

## Supplementary Online Content

Ioannidis JPA. Neglecting major health problems and broadcasting minor, uncertain issues in lifestyle science. *JAMA*. doi:10.1001/jama.2019.17576

**eAppendix.** Almetric Short Descriptions of 49 Articles With Top Attention Scores in 2017 and 2018

This supplementary material has been provided by the authors to give readers additional information about their work.

## **eAppendix. Altmetric Short Descriptions of 49 Articles With Top Attention Scores in 2017 and 2018**

Next to the summary of each article (according to the Top-100 Altmetric website) is provided in parenthesis the journal name and year of publication, and the Altmetric score at the time of publication of the annual Top-100 list. Altmetric scores keep being updated continuously and therefore for most of the articles in this list they will reach higher scores over time.

### **EXERCISE**

Grab your Shake Weight™! This study of 1.2 million people found that any amount of exercise can make you happier. Team sports, cycling, and going to the gym are among the most effective kinds of exercise for improved mental health. (Lancet Psychiatry 2018, score 5667)

Time to find your inner gym bunny! This startling study showed that in 2016 more than a quarter of all adults were not doing enough physical activity, putting themselves at risk of developing or exacerbating obesity-related health issues. The authors propose that national policies should be introduced to combat this trend, with a particular focus placed on providing women with more opportunities and encouragement to exercise. (Lancet Global Health 2018, score 2937)

A study of 130,843 participants from all backgrounds found that moderate exercise (just 150-750 minutes each week) led to a marked decline in risk for heart disease. (Lancet 2017, score 2347)

One more reason to get swole: Researchers have found that resistance exercise like strength training could be used as an alternative to therapy for people with depression. (JAMA Psychiatry 2018, score 2032)

This study of 61 middle-aged adults found that regular exercise can reverse the damaging affects of aging on the heart. Due to the small sample size, the results should be interpreted with care. (Circulation 2018, score 2011)

Get on your bike! Cycling to work can reduce your risk of early death by as much as 40%, according to the findings of this study. (BMJ 2017, score 3281)

Could exercising only once or twice a week be better for you? This study addresses the benefits of being a "Weekend Warrior". (JAMA Intern Med 2017, score 2970)

An illuminating in-depth examination of the long-term health effects of specific sports disciplines associated with cardiovascular disease. (Br J Sports Med 2017, score 2457)

Is HIIT the best exercise? Research in Cell Metabolism suggests that High Interval Training can address age related decline in your muscles. (Cell Metabolism 2017, score 2217)

Get moving! Evidence from a new study shows that exercise is associated with better heart health and a longer life. (Lancet 2017, score 2172)

Time to get out of that chair! New research shows that sitting down for long periods of time each day may lead to an early death. (Ann Intern Med 2017, score 2121)

### **DIET – general**

What you don't eat could be end of you. Certain foods and nutrients have been found to reduce the likelihood of dying from heart disease, stroke, or Type 2 diabetes. (JAMA 2017, score 2095)

### **DIET – fruits and vegetables**

In case you hadn't already gotten the memo: you should eat fruit and vegetables. 500g of fruit and 800g of vegetables a day, to be precise. (Int J Epidemiol 2017, score 1971)

#### DIET – nuts

Good news if you like peanuts - consuming a handful of nuts a day might help lessen your risk of cancer and heart disease. (BMC Med 2017, score 1905)

#### DIET – gluten

If you don't have celiac disease you probably shouldn't avoid gluten - by avoiding beneficial whole grains you may be doing yourself more harm than good. (BMJ 2017, score 1911)

#### DIET – fat

Advice from the American Heart Association suggests that lowering intake of saturated fat and replacing it with polyunsaturated vegetable oil reduces heart disease by 30%. A side note for consumers: coconut oil is not healthy. (Circulation 2017, score 1982)

#### DIET - carb

Moderation in all things, especially carbs: This study found that a diet comprised of roughly 50% calories from carbs is associated with lower risk of death than both high and low-carb diets. (Lancet Public Health 2018, score 4993)

Keto converts, beware! Low-carb diets may not be the panacea that many claim, according to this study. Instead, researchers recommend focusing on the quality, not the quantity, of the calories you consume. (JAMA 2018, 3629)

Is this the end of the low-fat diet? Contrary to popular belief, researchers reviewed the diet of over 100,000 people in 18 countries and discovered that low fat diets may result in a higher risk of premature death. (Lancet 2017, score 5876)

#### DIET – coffee

Single or double espresso? Drinking coffee can do more than just keep you awake, say these researchers. The study of over 500,000 people found that coffee drinkers had a lower risk of death than people who drank none (JAMA Intern Med 2018, score 3339)

This study, looking at the relationship between coffee consumption and mortality across European countries, is enough to wake anyone up! (Ann Intern Med 2017, score 3192)

Drink coffee and live longer! Coffee consumption has now been linked to a lower risk of death. (Ann Intern Med 2017, score 2194)

#### DIET – organic food

Not just a fad: the authors of this paper found that people who had eaten more organic food over the previous 4.5 years had slightly lower rates of cancer, although were careful to note that other factors (such as general health, education, and wealth) are also likely to have played a role. (JAMA Intern Med 2018, score 3252)

#### DIET – vegetables

Don't forget to eat your greens! While cognitive abilities naturally decline with age, eating one serving of leafy green vegetables a day may aid in preserving memory and thinking skills as a person grows older,

according to this study by researchers at Rush University Medical Center in Chicago. (Neurology 2017, score 2584)

#### DIET – vegan

The most comprehensive analysis to date on the damage farming does to the planet shows that if consumers want to truly make a significant impact, vegan eating habits are most effective. (Science 2018, score 2384)

#### DIET – vitamin D

According to this meta-analysis, Vitamin D supplements do nothing for bone health. This study recommends that governments discontinue their advice to take Vitamin D throughout the winter months. (Lancet Diabetes Endocrin 2018, score 2538)

Calcium and vitamin D supplements do not appear to prevent bone fractures in people over the age of 50, according to this article based on 33 clinical trials done over 10 years. (JAMA 2017, score 2368)

Addressing your Vitamin D deficiency might be the key to staving off colds and the flu. (BMJ 2017, score 2333)

#### DIET – sugar

Archival evidence from internal sugar industry documents show that, four decades ago, the industry suppressed the results of a study linking sugar consumption to health risks, including cancer. The industry also secretly funded a study that played down links between sugar consumption and coronary heart disease. It isn't surprising that these revelations made a splash in the news and on social media. (PLoS Biol 2017, score 2184)

#### DIET – artificially sweetened beverages

It turns out diet drinks may not be a healthier choice. This study concluded that artificially sweetened drink consumption is associated with a higher risk of stroke and dementia than sugar-sweetened alternatives. (Stroke 2017, score 3103)

Sugar or sweetener? This paper investigates the link between nonnutrative sweeteners and adverse cardiometabolic effects such as diabetes. (CMAJ 2017, score 2907)

#### DIET – chocolate

Whilst eating chocolate has been associated with benefits to cardiovascular health, this paper looks at its link with atrial fibrillation, which is the cause of a variety of negative health outcomes. (Heart 2017, score 2991)

#### DIET - alcohol

Talk about a buzzkill: this global study has found that the only "safe" level of alcohol consumption is no alcohol at all (Lancet 2018, score 6854)

This major study found that while moderate alcohol consumption can lower your risk for heart attacks, it increases other health risks. Study authors have called for a reconsideration of global alcohol intake guidelines, saying less booze is likely healthier (Lancet 2018, score 4006)

This study reveals how alcohol consumption can damage stem cell DNA in mice. (Nature 2018, score 2001)

Enjoy a glass of wine of an evening? Unfortunately this article has found that even moderate alcohol consumption can have negative effects on the brain. (BMJ 2017, score 3186)

High levels of alcohol consumption, 3-4 days a week or more, is associated with a low-level likelihood of developing diabetes. (Diabetologia 2017, score 2250)

#### WEIGHT LOSS

A team of researchers found that weight loss interventions could help seniors manage and even reverse their Type 2 diabetes. Over half of participants in this clinical trial found that their Type 2 diabetes went into remission. (Lancet 2018, score 3404)

#### OBESITY

A startling stat: this study found that obesity amongst children and adults has risen tenfold globally in the last 40 years. (Lancet 2017, score 4016)

With high BMI accounting for 4 million deaths globally, the rate of increase in childhood obesity levels found in this study gives particular cause for concern. (NEJM 2017, score 3526)

#### SLEEP

Are you a night owl? This article examines the significant health risks to people that have a preference of going to bed late, including neurological and respiratory disorders and even death. (Chronobiology Int 2018, score 2130)

The benefits of getting a good night's sleep have long been acknowledged, but this paper suggests that even skipping one night's sleep could have long-term impacts on the health of your brain. (PNAS 2018, score 2122)

#### ALL LIFESTYLE

What are the lifestyle factors that lead Americans to have a relatively low life expectancy, compared to other wealthy countries? In this 34-year study, five key lifestyle factors emerged that contribute to 12-14 years of increased life expectancy: eating well, maintaining a healthy body mass index, not smoking, drinking less, and exercising regularly. (Circulation 2018, score 2264)

#### DOG OWNERSHIP

Need another reason to love dogs? Here's one: The social support and increased physical activity that dog owners get leads to a measurable decrease in risk of cardiovascular disease and death. (Scientific Reports 2017, score 2210)

#### BUILT ENVIRONMENT

This investigation into the association between living near major roads and three major neurological diseases found that people living close to heavy traffic could be at risk of dementia. (Lancet 2017, score 2911)

#### SMARTPHONE

When was the last time you checked your phone? Researchers have found that just having your phone near you can reduce your ability to focus on other things. (J Assoc Consumer Res 2017, score 2791)

#### SOCIAL MEDIA

The unbearable loneliness of social media? This study found an association between higher social media use and feelings of social isolation in a survey of young American adults. (Am J Preventive Med 2017, score 2142)

#### PUBIC HAIR GROOMING

People who spend a lot of time on pubic hair grooming tend to report higher rates of STIs, though the reasons why are still unclear. (Sex Transmitted Infections 2017, score 1924)

#### STRESS

Emotional stress has long been linked to heart attacks. Here researchers used brain scans of study subjects to correlate base metabolic activity in the amygdala (which is involved in stress) with risk of cardiovascular events. (Lancet 2017, score 1924)