

RUNNING & FITNEWS®

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The Fate of *FitNews*: Just Two Issues Left

On the Back Page of the Nov/Dec 2016 issue, [executive director Dave Watt announced big changes](#) ahead for the American Running Association (and its professional medical arm, AMAA). At that time, details were still being sorted out; now the ARA is prepared to announce that the last regularly published issue of *Running & FitNews*® will be May/June 2017.

While it is at this point conceivable that some version of this publication may emerge in the undetermined future, it is accurate to say that *FitNews* will not continue as we now know it.

The genesis of this and other major changes in the structure of both the ARA and AMAA was the decision by the Boston Athletic Association in June of last year to alter the rules for charity eligibility in the Boston Marathon, the cornerstone of the ARA/AMAA funding model.

The BAA's new rules for granting charity slots in the marathon require that a charity only be given an allotment of race entries if the group is directly tied to helping the greater Boston area. For the D.C.-based ARA, this requirement will go unmet, and so it effectively eliminates funding for the ARA's core programs such as the Youth Fitness initiative, specifically NATIONAL RUN A MILE DAYS.

Over the past several years, AMAA's race entry allotment had already been shrinking; according to Dave Watt, in 2012 AMAA enjoyed 115 entries, but held just 75 by 2016. Now the allotment has been altogether eliminated, with zero entries granted for would-be symposium goers in 2017.

While the future of the ARA and AMAA is uncertain, the goals of both organizations have not disappeared. While AMAA is presently looking for a home under the [International Institute for Race Medicine](#) (formerly ARRMS), some incarnation of the ARA may regrow that can still focus on increasing the physical activity of Americans, raise obesity awareness, and educate and motivate both the sedentary and the already active, from the very young to the very old.

Whether a rebirth is successful won't undo the work that has already been done, and the mission lives on in millions of citizens who have already embraced the fitness message and will continue to share it going forward regardless of the fate of any given not-for-profit. The fitness movement is here to stay, and *Running & FitNews* has for nearly four decades been proud to have been a part of it.

Beach Umbrellas Not Enough to Protect Against Sun

As beach season approaches, a useful and somewhat counterintuitive new study published in *JAMA Dermatology* is worth keeping in mind.

To explore the effects of sun exposure on people using different forms of protection, the study randomized 80 subjects into two groups. One group was instructed to apply sunscreen every two hours while on the beach for 3.5 hours beginning at midday. The other group used UV-blocking beach umbrellas to protect them from the sun at the same time of day and for the same duration.

The sunscreen group, which utilized a very strong SPF-100 sunblock, fared better than the group seeking shade under beach umbrellas. One day after sun exposure, the participants were evaluated for sunburn by a clinician. The umbrella group had a total of 142 sunburned areas, as opposed to only 17 such areas in the sunscreen group.

Another way to frame this data is to compare the differences between the two groups as measured against their baseline level of sunburn. Compared with baseline, global sunburn scores increased significantly in 78% of the subjects in the umbrella group versus 25% in the sunscreen group.

While the study was relatively small, the differences in the outcomes between umbrella shading and strong sunscreen are certainly meaningful. It is worth noting here, as the authors do in the study, that even still, neither method completely prevented sunburn from all seven areas of exposure on the body that were examined after the day of sunbathing. And this study highlights what is known about UV exposure: shade works by physically shielding skin from direct harmful UV rays, but skin may still remain exposed to reflected and indirect UV rays. It remains a best practice to use a combination of sun screen protections to minimize risk of UV ray exposure, especially given the significant rise of skin cancers in recent years.

Sun exposure is one major way for humans to get sufficient vitamin D—our skin manufactures it when in contact with sunlight. Yet, [as we explored in the previous issue](#), several leading endocrinologists have been arguing lately for a lowering of the currently accepted threshold level of 20, feeling that many clinicians are overscreening for and unnecessarily treating perceived vitamin D deficiency.

Over the past three decades, more people have had skin cancer than all other cancers combined. With statistics like this, it may be time to prioritize aggressive UV protection over the benefits of exposure on vitamin D production. For more info on identifying potentially cancerous skin irregularities, see “Check Yourself for Skin Cancer” in this issue.

JAMA Dermatology, 2017, Vol. 153, No.3, pp. 304-308,
<http://jamanetwork.com/journals/jamadermatology/article-abstract/2597893>

Check Yourself for Skin Cancer

Even if you are diligent about applying sunscreen and wearing protective hats and clothing outside, it may not be enough. A regular head-to-toe self-exam can help detect early signs of skin cancer. By checking your skin regularly, you'll learn what is normal for you and can more easily note abnormalities you should call to your doctor's attention.

After all, between 40 and 50% of Americans who live to age 65 will have either basal cell carcinoma or squamous cell carcinoma at least once. Basal cell carcinoma (BCC) is the most common form of skin cancer, with more than 4 million cases of BCC diagnosed in the U.S. each year. Squamous cell carcinoma (SCC) is the second most common form of skin cancer. More than 1 million cases are diagnosed in the U.S. annually.

Melanoma is a third type of skin cancer—much less common than basal cell and squamous cell skin cancers. However, melanoma is very hazardous due to its increased likelihood of spreading.

Additional skin cancer stats from the Skin Cancer Foundation

- Each year there are more new cases of skin cancer than the combined incidence of cancers of the breast, prostate, lung and colon.
- Over the past three decades, more people have had skin cancer than all other cancers combined.
- Organ transplant patients are approximately 100 times more likely than the general public to develop squamous cell carcinoma.
- Actinic keratosis is the most common precancer; it affects more than 58 million Americans.
- Each year in the U.S. over 5.4 million cases of nonmelanoma skin cancer are treated in more than 3.3 million people.
- About 90% of nonmelanoma skin cancers are associated with exposure to ultraviolet (UV) radiation from the sun.
- The annual cost of treating skin cancers in the U.S. is estimated at \$8.1 billion, about \$4.8 billion for nonmelanoma skin cancers and \$3.3 billion for melanoma.

Checking for skin cancer

The following was compiled by Matthew Solan, the executive editor of *Harvard Men's Health Watch*, from info supplied by the National Institutes of Health Senior Health.

The best time to check your skin is after a shower or bath. Using a full-length mirror and a hand-held mirror in a room with plenty of light, follow these five steps to check yourself from head to toe:

1. Look at your face, neck, ears and scalp. Consider using a comb to move your hair for better visibility. If necessary, have a relative or friend check your scalp through your hair.
2. Look at the front and back of your body in the mirror. Then, raise your arms and look at your left and right sides. Bend your elbows. Look carefully at your fingernails, palms, forearms top and bottom and upper arms.
3. Check the back, front and sides of your legs. Also check the skin all over your buttocks and genital area.
4. Sit and closely examine your feet, including your toenails, the soles of your feet and the spaces between your toes.
5. Learn where your moles are and their usual look and feel. Check for anything different, such as:
 - a new mole that looks different from your other moles
 - a new red or darker-colored flaky patch that may be a little raised
 - a change in the size, shape, color or feel of a mole
 - a sore that doesn't heal
 - a new flesh-colored firm bump

Write down the dates of your skin self-exams and make notes about the way your skin looks on those dates. You might want to take photos to help monitor changes in moles over time. If you notice anything unusual, speak to your doctor.

Harvard Health Publications, March, 2017, http://www.health.harvard.edu/staying-healthy/checking-for-skin-cancer?utm_source=delivra&utm_medium=email&utm_campaign=WR20170324-Skin&utm_id=438870&dlv-ga-memberid=10660158&mid=10660158&ml=438870

Skin Cancer Foundation, Updated Feb. 2, 2017, <http://www.skincancer.org/skin-cancer-information/skin-cancer-facts>

A Look at Some Effective Home Remedies

It's probably a safe bet that most readers of *Running & FitNews* are big fans of evidence-based medicine that deploys well tested treatments shown to be effective through randomized clinical trials. Still, this is not to say that certain home remedies do not have a place on the treatment spectrum. *Harvard Women's Health Watch* executive editor Beverly Merz recently assembled information on home remedies that may save you money and help keep the doctor away. Certain conditions that aren't deadly serious or that lack surefire cures are good candidates for home treatment. Here we look at some.

Advantages to home remedies

Home remedies are inexpensive. Even though prescription drugs and over-the-counter products may be available for some conditions, home remedies may also be effective at a fraction of the cost. For example, the price of a year's supply of efinaconazole (Jublia), used to treat toenail fungus, is several thousand dollars. A tub of Vicks VapoRub—read on for details—is around \$24.

Home remedies are also readily available when you need them. You may already have them in your kitchen cabinet or on your bathroom shelves. If not, they're likely to be as close as the nearest 24-hour drugstore or supermarket.

Evidence of effectiveness

Hundreds of testimonials for a home remedy on the internet may provide some assurance that it may help and probably won't hurt you, but evidence from a well-conducted scientific study is far preferable. For example, a small study published in the *Journal of the American Board of Family Physicians* in 2011 demonstrated that Vicks can help eliminate toenail fungus.

In that study, 15 of 18 volunteers with fungus-infected toenails had significant improvements, and five had complete eradications of the fungus, after daily applications of Vicks for a year.

And chicken soup as a cold remedy has undergone scientific scrutiny as well. A clinical study published in *Chest* in 1978 demonstrated that drinking chicken soup increased the flow of nasal mucus significantly more than drinking either hot or cold water.

The remedies listed below have been tested in clinical studies that have been published in peer-reviewed medical journals.

Caveats

Some innocuous-seeming home remedies can have dangerous side effects. For example, baking soda dissolved in water, once recommended for relieving indigestion, has sent hundreds of people to the emergency room with electrolyte imbalances. If you're taking any home remedy

for an extended period, you may want to check with your doctor to see if there are any risks involved.

Harvard Health Blog, March 22, 2017, http://www.health.harvard.edu/blog/home-remedies-that-may-be-worth-a-try-2017032211444?utm_source=delivra&utm_medium=email&utm_campaign=BF20170327-Feet&utm_id=441563&dlv-ga-memberid=10660158&mid=10660158&ml=441563

Can We Stave Off The Age of *WALL-E*?

In the cheerful but distinctly cautionary 2008 Pixar film *WALL-E*, the slide into widespread, morbid levels of human adiposity is complete. The movie depicts a distant future in which the best our atrophied species can do is ride around in powered cars, always sitting, scarcely turning their heads as they consume huge amounts of sugary soft drinks from sippy cups like giant infants, too weak to self-propel or, really, to even stand up. Every service is automated, every experience of physical activity virtual.

Most unsettling of all, these distant cousins of ours seem entirely content to live this way. The battle for hearts and minds in the health and fitness wars has been utterly lost. This disturbs, if amuses, us as present-day viewers in large part because the sheer complacency with which the humans in the movie experience this plus-sized dystopia clearly dooms them to live in it forever. It also offends our sense of the human spirit, the trying always for a better self and a better world. These folks have given up.

Courtesy of Walt Disney Studios

Now, a research letter published in *JAMA* offers evidence that this may well be the trend we are on. We may still be in the phase where this is a valuable warning shot, but the data suggest there are an increasing number of hearts and minds to win over every year in the above-mentioned health and fitness wars.

The study examined data from The National Health and Nutrition Examination Survey (NHANES) to determine trends in weight-loss attempts over two and a half decades, and what it has found is increasingly *WALL-Esque* levels of complacency creeping into the national psyche: Each year, overweight adults are less and less likely to try to lose weight than overweight adults from earlier generations.

Using the NHANES data, researchers examined attempts at weight loss in 1988–1994, 1999–2004 and 2009–2014. Overall, 27,000 overweight or obese adults aged 20–59 reported whether they had tried to lose weight in the previous 12 months.

The percentage of respondents who reported weight-loss attempts declined from 56% in the earliest period to 49% in the latest. The decline was largest among cohorts with the highest obesity prevalence.

The authors write that these results may be due to body weight “misperception,” which could reduce motivation to engage in weight loss efforts. They also wonder whether primary care clinicians are more often avoiding weight discussions with patients. Surely an additional factor is that, as the authors write, “[T]he longer adults live with obesity, the less they may be willing to attempt weight loss.”

While the solid 7% increase in weight complacency does not yet require a declaration that the battle is lost and the sky is falling, there is scant evidence to suggest that this trend will suddenly reverse among the populations most harmed by unhealthy weight gain, even as many others among the wider population are seeing the value of regular physical activity and taking up its mantle.

If instead the trend continues, we may see slides into greater complacency at a rate far beyond 7% over two and a half decades. But beyond this 26-year look at increased complacency with unhealthy body weight, we can look back even further using CDC and NHANES data to identify alarming changes in obesity trends in general.

Trends from the 1960s to 2000

- The percent of obese adults (BMI 30 or greater) increased over four decades from the 1960s to 2000, as the percentage of adults with healthy weights declined.
- The percent of obese adults varied little from 1960 to 1980 but increased considerably between 1980 and 1991, from 13 to 21% among men and from 17 to 26% among women.
- This trend continued in 1999–2000, with an increase in obesity of 28% of men and 34% of women.
- The percent of adults with healthy weights declined approximately 10% from 1960 to 1994, with an additional decline of approximately 8% from 1994 to 2000.

These longer-term trends shed light on why over the last quarter century the proportion of overweight adults attempting to lose weight has declined significantly. If socially acceptable body weight is in general increasing, it may be due in part to the increased commonality of obesity and overweight in the culture, which can begin to normalize it. In turn, if more individuals who are overweight or obese are satisfied with their weight, fewer might be motivated to lose unhealthy weight, compounding the normalizing effect.

JAMA, 2017, Vol. 317, No.9, pp. 971-973, <http://jamanetwork.com/journals/jama/article-abstract/2608211>

CDC, *NHANES Data Brief*, 2000,
<https://www.cdc.gov/nchs/data/nhanes/databriefs/adultweight.pdf>

B12 Deficiency Can Be Serious

Even as in the last issue we discussed recent, increased vitamin D deficiency overdiagnosis (call it “vitamin D sufficiency”), there can of course be legitimate gaps in our nutrition that are far more common than others. One deficiency with many causes that can lead to health trouble is vitamin B12 deficiency.

Vitamin B12 helps the body manufacture red blood cells and nerves; it also helps with DNA maintenance and other functions. The current recommended intake for B12 is, for the average adult, 2.4 micrograms per day. Like most vitamins, B12 can't be made by the body and so is classified as an “essential” vitamin. Some people don't consume enough vitamin B12 to meet their needs, while others can't absorb enough, no matter how much they consume.

Vitamin B12 deficiency is therefore relatively common, especially among older people. The National Health and Nutrition Examination Survey (NHANES) estimates that 3.2% of adults over age 50 have a seriously low B12 level, and up to 20% may have a borderline deficiency.

What are the possible health outcomes of B12 deficiency?

According to a case report from Massachusetts General Hospital published in *NEJM*, over the course of two months, one 62-year-old man developed pins and needles sensations in his hands, had trouble walking, suffered severe joint pain, became progressively short of breath and turned yellow. The cause was lack of vitamin B12 in his bloodstream. Worse than all of this, a severe vitamin B12 deficiency can also lead to deep depression, paranoia and delusions, memory loss, incontinence, loss of taste and smell and more.

Who is at risk for B12 deficiency?

Of the many causes of B12 deficiency, two of them can confound us because they are practices frequently undertaken to improve health: a vegetarian diet and weight loss surgery.

It's important to remember that plants don't make vitamin B12. The only foods that deliver it are meat, eggs, poultry, dairy products and B vitamin-enriched pastas and cereals. Strict vegetarians and vegans are at high risk for developing a B12 deficiency if they don't eat grains that have been fortified with the vitamin or take a vitamin supplement. But the popular gluten-free and low carbohydrate diets that have been embraced by millions of people in recent years can eliminate even these supplemental sources of B vitamins that would otherwise be consumed.

People who have stomach stapling or other form of weight-loss surgery are also more likely to be low in vitamin B12 because the operation interferes with the body's ability to extract vitamin B12 from food.

Conditions that interfere with food absorption, such as celiac or Crohn's disease, can cause B12 trouble (as well as necessitate dietary modifications that can interfere with B12 intake, like eliminating foods containing gluten). Note too that use of commonly prescribed acid reflux medications can interfere with the stomach acids needed to absorb vitamin B12. The condition is more likely to occur in older people due to the cutback in stomach acid production that often occurs with aging.

How to recognize a B12 deficiency

Vitamin B12 deficiency can manifest both fairly quickly or very gradually. The condition can also be overlooked or confused with something else since the symptoms are wide-ranging. These may include:

- strange sensations, numbness or tingling in the hands, legs or feet
- difficulty walking (staggering, balance problems)
- anemia
- a swollen, inflamed tongue
- yellowed skin (jaundice)
- cognitive difficulties and memory loss
- paranoia or hallucinations
- weakness
- fatigue

After a clinical evaluation a blood test is needed to confirm the condition. Early detection and treatment are important. Untreated B12 deficiency can cause severe neurologic problems and blood diseases.

When to check your level

You should ask your doctor to check your B12 level if you:

- are over 50 years old
- take a proton-pump inhibitor (such as Nexium or Prevacid) or H2 blocker (such as Pepcid or Zantac)
- take metformin (a diabetes drug)
- are a strict vegetarian
- have had weight-loss surgery or have a condition that interferes with the absorption of food

A serious vitamin B12 deficiency can be corrected two ways: weekly shots of vitamin B12 or daily high-dose B12 pills. A mild B12 deficiency can be corrected with a standard multivitamin. Preventing a B12 deficiency is not difficult for many people who may otherwise be at risk. If you

are a strict vegetarian or vegan, it's important to eat breads, cereals or other grains that have been fortified with vitamin B12, or take a daily supplement. A standard multivitamin delivers 6 micrograms, well above the determined daily need of 2.4 micrograms.

If you are over age 50, the Institute of Medicine recommends that you get extra B12 from a supplement, since you may not be able to absorb enough through food. Once again, Aa standard multivitamin usually will suffice.

B12 is not really a cure

It's worth mentioning that vitamin B12 is increasingly oversold as a cure or preventive strategy for many conditions. The internet is full of pseudoscience claiming that vitamin B12 can prevent Alzheimer's disease, heart disease and other chronic conditions. There are websites devoted to B12 supplementation to reverse infertility, eczema and a long list of other health problems. There is no basis for many of these overreaching conclusions.

Harvard health points out, for example, that although B12 deficiency can be associated with cognitive decline, the leap to B12 supplementation as a means to prevent Alzheimer's disease is unfounded. Clinical studies involving people with Alzheimer's disease have not shown improvement in cognitive function, even doses of the vitamin as high as 1,000 micrograms. Plan to get enough vitamin B12 to prevent a deficiency, and avoid turning to the vitamin as a remedy for whatever ails you.

Harvard Health, Oct. 2016, "Vitamin B12 deficiency can be sneaky, harmful,"
<http://tinyurl.com/kfqhcv6>

The Health Benefits of Thinking Positive

Negative feelings are natural and inevitable at times. Any normal life has its fair share of anger, worry, resentment and sadness. But learning to recognize when and why these feelings overtake us can help dissipate them before they do lasting damage. With practice, we have the ability to generate positive emotions daily—and the health benefits are real.

Researchers at the University of North Carolina now theorize that even accumulating "micro-moments of positivity" can result in greater overall wellbeing over time. These micro-moments are simply repeated, brief periods of positive feelings, and research suggests that they can protect against stress and depression and encourage physical and mental health.

Negative feelings activate the amygdala, the brain's anxiety and fear processing center. But what happens next can influence overall health. Neuroscientists at the University of Wisconsin - Madison have shown that people with slowly recovering amygdalas once a threat comes and goes are at greater risk for a variety of health problems than in subjects for whom the amygdala recovers quickly.

Tied to this research is much evidence that the brain is plastic, or capable of generating new cells and pathways, such that it's possible to train the circuitry in the brain to promote more positive responses. A person can learn to be more positive by practicing certain skills that foster positivity.

This is the essence of cognitive behavioral therapy, which trains patients to recognize negative feelings or unhealthy cravings, and willfully pivot away from them or push through them, in particular by questioning whether the negative conclusions causing the stress are rational or true; they very often aren't.

Likewise, the Dalai Lama speaks of replacing negative feelings with positive ones, specifically anger, suspicion and distrust with patience, tolerance and compassion. Sure enough, the UNC team found that six weeks of training in compassion and kindness meditation resulted in an increase in positive emotions and social connectedness—and also improved function of one of the main nerves that helps control heart rate. The resulting variable heart rate is linked to tangible health benefits, including better blood glucose regulation, reduced inflammation and even faster recovery from myocardial infarction.

In light of all this, one way of thinking about it is to consider wellbeing a practicable life skill. By learning and regularly practicing skills that promote positive emotions, you can become a happier and healthier person.

Another similar variant of the Dalai Lama's approach is "loving-kindness meditation," which focuses on directing good wishes and positive feelings of warmth toward others. This can result in feeling more in tune with those around you.

To practice fostering positive emotions, try some of the following:

Perform kind deeds for others (e.g., give a stranger directions or help a neighbor with groceries). This exercise enhances the positive feelings in both parties.

Smell the roses (e.g., appreciate the beauty of a bird or tree on a lunchtime walk, or admire someone's outfit). Appreciating the world around you is a kind of moment-to-moment keeping of a gratitude journal.

Develop personal relationships. Building strong social connections with friends or family members enhances feelings of self worth and is associated with better health and a longer life.

Establish achievable goals. Perhaps you want to improve your golf swing or read more books. Pick some goals but be realistic—a goal that is too challenging can create unnecessary stress.

Learn something new. Developing a skill (e.g., a new language, sport, musical instrument or software program) instills a sense of achievement, self-confidence and resilience. It also

stimulates the gratification circuitry in the brain as you go from unskilled novice to more masterfully “in the zone,” an engaged, positive brain state often called flow.

Accept yourself, flaws and all. Don't view imperfections as failures, and focus on your positive attributes and achievements.

Make lemonade. Practice resilience when life hands you lemons. Rather than let loss, stress, failure or trauma overwhelm you, use them as learning experiences on the path to a better future.

Practice mindfulness. Dwelling on past problems or future difficulties drains mental resources and steals attention from current pleasures. Let go of things you can't control and focus on the present. Consider taking a course in insight meditation, a form of Buddhist meditation that sharply focuses on bodily sensations and mental events to gain insight into the here and now. There are several meditation apps for iOS and Android that can guide you through the process and make practicing daily as easy as pressing a button on your phone.

The New York Times, April 3, 2017, “Turning Negative Thinkers Into Positive Ones,” by Jane E. Brody, https://www.nytimes.com/2017/04/03/well/live/turning-negative-thinkers-into-positive-ones.html?_r=0

The Medicalization of Common Conditions

Some time ago, the Diabetes Prevention Program and other studies found that people with impaired glucose tolerance (based on a 75-gram oral glucose tolerance test) can decrease their risk of type 2 diabetes eventually developing either by an intensive supervised lifestyle intervention, including diet and exercise modification, or by metformin hydrochloride treatment.

As a result of this research, the glycemic criteria for prediabetes were expanded to include a decreased level for fasting glucose, among other changes. Although the benefit of type 2 diabetes prevention is unclear in this broader group, the Centers for Disease Control and Prevention, American Diabetes Association, and American Medical Association have promoted a web-based risk test to evaluate people at high risk for prediabetes.

JAMA Internal Medicine, as part of its ongoing Less Is More series of thought pieces and research articles aimed at calling out over-prescribing and over-treatment, estimated the proportion of the adult, nondiabetic U.S. population that would suddenly be classified as being at high risk for prediabetes.

The Less Is More series is concerned about the “medicalization” of common conditions. They in fact found that the widely endorsed prediabetes risk instrument would label more than 73 million Americans, including more than 80% of those older than 60 years, as being at high risk for prediabetes, a condition never heard of 10 years ago.

The study authors suggest a better approach to preventing obesity and its health-related complications is “emphasis on healthful diet, weight loss...and increased physical activity at all levels—by schools, the medical profession, and public health and governmental agencies.”

The medicalization of common conditions is an issue far broader than just prediabetes, the concept of which arguably has much merit. Turn on the TV and find a cable news show running any midday during the week, and the parade of new prescription drug commercials—with their comically long list of side effects seeming to far outweigh the “solution” to the condition advertised—is relentless. New medical conditions seem to appear daily.

Now, such common conditions as menopause, pregnancy, infertility, erectile dysfunction and beyond are routinely weaponized to sell evermore medications. Over the last several decades, these conditions have come to be defined and treated as medical problems. In a study published several years ago in *Social Science and Medicine*, Brandeis researchers used national data to estimate the costs of these and a handful of other common conditions on escalating U.S. healthcare spending.

The researchers evaluated 12 conditions that had been defined as medicalized by physician organizations, and for which there were current medical spending data. The other conditions considered in the study were anxiety and behavioral disorders, body image, male pattern baldness, normal sadness, obesity, sleep disorders and substance-related disorders.

Among the medical spending analyzed in the study were payments to hospitals, pharmacies, physicians and other health care providers. They found that these expenditures accounted for \$77.1 billion in medical spending in 2005—just under 4% of total domestic healthcare costs.

The study did not attempt to directly assess whether medicalization is good or bad for health and society. Yet it demonstrates the need for understanding just what the impact is, both societally and economically.

By estimating the amount spent on medicalized human problems, the important question has now been raised as to whether this spending is appropriate. It seems likely that soon the medical community may be considering policies that curb the growth of spending on at least some of these new conditions.

JAMA Intern Med, 2016, Vol. 176, No.12, pp. 1861-1863,
<http://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2560373>

ScienceDaily, May 2010, Brandeis University, "Medicalizing human conditions: A growth industry—but what does it cost?" www.sciencedaily.com/releases/2010/05/100517152536.htm

Social Sci & Med, 2010, Vol. 70, No. 12, DOI: 10.1016/j.socscimed.2010.02.019

THE CLINIC

Alternative Exercises to Ease Shoulder Pain

As I have gotten older I have had to reduce the amount of weight I lift, as well as the number of sets, due to pain in my shoulders while lifting. The pain is usually only present when I do military presses. If I am unable to lift due to work or other scheduling conflicts, I notice I can lift pain free for a while when I return. I am a 46-year-old male who has been lifting weights since about the age of 13.

I take glucosamine/chondroitin daily to help my joints. I have had one of my shoulders arthroscoped twice due to a torn rotator cuff from playing softball 15 years ago. Is there anything I can do to correct this problem, or barring that, another lift that will strengthen the same muscle group without stressing this area?

Werner E. Davis
Grand junction, CO

The rotator cuff muscles provide the stability your shoulder needs to perform the movements created by the prime movers of the joint. As you engage in a strengthening program that includes shoulder presses, your larger shoulder muscles become stronger and create a greater imbalance of strength between them and the rotator cuff muscles.

To continue with shoulder presses, you could try altering your range of motion, the angle at which you press, and your hand position, any one of which may take the burden off the shoulder that had the surgeries. You can accomplish this using dumbbells instead of a machine, which has a fixed path of movement. As noted above, a regimen of rotator cuff strengthening exercises should be added to your program. A visit to an orthopedist would help you both receive a proper diagnosis and get more details on which exercises to add.

Greg Tymon, MEd, CSCS
East Stroudsburg, PA

This sounds like shoulder impingement syndrome. People who raise their arms over their heads, as with the military press, often irritate their rotator cuff muscles and tendons. The two previous surgeries have complicated your situation. Even successful surgeries will leave scar tissue in the shoulder joint. There are several things which should help your condition:

1. Pay strict attention to your posture. Try to keep your shoulders from drooping forward throughout the day.
2. If you haven't been doing so already, start performing scapular retraction exercises. Examples include seated rows and reverse flies.
3. Eliminate movements that aggravate your shoulders.
4. For the time being replace the bench press with incline bench or DB incline bench.

5. Do front, lateral, and posterior raises instead of the military press, at least for the time being.
6. Perform shoulder and chest stretches on a daily basis—but only stretch to a point that does not aggravate your symptoms.

If these measures do not help over the next six to eight weeks, I suggest scheduling a visit with a sports medicine specialist. You may need more intensive therapeutic treatment.

Doug Lentz, CSCS
Chambersburg, PA

Ganglion Cyst or Fibroma?

I have a pea-sized lump on the bottom of the arch of my left foot, which my doctor believes may be a ganglion cyst in the plantar fascia. It swells to a larger size after I walk or run on it. I've had it for about six weeks, and it's tender to the touch; it gets irritated and painful when I run or take long walks on it.

I've tried conservative treatments like ice, stretching, a night splint, and I'm in the process of getting new orthotics. My doctor is now considering cortisone injections or surgery. I've been a regular runner for over 20 years and a marathoner for the past 10. I've been told that ganglion cysts often recur, and I am very troubled by the thought that I may not be able to run consistently again, or for long distances.

What are the various treatments and procedures for this injury, and what are the success rates? I would also like to know what the recovery times are like.

Ron Mueller
Brooklyn, NY

I've been in practice for multiple decades, including two years as a foot and ankle surgery resident, and I have never seen a ganglion on the ligament in the arch. While it is possible, it is very unlikely. What I believe this is, most likely, is a fibroma. The only treatment is excision and you never perform that unless they hurt consistently.

First, ask your doctor if (s)he was using the term cyst as a term you would understand, even though it is really a fibroma. If the answer is still a cyst on the ligament, get an MRI to confirm that it really is a cyst, get it drained, and you may do very well. If it is a fibroma (as I suspect), get your orthotics modified to fit the lump without pressing into it. Otherwise, leave it alone until it drives you nuts; surgery is the only way to get rid of it and recurrence is indeed high.

Gene S. Mirkin, DPM, FACFAS
Kensington, MD

A fibroma is indeed the more likely diagnosis, as a fluid-filled cyst (ganglion) is rarely painful. You ought to have a diagnostic ultrasound to identify for certain which type of lesion it is, how big it is, and where it is attached before you can begin to assess treatment options or get discouraged about time before a return to running. If the growth is solid and painful, surgical removal is usually very successful and has minimal disability.

David M. Davidson, DPM
Williamsville, NY

Beware of Too Much, Too Often, Too Hard

I set a PR in a half-marathon three weeks ago (1:19:36), as part of training for an upcoming marathon. My race is in 10 days, so I started tapering down from 95 miles a week to 60 miles a week. I was doing an easy recovery run when I heard a pop-and-tear as I landed. I am 42 and have been running for about four years.

After the tear I had immediate pain in my knee area and had to hobble home. I had an ACL repair about 12 years ago but have never had any knee problems since then. I have a friend who is a radiologist, so I had an MRI done that very day, and it showed a contusion of the posterolateral tibial plateau along with an effusion, but no torn ligaments or meniscus. I can't find any information about running causing this type of injury. Besides rest and NSAIDs, how do I treat it and what can I do to prevent it from happening again?

Craig Kay
San Diego, CA

It sounds like you may have had a microscopic fracture of your plateau. This is a variant of a stress fracture and really is the result of too much, too often, too long, and too hard. If this is in fact what we are dealing with here, you must learn to scale back your training to more moderate levels and incorporate more low-impact crosstraining. Ninety-five miles a week may have been too much.

Immediate treatment involves no running for several weeks, followed by one or two days at most, and then working into increased distance and intensity slowly. I had a patient who tried to keep running and had loss of joint surface cartilage in the area, and consequent long-term problems.

Swim, row, bike, or use a glider-type crosstraining machine to substitute impact activity. If you are running some in three months, consider that very good progress and don't become impatient. I am not a great fan of NSAIDs just to keep people going, as inflammation is part of the healing process, so use these with caution.

Larry Hull, MD
Centralia, WA

It would certainly be very unusual to suffer a bone contusion in the manner in which you describe. However, it is well known that bone contusions commonly occur at the time of an anterior cruciate ligament tear, and this itself is not uncommon with a simple twisting type injury. In any event, although there are no hard and fast rules, bone contusions typically take four to six months to resolve on MRI, with some most likely never resolving. It is possible that this is residual signal uptake from your original injury 12 years ago. There is really nothing you can do from a treatment standpoint for a bone contusion except time, activity modification, and analgesics. Be as active as comfort allows.

However, you must avoid impact activities such as running; substitute with swimming or

bicycling. I would also like to note that MRIs are not perfect. It's been shown that MRIs miss up to 20% of cartilage tears. If your tenderness is not directly over the area of the bone contusion on the MRI, I would question whether the MRI abnormality is in fact causing your pain. Perhaps you have a torn posterolateral meniscus that has gone unidentified on the MRI.

G. Klaud Miller, MD
Evanston, IL

The Heel Can Be Tough to Treat

I have a sore left Achilles tendon. My weekly mileage and speed have decreased with age since I began running in 1976, but I am still addicted to running. I'm 56 years old, 5' 9", 174 lbs. I have not run regularly for about eight months. I am willing to do whatever it takes to get back to it.

Prior to injury I ran 5 to 6 miles every other day, at around 8:00 pace. On the odd days I played racquetball, bicycled or used a crosstrainer. I also do weight training two to three times a week. I received ultrasound therapy for the Achilles for two months, and iced it every night, but the pain persisted.

I now only use the crosstrainer and bicycle, though I do Achilles stretches every day, and wear a heel pad in my left shoe at all times. In the past, I've had problems with my right Achilles and right hamstring. The same physical therapist helped me with these problems, but this new, left Achilles pain seems difficult to treat. Any suggestions would be greatly appreciated.

Kyle Wargo
Bethesda, MD

Without more info on the area of the tendon involved, it's difficult to say, however it seems there may be structural changes such as calcification within the tendon. I say this because the situation has not improved over time and with physical therapy. Do see a podiatrist or an orthopedist and discuss the advantages of an MRI exam.

Jeff Carrel, DPM
Williamsville, NY

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The Back Page

Boston Marathon 2017 – A look at what inspired

What made the 2017 Boston Marathon special, or for that matter, what inspired spectators and runners alike? This was my 15th Boston as Executive Director of American Running and our Sports Medicine Division or core, AMAA as members and followers call it. It was the 45th gathering or Symposium for the group that began as the Medical Joggers (AMJA). More on this later. It was the Marathon that is the central event on what has become a 3-day weekend of Expo and smaller BAA running events.

Each year there is a history marker that is celebrated. That is easy to do considering the Boston Marathon began in 1897. The major moment being celebrated was the 50th anniversary of **K V Switzer's** run in 1967. KV was Kathryn and she ended up being the first registered woman to run the historic marathon. One iconic moment captured by film and photo was early into the race when a top race official, Jock Semple, tried to rip off the bib number off Kathryn's shirt. Her bodyguard was here then-boyfriend and the older man, Jock Semple, was thwarted in his effort to disqualify her on the spot. This one moment gave birth to admitting women in marathons and eventually all longer distances competed in the Olympic Games. It was not an overnight change in attitudes, but it was a moment that changed everything for women competing in sports.

Speed ahead 50 years and **Kathryn Switzer** decides to come out of running retirement, get in shape and run the Boston Marathon once again. She wore Bib #261 just as she had in 1967 at the age of 20. Here she was in 2017 running with purpose in a celebratory way. All marathoners applauded for today and for what she did back in 1967. Bobbi Gibb had run and completed the Boston Marathon 2 years earlier but she was not an official woman's entrant. Since that time, she has been recognized and celebrated for what she did. But Kathryn Switzer's marathon in 1967 stood out, because Jock Semple who was the #2 guy at the Marathon, tried to remove her as an officially entered athlete. Plus, it was caught on film to become one of the most iconic moments in sports in the 20th Century. I only saw her 80m past the finish line. She was beaming. She clearly knew her spot in marathon history and understood what it meant to close the door on what she opened back in 1967. It was inspiring. One side note on Kathryn Switzer. I found out 4-5 years ago that she attended the same high school as me. It was the opening year of the high school. She was a member of the first graduating class of George C Marshall HS in Falls Church VA in 1964.

Numerous other runners, wheelchair athletes, and those pushed by others caught spectator's eyes. One in particular was the man in a pushed wheelchair called "**Team Frates**". For most people around the Globe, the name FRATES was synonymous with a fundraising campaign that swept the country and then the world. Remember the "Ice Bucket Challenge"? The idea came to Pete Frates' Mom. He had been diagnosed with ALS, the debilitating disease formerly called Lou Gehrig's Disease. Pete was a college baseball player at Boston College when stricken. Now 5 years after his diagnosis, Pete was pushed by a family member to continue to raise funds for a cure for ALS and continued and awareness.

Back to the earlier moments of the 2017 Boston Marathon. First off the line are the **wheelchair** athletes followed by the **push rim** athletes. This year marked a new advance for the push rim competitors as they were now entered and competing in their own race category. One athlete had petitioned the BAA (Boston Athletic Association) that the “push rim” entrants deserved their own race. The BAA concurred so that 2017 had almost an equal number of wheelchair entrants and push rim entrants. Chalk another one up to change winning that request.

American elite runners also inspired. Two notable runners trained by former Boston Marathon Champion and Massachusetts native Alberto Salazar made their Boston debuts. One, **Jordan Hasay**, made Boston her marathon distance debut. Elite runners can now qualify for the elite field if they complete a half marathon in a fast time. Jordan surprised herself and everyone in attendance by hanging with the lead group and then going with the top 2 runners. She ended up on the podium with the fastest debut time by an American woman in the marathon by a whopping 3 minutes. On the mens’ side, Salazar’s protégé and Bronze medalist in the RIO 2016 Games showed he is a force to stay in the marathon. **Galen Rupp** took home the runner-up position and ran a sub 2:10 time in Boston that cemented himself in the top 5 Americans all-time in Boston.

How could I forget mentioning Meb and his final Boston Marathon as a professional. If everyone recalls, **Meb Keflezighi** came to Boston in 2014 to show Boston and the world that a bombing would not deter anyone. Not only did he come to race hard, he came to win that day and win he did! Three years later and Meb (he is one of those sports stars who is simply called by his or her first name) came back and was the most popular athlete in the field. The roars followed his path along the Hopkinton to Boston 26.2 mile path.

Boston Marathon spectators are also an inspiring lot. Each year, families, friends and just plain celebrants gather along the course to cheer and acknowledge the toughness of the runners and competitors. It is like no other. I’ve been privileged for the past 15 years to take photos for our AMAA runners and to cover the event for American Running. One key group was missing this year, the AMAA Charity Runners. AMAA was told that the special exception agreement that had been renewed each year to some level of participation would no longer be granted. We applied and competed for official Boston Marathon Charity spots after this notification, but the criteria for supporting the greater Boston Area was most likely the reason that AMAA did not receive any Charity or otherwise termed “Invitational Entries”. I missed seeing many of our former AMAA runners who had supported our cause of Youth Fitness with the RUN A MILE DAYS Campaign. I also missed seeing those AMAA runners who could no longer make the 6-hour time limit to finish.

As the 2017 Boston Marathon came to a close, I remain inspired and hopeful. I do hold out hope that AMAA and American Running can get that chance to raise funds for a worthy and sustaining cause of getting America’s youth more physically active through running the mile.