 147, No. 7, pp. 478-505, <http://annals.org/article.aspx?articleid=736814>

NEJM Journal Watch, Oct. 25, 2007, “Diagnosis and Treatment of Low Back Pain,” by Richard Saitz, MD

### **A Renaissance for Bike Polo in City Culture**

Bicycle polo, which dates back to the 19<sup>th</sup> century, is a rolling version of traditional equestrian polo, now enjoying a reboot from its staid past, emerging as a highly charged contact sport among urban dwellers internationally. In places like Toronto, Miami, Philadelphia and New York City, you can find robust subcultures of the sport, some more organized than others but all enjoying a rousing and innovative adaptation of a once-royal pastime seldom played by anyone without access to a 300-yard grass field and horses.

Today, the two main strains of bicycle polo are the more traditional, grass-court version within which collisions are discouraged; and the urbanized contact sport popular among bike messengers known as hardcourt.

Hardcourt Bike Polo

While grass-court bicycle polo is played under the watchful eyes of an umpire, with elaborate rules for penalty shots at various distances and strong proscriptions against everything from hooking mallets to zigzagging in front of opponents, hardcourt rules—though indeed codified through countless hardcourt tournaments and championships globally—are much fewer, and fewer still in pick-up games and ad-hock leagues forming among bike enthusiasts in today’s cities.

Bike polo is an acquired skill. Imagine wielding a mallet to capture a speeding ball while holding handlebars, balanced on a bike you’re pedaling rapidly with five other players circling around you. For these reasons, one may wonder how a person ever jumps into veteran bike polo player culture at all.

The solution is that although you'll find well organized events throughout the U.S. with names like the Great Lakes Winter Classic, the East Side Polo Invite, or the World Hardcourt Bike Polo Championship, many local clubs also have “rookie nights.” That would be the place to dip a toe in the water and find out if recreational bike polo is in your long-term future.

Hardcourt bike polo is played on asphalt courts or in parking lots, and though hockey nets are usually deployed as goals, informal urban games have been known to simply set out orange traffic cones one bike length apart for goal posts.

Riders typically choose fixed-gear bikes, the better to pivot nimbly around the court, changing directions as rapidly as in hockey. Indeed, many hardcourt bike polo leagues use a street hockey ball for game play.

Participants in hardcourt bike polo often construct their own mallets—wooden equestrian polo mallets are too long and otherwise ill-suited because they break easily when hit against concrete. Players typically attach a ski pole to a piece of industrial-strength piping to make mallets. These, too, are far from immune from destruction; teams routinely bring along an abundance of spare mallets.

Different styles of play tend to emerge in different cities. The sport lives in distinct pockets, and it leaves a lot of interpretation up to the player. For many players, one enjoyable aspect of intercity tournament play is seeing how different playing styles and strategies measure up against one another.

#### Simple Hardcourt Bike Polo Rules

The following rules come from the [Hardcourt Bike Polo blog](#), which states that these are “the general rules for weekly pick-up games in New York City. Tournaments have more specific rules depending on the location.” The blog also offers instructions on how to build a bike polo mallet, and even how to modify a bicycle for the sport.

- The game consists of two teams of three players.
- Any type of bicycle is allowed. Handlebars must be plugged.
- Mallets must resemble a croquet mallet with a wide side and a round end. Modified ski poles and plastic pipe are the most common materials. The handle end of the mallet must be plugged.
- A street hockey ball is used.
- Goals will be a pair of orange cones spaced one bike length apart.
- If a goal cone is disrupted it is the responsibility of the player who disrupted it to fix it.

- To start the game the two teams mount their bikes at opposite ends of the court with the ball at center court. After a countdown, the two teams charge toward the ball and try to take possession.
- Players may not play the ball with their feet at any time.
- Scoring a goal must be made from what started as a hit from the end of a player's mallet.
- A "shuffle" does not count as a goal; if the ball is shuffled through the goal, play continues uninterrupted.
- After a goal is scored, the team who scored returns to their half of the court. The team who was scored upon takes possession of the ball.
- Call out the score after each goal.
- Passing "backward" through the goal occurs when a player behind the goal passes through the goal to a player in front of the goal line. A goal cannot be scored by the first player to play the ball after such a backward pass. Any subsequent player to play the ball may score. A ball that crosses a goal line backwards must be hit before it can score.
- If a ball is shot from in front of the goal line and does not go through the goal but bounces off the back wall and comes out through the goal, the ball is in play and can be scored.
- Players' feet must not touch the ground, known as "foot-down." Each time a player goes foot-down, that player is out of play and must ride to the sideline at center court and ring the bell. This effectively gives the other team a brief "power play," as in hockey.
- The rules of contact can be summed up thus: "like" contact is allowed. This means that body to body (short of grabbing or pushing), mallet to mallet, and bike to bike contact are allowed. Everything else is not allowed, e.g., mallet to player, player to bike, mallet to bike, etc.
- Throwing of mallets is not allowed at any time, in any situation.
- Some games are timed and end after 10 minutes. Some games are not timed and instead played to a winning score of five points.
- Trash talking is allowed.

Hardcourt Bike Polo blog, Rules, [http://www.hardcourtbikepolo.com/?page\\_id=4](http://www.hardcourtbikepolo.com/?page_id=4)

International Bicycle Polo Federation, Official Rules, <http://bicyclepolo.org/ibpfrule.htm>

### **Troubled Training Run: To Push Or Pull Back?**

It's a dreaded training run question we all face when our planned workout suddenly seems impossible: a.) keep going, b.) change the workout, or c.) call it a day?

Pushing hard to finish can be worthwhile, but it can also lead to injury or the compromise of the entire rest of your week's workouts. What are the readable signals to be on the lookout for to guide you in making the right decision?

### Signs Before The Workout

Skip the workout if:

You are starting to feel sick or sense an injury coming on. The benefit of any one workout is not as great as the downside of missing multiple days of training.

You're dealing with long hours at work or a consistent lack of sleep. A good rule of thumb is, if you don't feel like you're ready to do about 90% of the workout as planned, skip it.

Consider skipping the workout if:

You feel too tired to do a workout on the day it's scheduled. Waiting a day or two allows you to get more benefit than you would by running at a slower pace on the assigned day.

It's ok to work out if:

A stressful day coincides with it, but you're well rested. In this situation, the workout itself often makes you feel better—in part because you have accomplished it, but in part because exercise is the great stress reducer.

### Signs During the Workout

Some days you may set out feeling ok, but soon struggle to meet split times you would normally achieve.

Stop the workout if:

You experience full-on fatigue instead of just discomfort. That burning sensation in your quads or glutes is normal during the last few miles of a tempo run. But an extremely heavy leg sensation, during which you feel you are dragging your feet with every step, is not normal and can be a sign of overtraining.

You experience sharp pain or any pain sufficient to alter your form. Altered form is another quick path to injury, and not just in the area that is causing you pain in the first place. As you rely on lesser-used muscles, tendons and joints not ordinarily involved in shouldering the burden handled by your normal stride, you are cooking up a recipe for injury that could put you off your training for weeks.

You start to have trouble breathing or become lightheaded. In addition to dropping the current workout, if this occurs more than once during training, you should consult your physician as to its underlying cause.

Consider stopping the workout if:

A pace adjustment helps you continue. On days when you're struggling, modifying your pace so that you are pushing, but comfortably, is an effective way to still come away with a more or less successful training day.

Shorter reps help you continue. If you're interval training, consider cutting the reps into pieces rather than slowing down the pace. For example, you might switch a series of 400s to 2 x 200s instead to better get through them. This way, you'll still achieve your planned total time or distance.

It's ok to continue if:

You're within 5% of your planned pace. If, for example, you are only losing 15 seconds per mile with a goal pace of 5:00 miles, continue. Remember that prevailing in, rather than aborting, a workout helps you realize that you can perform at a high level in a race, even when you feel bad.

### Signs After The Workout

Cut down your training volume if:

You repeatedly struggle to complete your workouts. You should aim to feel as though you could have done two more reps, one more mile, etc. If this feeling seems consistently out of reach, your body may not be ready for the kind of mileage you're asking of it, or you may need to permanently schedule in an extra rest day. And always make sure intense workouts are followed by easy ones to help you go into the next session fully recovered.

Keep your week's training as-is if:

A workout that hit rough patches wound up with a strong finish after you modified it. You may have allowed yourself to recover from a rough day in time to stay on your training schedule going forward. However, you shouldn't be trying to make up workouts. After a modified workout, be patient and wait until the next tough speedwork or long run when it appears on your schedule.

Runner's World, Dec. 2014, <http://www.runnersworld.com/race-training/adjusting-workouts-wimpy-or-wise>

This Runner's Recipes, April 2, 2015, <http://www.thisrunnersrecipes.com/when-to-push-and-when-to-stop/>

### Identifying Challenges to Exercise Adherence

For both individuals and families, getting and staying active can present continued challenges—whether you're attempting a goal-oriented weight loss plan or helping commit your children to a lifetime of general fitness. Knowing the factors that make exercise adherence difficult can help diminish their power and keep you on track, whatever your exercise goals.

#### Lack of Patience

One of the biggest mental barriers to exercise adherence is impatience. Remind yourself and your loved ones that exercise is challenging, and only over time can we expect to move beyond its initial psychological (not to mention physical) discomfort. Facing the extent to which you may have become detrained can be a frustrating, anxiety-ridden process. The key is to recognize and accept that the early phases of a new regimen offer no guarantee of enjoyment, but are an inevitable no man's land which must be pushed through to get to positive feelings of accomplishment and good health just around the corner.

Set modest goals, but hold yourself to them. Focus on the fact that each day you are strengthening muscles and making new demands on the heart and lungs, and beginning a process toward weight loss whose essential ingredients are just persistence and time. Then dial back any impulse to overthink it, and simply begin.

#### Negativity

Naturally, negative feelings and emotions can impair the development of an exercise habit. Eliminate “I don’t like this,” and “I’m too tired,” replacing them with thoughts like “I can do it,” and “Only three more minutes to go!” Perception quickly becomes reality when we take on unfamiliar tasks—and this can work either for or against you, so stay positive.

#### Anxiety

Anxiety is really worry over possible negative outcomes in the undetermined future, and so it is a distraction and a waste of energy. Sources of exercise anxiety include worry about meeting goals, physical appearance or being judged by others (e.g., strangers at a fitness club).

Remind yourself that exercise actually reduces both short-term (acute) and long-term (chronic) anxiety. Exercise is a well known behavioral strategy for managing anxiety, and telling yourself this can help you never allow exercise to become the source of it.

#### Perfectionism

Avoid setting excessively high standards of performance. Catch yourself if you start down the road of overly critical self-evaluations. Coupled together, these two factors can grind your exercise regimen to a halt.

One barrier to exercise common in schoolchildren is deep concern about making mistakes. The heightened anxiety, particularly with regard to competitive sports performance among peers in school, can foment an attitude of giving up or appearing not to care—the close cousin of which is disdain or ridicule for those who are in fact active. Needless to say, such attitudes are toxic for everyone.

It may be good practice to balance sports with non-competitive physical activity in school and the home. As skills and general fitness are gradually acquired in a safe, non-competitive space, confidence blossoms and traditional gym-class competition stops seeming so frightening.

It may also be helpful to emphasize comparisons to your child’s past self, rather than to peers. Genuine improvements are easy to see when highlighted as a series of personal accomplishments, rather than goals scored and races won against others.

#### Overcoming Obstacles to Activity Within the Family

The American Academy of Pediatrics encourages family members to remind each other regularly of the benefits of exercise, as well as create individual “activity plans” for use in staying motivated.

These points can be revisited as a group or individually whenever motivation lags. Remind family members that being physically active allows you to:

- Have fun
- Spend time with friends
- Increase your endurance for sport or hobbies
- Improve your body image
- Maintain a healthy weight
- Increase energy levels
- Improve your self-image
- Feel stronger
- Decrease stress

An activity plan is a worksheet you can fill out with your children that asks questions like:

- What are the benefits I want from being active?
- What are the barriers that keep me from being active?
- What will be my solutions to these barriers?
- What activities am I going to do?
- Where am I going to do these?
- When am I going to be active (times and days of the week)?
- How many minutes will I strive to be active each day?
- Who will be my activity buddies?

Head These Negative Thoughts Off at the Pass

Thought: I don't have time

Solution: Build it into your day:

- Walk or ride for transportation
- Get off the bus a stop early
- Take the stairs
- Walk around the mall twice before you start shopping

Thought: I'm not good at sports

Solution: Active hobbies like:

- Gardening
- Birdwatching
- Sightseeing on a bike
- Dancing
- Scavenger hunts
- Apple picking
- Cross-country skiing

You don't have to play a sport to be active.

Thought: My neighborhood isn't safe

Solutions:

- Use a home workout video
- Dance with your children in your home to your favorite music
- Visit your YMCA, Boys and Girls Club or community recreation center
- Sign up for after-school activities

Thought: I'm out of shape

Solutions:

- Start slow and short—e.g., 10 to 15 minutes of walking
- Build activity breaks into your workday—take the stairs and walk around the block
- Calculate your daily minutes of sedentary time and decrease them by 30 minutes
- Join a program that involves learning a new skill—and get a friend to go with you

Remember also that you can greatly help your children appreciate and commit to an active lifestyle by being the powerful role model that you already are. You shape your child's perception of physical activity and exercise in ways that may sustain throughout his or her entire life.

Adapted from Human Kinetics, <http://www.humankinetics.com/excerpts/excerpts/overcome-mental-barriers-to-reach-exercise-goals>

American Academy of Pediatrics, Care of the Young Athlete Education Handout, 2011-2015

### **Spotlight on Sourdough**

The Blue Zones Solution: Eating and Living Like the World's Healthiest People, is a 2015 book that looks carefully at what the longest living communities on earth all have in common. The shared characteristics of these cultures—which are as diverse as Akaria, Greece (an island near Turkey in the Aegean), Loma Linda, California, and Okinawa, Japan among others—are, in part:

- a built-in, active lifestyle
- strong communities reinforcing healthy behaviors
- a habit of eating only to 80% of fullness

#### Foods Associated with Healthy Communities

A sampling of abundantly eaten foods in these communities, which boast the highest concentrations of centenarians in the world, includes:

- beans
- wild greens
- fruit
- fish
- brown rice
- sourdough bread
- barley
- almonds
- avocados
- soy milk
- tofu

As well as:

- little if any added sugar
- only occasional meat and only in small 3-4 oz. portions
- zero or just 1-2 glasses of alcohol daily

Most of these habits and foods are well known to be reliable promoters of good health. Yet sourdough bread stands out as a somewhat unlikely addition to the vitamin-rich, fibrous, low- or healthy fat, whole-food diets.

It turns out that there is much to know about how this particular type of yeast offers unique health benefits. The bread that is its product should never be mentioned in proscriptions to avoid white bread as a blood-sugar-spiking, marginally nutritious, refined carbohydrate we can all do with a lot less of.

## Types of Bread Starters

A bread starter is simply a mixture of water and flour that has been colonized by yeast to provide fermentation for new batches of bread. The added yeast can be either “active dry,” or the flour mixture can be allowed to collect naturally occurring wild yeast and bacteria from the environment.

This is the principle difference between sourdough bread and other types: sourdough is made with wild yeast, and it is more microbiologically complex than active dry yeast. Among the healthy bacteria found specifically in sourdough yeast are lactobacillus and acetobacteria.

Sourdough starters have been used for centuries, and unlike other starters, are often maintained in stable colonies for long periods of time—even centuries—since it is simpler to maintain this type of starter than to remake it. This is likely one way that some healthy cultures wind up relying primarily on sourdough to make their bread.

## Sourdough as Health Food

Here are some of the key characteristics that make sourdough bread a health food:

- Sourdough breads are made from whole wheat flour.
- Fermenting with wild yeast converts sugars into lactic acid, lowering the bread’s glycemic index (and imparting that trademark slightly sour taste).
- Buettner’s colleague Gianni Pes, a senior researcher at the University of Sassari, Italy, has demonstrated that this type of bread is able to lower the glycemic load, reducing after-meal glucose and insulin blood levels by as much as 25% percent.
- This helps protect the pancreas and may help prevent obesity and diabetes.

Other studies have shown that yeast in general has probiotic effects, including treatment of intestinal diseases in part due to the removal of mycotoxins as they bind to the yeast cell wall.

Yet sourdough appears to be the champion among rivals when it comes to nutrient bioavailability. One study compared the effects of different kinds of bread fermentation on subjects’ mineral absorption ability.

Over the course of three weeks, laboratory rats were fed either: reconstituted whole wheat flour (white flour plus bran), yeast bread, sourdough bread or none (controls). The favorable results for sourdough were as follows:

- Magnesium absorption was significantly greater in rats fed the sourdough diets than in those consuming whole wheat flour and yeast bread.
- Sourdough bread enhanced iron absorption.
- Zinc absorption was strongly depressed in the presence of unprocessed whole wheat flour in the diet, whereas
- Sourdough bread led to maximal zinc absorption.

- Copper absorption increased significantly when rats were fed the sourdough bread.

It's evident that sourdough bread belongs in an entirely different category from white and even whole wheat bread, and should be made a delicious, regular addition to a healthy diet.

National Geographic, Apr. 2015, Book Talk with Dan Buettner, author of *The Blue Zones Solution*, <http://news.nationalgeographic.com/2015/04/150412-longevity-health-blue-zones-obesity-diet-ngbooktalk/>

NPR, Eat to Break 100, Apr. 2015, <http://www.npr.org/sections/thesalt/2015/04/11/398325030/eating-to-break-100-longevity-diet-tips-from-the-blue-zones>

Nutrition, 2003, Vol. 19, No. 6, pp. 524-30, <http://www.ncbi.nlm.nih.gov/pubmed/12781853>

Nutrients, 2010, Vol. 2, No. 4, pp. 449-73, <http://www.ncbi.nlm.nih.gov/pubmed/22254033>

#### Diabetes Stats Illuminate Need for Prevention

After looking at data from the National Health and Nutrition Examination Surveys (NHANES), which included over 26,000 U.S. adults and spanned from 1988 through 2012, researchers have reported in JAMA that in 2011-2012, 10% of the adult population had diabetes.

Much more alarmingly, the study found that in that year 38% of U.S. adults had prediabetes. Prediabetes is diagnosed when blood sugar levels are elevated, but not quite to the threshold that demarcates diabetes.

#### The Data

For the commonly used Fasting Plasma Glucose test, during which people refrain from eating for eight hours before their blood is drawn, results are interpreted as follows:

- Normal if your blood sugar is less than 100 mg/dL
- Prediabetes if your blood sugar is 100-125 mg/dL
- Diabetes if your blood sugar is 126 mg/dL or higher

Age-standardized diabetes prevalence was higher among African Americans, Hispanics and Asians (at over 20%). Prevalence among whites was 11%.

In the big picture from 1988 to 2012, diabetes prevalence increased, but the authors note that this is significantly due to a rise in diagnosed cases. Still, by every metric prevalence increased: among each age group, both sexes, every racial and ethnic group, and every education level and income level—with a particularly rapid increase among non-Hispanic black and Mexican American participants. Undiagnosed diabetes dropped over the study period—a small silver lining in the otherwise fairly stark findings.

#### Prevention

The Lancet Diabetes & Endocrinology has published a long-term follow-up to the Diabetes Prevention Program (DPP), finding diet and exercise continue to be the best ways to prevent type 2 diabetes.

The DPP involved almost 2,800 adults in a randomized trial, in which they were assigned to a behavioral lifestyle intervention (diet and exercise), the medication metformin (e.g., Glucophage) or placebo.

The interventions lasted about three years. All participants were offered lifestyle training at the end of the DPP, with the vast majority then followed for over a decade in the Outcomes Study.

The primary outcomes were the development of diabetes and the prevalence of microvascular disease. Also known as small vessel disease, this is a narrowing of the small arteries in the heart most commonly seen in people with diabetes and/or high blood pressure.

During a total 15 years' follow-up, diabetes incidence was reduced by 27% in the lifestyle group and 18% in the metformin group, relative to the placebo group. In women only, the lifestyle intervention reduced risk for microvascular complications by about 20% relative to metformin or placebo.

Those who did not develop diabetes in the first place had a lower prevalence of microvascular complications than those who did develop diabetes. The authors point out that this result highlights the importance of diabetes prevention.

#### Diet and Exercise Recommendations

People who are overweight are more likely to see their prediabetes turn into diabetes. Experts say that losing as little as 5% to 10% of your body weight can make a positive difference.

Moderate exercise for at least 30 minutes a day helps prevent and manage diabetes. Though this can include as simple an activity as brisk walking, aerobic exercise—after checking with your doctor if you are sedentary—is ideal.

And finally, lean protein, fiber-rich fruits and vegetables, legumes and whole grains are much more effective in preventing spikes in blood sugar than highly refined carbs and foods with added sugar. Controlling serving sizes and overall caloric intake is also important, something that consuming filling, high-fiber foods can help you do.

JAMA, 2015, Vol. 314, No. 10, pp. 1021-1029,  
<http://jama.jamanetwork.com/article.aspx?articleid=2434682>

The Lancet Diabetes & Endocrinology, published online Sept. 13, 2015,  
<http://www.thelancet.com/journals/landia/article/PIIS2213-8587%2815%2900291-0/abstract>

## THE CLINIC

### After Surgery, Runners Take Caution

After running for nearly ten years, I started having knee problems about a year ago. After lots of physical therapy and cross-training, I had arthroscopic surgery 12 weeks ago. Loose bodies and damaged tissue under the patella were removed, the patella was smoothed out, and a lateral release was done. I have been doing quad strengthening exercises (leg presses, step-downs, and wall squats to 45 degrees, and riding my exercise bike.

Although by all standards my knee is better, I still have some pain. Both my orthopedist and my chiropractor have said that it is OK to start running again. The pain is only in the area of the incisions, not

like pre-surgery pain. Is it really OK to start running again, building to long distances? I'd like to train for a marathon next year.

Lucy Johnson  
Fayetteville, AR

If your pain is due to tightness around the arthroscopic portals (surgical incisions), the adherent tissue can sometimes be loosened by specific scar massage techniques, best provided by a sports-oriented physical therapist.

However, this tissue may gradually loosen up over time. There's less concern about your pain as long as it is not pain within your knee joint. Any recurrence of swelling, patellar pain, or any tendency for your knee to "give-out," should prompt re-evaluation by your orthopedist.

As to a full return to distance running, the prognosis is less encouraging. In general, once damage to a weight-bearing joint, such as the knee, has occurred, running, especially long distances, is usually advised against.

The cumulative trauma from the repetitive impact of running is likely to cause further joint damage and can set the stage for future osteoarthritis. The loose bodies that were removed were most likely fragments of cartilage, meaning you now have less cartilage to cushion your joint. The lateral release may result in a better balance of forces across your kneecap, reducing the chances of further loose body formation.

A search for any biomechanical factors that may have contributed to your original problem would be very worthwhile, again to reduce the chances of future problems. These factors might include a leg length discrepancy, which can be either structural or functional (for example, always running on the same side of a banked surface), over-pronation, or imbalances in muscle strength or flexibility. Your orthopedist or physical therapist would be able to evaluate these conditions.

If you decide to return to running, do so cautiously. Do not ignore any knee joint pain or swelling (as opposed to incision pain). Make all increases in distance very gradually, warm up thoroughly, stretch, run no more than every other day to allow recovery, minimize hills and banked surfaces, get a professional recommendation for shoes appropriate for your specific conditions, and make sure you replace them before they wear out.

Brian Bowyer, MD  
Columbus, OH

## **Running With Osteoporosis**

I have been running competitively since elementary school. I am now 47 years old. Last year my doctor recommended a bone density scan because of lower back pain I had, especially after running. The result showed osteopenia (slightly reduced bone mass) of the lower spine. I continued to run my usual 35 miles per week, reducing my pace. A follow-up bone density scan was done this year and showed further bone loss, resulting in osteoporosis of the lower spine. Should I continue to run?

Annette Marella  
St. Augustine, FL

Osteoporosis and osteopenia are important health issues, particularly for postmenopausal women and for women who have menstrual irregularities, which is not uncommon among competitive and elite female runners.

Typically, weight-bearing activities like running help to maintain bone density, or at least to slow the decrease in bone density. Therefore, in the absence of menstrual irregularity, running itself is not contraindicated for women who are osteopenic or osteoporotic. Further, slowing your pace most likely will not influence your bone density.

The issue of your back pain is another matter. It is frequently misunderstood that osteopenia and osteoporosis result in back pain. Only if there is an associated spinal fracture would osteoporosis be the indirect cause of back pain.

However, there are numerous other reasons for back pain that are unrelated to osteopenia or osteoporosis. You need a thorough medical assessment addressing the cause of your osteoporosis as well as the cause of your lower back pain. Until these two issues are clarified, I would not discontinue running. Once all of the medical information is obtained you can determine if running will make it worse. You should see a sports medicine specialist to address the issues associated with both the cause of osteoporosis and the cause of your back pain. Osteoporosis, in itself, should not limit your running.

Stuart M. Weinstein, MD  
Seattle, WA

## **Heel Pain Could Be Plantar or Achilles Related**

I am a 51-year-old runner. I have been running for eight years. I usually run three and a half miles, three to four times a week. Recently I have developed an aching pain in my right heel. This occurs when I walk and especially when I run, pushing off on my right foot. I had plantar fasciitis in this foot about three years ago.

Is the pain on the back of my heel related to the plantar fasciitis? What should I do? Will this get better if I rest? I would like to continue running as long as possible, but worry that I should quit.

Doreen Kopchik  
Grand Rapids, MI

At 51 years old, your running career is not over! You may need to make several adjustments in your training in order to continue running, but your outlook is still good. Your current heel pain is very likely related to your history of plantar fasciitis.

You should be able to manage very successfully with appropriate conservative care. The plantar fascia is a tight band of inelastic tissue that runs from the toes along the arch and inserts in the heel bone.

Pulling of this ligament on the bone during running can cause microtears within the ligament and muscle leading to inflammation, pain and swelling. The band of tissue continues around the back of the heel, which may be causing your current symptoms. Activities that increase the pull of the plantar fascia on the heel bone will worsen the condition. Additionally, a tight Achilles tendon can place excessive stress on the back of the heel.

Treatment should begin with removing the stress caused by repetitive excessive pull of the plantar fascia on the heel bone. This includes relative rest and cross-training with low impact activities. Deep-water pool running is your best choice both to reduce heel stress and maintain your training gains. Cycling is also acceptable.

You should also ice your heel. Fill a bucket or large pan with cold water and ice cubes, then immerse the heel directly into the icy water. You will probably be able to tolerate the cold for about four to five minutes at a time and repeat every 20 minutes several times a day. Using non-steroidal anti-inflammatory medications such as ibuprofen, as directed, will also help eliminate pain and inflammation.

A night-splint can be helpful and effective for stretching the plantar fascia and Achilles tendon. Before you return to running, make sure you are using shoes that provide adequate arch support. You may need to consider using orthotics or inserts that can help reduce excessive motion and redistribute pressure off the heel. Find a professional running shoe store with a knowledgeable staff to help you find the right combination.

Since you've had problems before, it would be a good idea to see a podiatrist or a sports medicine professional to evaluate your biomechanics to determine whether a prescription orthotic might help prevent recurring pain. Stretching the Achilles tendon before and after running is an essential part of effective prevention. Also make sure you allow adequate rest and recovery between workouts and make any increases in your training very gradually.

Matt Werd, DPM  
Lakeland, FL

If the pain is primarily on the back of the heel, the problem may be at the insertion of the Achilles tendon. All the above treatments will help, but adding a 1/4-inch heel lift (in both shoes for balance) will also help.

Paul Taylor, DPM  
Silver Spring, MD

### **Hip Pain? Don't Rule Out The Back**

I am a 43-year-old runner with pain on the top right (lateral) side of my right thigh just below where it meets the hip. I've had this problem for about a year. I ran the Chicago Marathon and the Twin Cities Marathon without problems. However, about a month after Twin Cities the pain began without any obvious cause since I'd cut my mileage to about 25 miles a week at the time. The pain gradually worsened until I could no longer run without pain. After about four weeks of rest I gradually began to run again, but I have not been able to run more than about nine miles per week without the pain coming back. Cross-training with a bicycle, recumbent bike, and even deep-water running all seem to aggravate the problem.

The pain is worse when I'm driving a car. A physician diagnosed the condition as trochanteric tendinitis/bursitis, but despite a steroid injection in the region of the greater trochanter and ultrasonic therapy, I still have pain. Do you have any suggestions?

Douglas Feitzer  
Toronto, ON

At times, what appears to be an iliotibial band problem or trochanteric bursitis may in fact represent some other type of underlying condition.

This could include a primary problem with the hip joint, stress fracture, or possibly even pain referred from the lower back. An MRI of the lower back, as well as the hip, might prove helpful.

If, in fact, your problem is trochanteric bursitis, the condition is often associated with tightness and inflexibility of the iliotibial band, which is a soft tissue structure traveling from the outer aspect of the hip along the outer thigh toward the knee. Even without experiencing pain in the thigh or knee, as in a typical iliotibial band syndrome, a tight or contracted iliotibial band can often result in pain at the region of the trochanter.

There is a fluid-filled sac, or a bursa that overlies the trochanter, which can become inflamed. It is possible that the second marathon may have mechanically overloaded these structures. You may also have had a subtle injury that had gone unrecognized. Frequently, iliotibial band problems are associated with biomechanical dysfunction, either around the hip girdle, including weakness of the hip abductors and extensors, or possibly even more distally, an inflexibility of the calf and Achilles, as well as problems with hyperpronation.

Try eliminating all activities for a more extended period, to see if you can bring this problem under some control. At the same time, I would strongly recommend starting a comprehensive physical therapy program to assess your gait and to provide you with specific stretching and strengthening exercises. It is possible that simple iliotibial band stretches may be enough to help eliminate this problem.

Stuart M. Weinstein, MD  
Seattle, WA

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## The Back Page

Return to X-Country Coaching – the Joy

The first hint of fall for most people is when evening temperatures drop into the 50s and you have to don a sweatshirt or sweater. In my case, all I need to do is see a group of high school or college kids running on a path or trail. It's summer training yet in less than a month, we will see them daily for morning workouts. This is the 6<sup>th</sup> season that I have joined the ranks of cross-country coaches. I have written about some of the experiences over some past seasons. One thing rings true about cross country. It has a certain joy about it that sets it apart from track and many other sports. That joy brings me back

The late summer training in August is similar to the horse trainers in Virginia, Kentucky and elsewhere. For them it's the two year olds on their first paced gallops. Do they have a possible 3 year old that can race? Before anyone cringes thinking that I am equating young horses with kids, just go with the sports metaphor and comparison. In August, we keep a keen eye out for the new freshman or the new student to the school who may have run track but skipped x-country his or her freshman year. Somehow it's that first run beyond a warm-up jog that catches your eye. It can be how they stick on the shoulder of a veteran runner at the end of a rolling 5 mile run. Sometimes, it's the look on their face after that first up-tempo 1200m circuit. They are not fazed, not doubled over in pain. There is no moaning and request to sit out the next interval. They merely give you that nod in the affirmative when you ask them if that felt OK. Not a lot of conversation. Just that nod and they walk over near the older kids on the team. That is when you know you might have something or someone who can jump in and contribute on the top 7.

Coaches are always looking and doing projections into the months ahead. Can that fair-haired freshman boy who is so thin you are afraid the wind gusts on an open plain will blow him off the course be able to stay health for 3 months of pounding and training for 5- 6 days a week? Will the junior girl assume the role you envision of her becoming that #1 runner? You see the speed and the gained strength. What will it take to convince her to push that first 2 miles in her next race and see what happens? Then you look at the freshman boy who has grown 8 inches in one year. He stumbles forward when he runs. He clings to a group of other freshman boys during runs. He just wants to make it and blend in. But you see something that brings back memories of a 115 lb. freshman with long hair and not much else. He blended

in too. That blending-in carried on for a couple more years but then something clicked and that once semi-visible athlete was 20 lbs. heavier and light years more confident. He becomes your #1 runner and earns a spot in the State Meet. On this August day, you look at today's awkward freshman boy and you pause a second time. You smile and tell him to hang in there. Compliment his form and tell him to put the shoulders back and relax those arms. You simply hope that maybe in 2-3 years, he will blossom and some switch in his brain will propel him forward to being a confident and competitive x-country runner.

The other joy of early season cross country coaching is the get-away to camp. For the West Springfield HS team (Springfield, VA), we continue a tradition that started almost 40 years ago by the long-standing coach who hailed from nearby West Virginia. His idea was to take away the top 12 runners of each gender and experience tough runs, learn to become a group or team and to lie out personal team goals for the coming season. For me, the escape to Cacapon State Park in Berkeley Springs West Virginia is cross country in its purest and most fun form. You survive a mountain run, enjoy several runs each day along streams, fields and forests, and relax with teammates and coaches. Each day is about running and getting to know your teammates and how a formidable top 7 can attack some goals and achieve success. During that week when the girls arrive first and then the boys take the 2<sup>nd</sup> half of the week in the rented cabin, the coaching staff also plots what could lie ahead for the fall season. We know that someone not at this camp is going to emerge and become a vital top 7 team member. It happens every year, so we have to plan or at least envision that occurrence.

The fall 2015 season begins. Over an 8-week period, we race quad meet or developmental meets that involve the JV boys and girls. The goal is fairly simple. Get each athlete to race faster than the last Quad meet and learn to run with teammates. Some of the fastest KJV runners point to the season-ending JV Festival Meet where it's their last shot to earn a post-season roster spot. That meet concluded last week. Now our West Springfield team is preparing for the path to States as we always envision it. It's not simply the Conference (formerly District), Regional and State meet in succession. We put the emphasis on "earning a State Slot" for the teams. That philosophy only goes so far. You need the talent to hit those times and places at the Regional Meet to get to States.

Our season. In a nutshell, we are doing better than expected. Our Boys Varsity team was the state 6A Runner-up one year ago with 6 seniors. It could easily be considered a rebuilding year, but we took saw that sliver of a chance that we can end up being a lot faster and better than expected. We won an invitational in North Carolina in driving wind and rain by one point. More recently, we got beaten up on a faster course with faster competition. We are hopeful that the semi-dead legs two guys exhibited have gone away. We could grab that final spot to States. The Varsity Girls has been like a patchwork quilt. Take a seasoned senior who has explosive 800m speed and coax her into thinking she can run a much fast 5K. Add in three juniors who may someday realize they indeed can run fast. Pump up the budding sophomores so they can possibly contribute and close the cliff-like gap between #5 and the #6-7 duo. Lastly, cross your fingers that the talented junior who splits time in the sport of soccer will give it her all in the post-season. When you add up that mix, we have a Girls team that can get to States

So the Joy of cross country lured me back. It's always something new each year as the faces and personalities change. The hills and rolling fields with a cut trail is all you need. Give me a call and I come back.

Weini and Drew – Can Two Virginia prep runners win National Titles in the same year?  
From the same region of Loudon County Virginia yet one is far from home

The role of the assistant coach in cross country regardless of age is similar. We assist the team and follow the direction of the head coach. Sometimes your roles are more defined due to your expertise. Then again you have to help the head coach in other ways especially if a world-class talent drops on your doorstep and you have to “not screw it up”. That is how I would initially feel if Weini Kelati had moved 30 miles further east of Leesburg Virginia. In the fall of 2014, a talented girl named Weini (Why-knee) moved to the U.S. to go to school while living with her uncle. She came from Eritrea, the former war-torn country adjacent to Ethiopia. She had credentials that would make any coach drool. That 9:06 3K for starters. Across Loudon County are two parents who have a large family of boys and girls, some adopted and the rest their own. They are both former star runners and were the coaches of Alan Webb, the American record holder in the mile, in his freshman year. Their eldest son Andrew or Drew is on the path to challenging for the Boys National High School title.

I had the privilege to watch the speed and determination of both Weini and Drew in a late season cross country invitational in Winchester Virginia. It was held on a course that saw over 1500 Civil War soldiers killed in the latter stages of the Civil War. It is aptly named the 3<sup>rd</sup> Battle of Winchester. The course is accurately measured assures the Meet Director, as fast times are produced almost every year. This year was no exception.

Weini blasted out the first mile in 5:05 or so and kept on pushing the pedal to the point she had a lead of over a minute coming to the final 200m. It was a minute lead over a no-slouch runner too. In 2<sup>nd</sup> place that day was the defending VA 6A State Champion and NXN Southeast Champion Rachel MacArthur. Another 40 seconds back was last year's freshman sensation and 5A State Champion Heather Holt. Never had I seen 3 girls who were State Champions or the runner-up (Weini Kelati in VA's 4A race in 2014) go head-to-head and finish 1-2-3. Weini's time was 16:29 for 5K and shattered the course record set by a girl I helped coach 2 years earlier in Caroline Alcorta, now running for UNC-Chapel Hill. The time is the 2<sup>nd</sup> fastest time run in cross country this season in the U.S.

Thirty minutes later it was Drew's turn. He did not sit back. Out he charged once the pack hit the trail in the woods that make up the battlefields of the 3<sup>rd</sup> Battle of Winchester. The 4:40 mile pace was fine with him. In fact, he dipped the pace into the 4:30s when it became clear he could run under 14:30. When he went by me he let it all out. The singlet and shorts were flying and he was too. His final time was a U.S. #1 time of 14:20

Keep an eye out on Drew and Weini. They may hail from different corners of the world, but their cross country success was born in Virginia.

The “Border War” turns 10.  
State vs. State Competition showcases the best of high school cross country

Wearing a singlet in high school means representing your high school team in track or cross country. It was a prideful thing. You were proud to be a Bruin, a Spartan or a Wolverine. The Battle of the Potomac XC Championship extended that thought to focus on the state or entity (as in the District of Columbia) where you came from. It was all about “repping your home”. Pride and state rivalry were the focus back

in 2006 when American Running's Dave Watt and his two co-chairs Hal Danoff and Bruce Gross came up with the idea to showcase the sport that is one of the best antidote to youth obesity and youth overweight. They used the Nike event "The Border Clash" as the model. Nike's Chairman had provided financial support to the earlier American Running Honors Galas and the hope was that he'd continue to support a youth running event that was modeled after the one pitting Oregon vs. Washington in a high school x-country race. The first year took some barnstorming and just being a campaign huckster to convince kids, parents and coaches to give this new post-season running event a try. There were 115 willing runners in the first year. The dual start worked. The Red MD Nike Singlets vs the Navy Blue VA singlets made it appear to be an oversized dual meet. Throw in the fresh barbecue chicken that is the staple of Smokey Glen Farm and we had something.

Over the past 9 years, there has been steady interest each year to run the event simply nicknamed the "Border War. We use the name XC Border War on tees and web materials, yet everyone knows it is the "Battle" of cross country pride for the states of West Virginia, Virginia, Maryland, and the District of Columbia. They all border the Potomac River, hence the "XC Border War"

The 10<sup>th</sup> running of the Battle of the Potomac promises to be just like prior years. Sure there are athletes who come for the chicken dinner, others covet the Nike singlet and then others want to race the rolling hills and enjoy the trifecta of racing, a singlet and barbecue chicken.

For information, registration and photos go to [www.battlexc.com](http://www.battlexc.com)