Dr. Sanders’s Health Tips
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This is a compendium of practical ways to be physically and mentally healthy. If you are experiencing deep sadness or anxiety, please skip down to page 15.

You Are What You Eat

What we eat affects both body and mind. We are in an exciting era for food research, with the expectation that “food is the new medicine.” Recent discoveries about the role of the intestinal microbiome confirm that “Trillions of microbial cells inhabit the human body, outnumbering human cells by 10 to one according to some estimates, and growing evidence suggests that the rich array of intestinal microbiota helps us process nutrients in the foods we eat, bolsters the immune system and does all sorts of odd jobs that promote sound health. A diminished microbial ecosystem, on the other hand, is believed to have consequences that extend far beyond the intestinal tract, affecting everything from allergies and inflammation, metabolic diseases like diabetes and obesity, even mental health conditions like depression and anxiety.” (http://well.blogs.nytimes.com/2016/07/07/gut-bacteriaaredifferentinpeopledwichronicfatigue/syndrome/?action=click&contentCollection=Well&module=RelatedCoverage&region=Marginalia&pgtype=article)


If antibiotics are necessary, work on rebuilding the gut microbiota. But if you are attentive to your microbiome, you won’t need as many good-bug-destroying antibiotics. A valuable book on the microbiome and chronic disease is Cornell Prof. Rodney Dietert’s The Human Super-Organism.

Countless studies report that “Eating a Mediterranean-style a — packed with fruits, grains, vegetables, legumes, nuts, olive oil and fish — is good for your heart, [as] many studies have found. Now scientists are suggesting the diet may be good for your mental health, too.” People who ate a Mediterranean-style diet, in addition to being physically healthier, were 50 percent less likely to suffer from depression during the course of the study. (NYT Oct. 8, 2009). Eat green, orange and red vegetables, and salads (with olive oil-based dressings. Avoid mayonnaise on sandwiches; use mustard instead, or a light spread of avocado or hummus (GOOD fats). When you get munchies, grab an apple, nuts, banana or a bag of organic carrots and hummus. Make a rule for yourself that you won’t eat anything but fruit, yogurt, or maybe decaf tea or chai after ten pm.
Try to eat only organic food. The pesticides you get on and in non-organic food wreck havoc on so many biological systems. That’s ONE reason to avoid GMO’s. These engineered plants are grown with large quantities of a cancer-causing pesticide, glyphosate. The latter also changes the soil the plants are grown in, killing beneficial organisms and leaving the soil deficient in necessary minerals. Chlorpyrifos, a horrific pesticide shown to cause brain damage in rats and diverse developmental damage in children-- the higher the blood levels-- the worse damage, has been kept in use by the EPA and is widely used on apples, strawberries and other foods we normally would think of as healthy additions to our diets. Only if they are organic, it seems. (And you can get frozen organic to put on your breakfast cereal or use in cooking).

It is strongly advisable to avoid fried foods and foods with much saturated fat. The worst food, leading the list in causes of weight gain (according to a large-scale, long term analysis reported in the NYT 7-19-2011) is French fries. Learn to hate them. Second on the bad food list are sugar-sweetened drinks, empty calories that affect metabolism, mess up your gut microbiota, and pile on pounds. Try to avoid highly salted food, which, Science Magazine reports, not only raises blood pressure but might even “promote autoimmune diseases such as multiple sclerosis and inflammatory bowel disease.” (Science Magazine, March 8, 2013). Read ingredient labels. Cornell Dining prepared food is especially problematic in the salt, chemical, and saturated fat department.

A recent addition to the “don’t ever eat this” list is processed [deli] meats: bacon, ham, sausage, salami, pepperoni, and others. A European study published in BMC Medicine and reported on NPR March 6, 2013, “found that people who ate a lot of processed meats — more than 20 grams a day, the equivalent of one thin strip of bacon — were much more likely to die of heart attacks and stroke, and also had a higher cancer risk. The more processed meats they ate, the greater the risk... people who ate one serving of processed meat a day increased their risk of death from cancer and heart disease by 20 percent.” Time to switch to veggi pizza with light cheese, and avoid processed meat sandwiches. Don’t let restaurants pile bacon bits on your salad. Send it back if they do!

The July 2, 2015 issue of Science reports that an “epidemic has now spread throughout the country as our livers pay the price for our calorie-rich diets and sedentary lifestyles. About 20% to 30% of people in the United States who don’t abuse alcohol carry extra fat in their livers, a precursor to NASH [fatty liver disease].” And sadly, more and more children fall in this category because of fatty, high calorie diets and far too little exercise.

Avoid foods that list “high fructose corn syrup,” a problematic sugar with effects that seem to promote weight gain, diabetes, and heart disease more than do regular sugars. (see http://www.nytimes.com/2009/04/23/health/sugar.html?em). But minimizing ALL sugar consumption is the best strategy. The World Health Organization in 2014 recommended cutting in half the previous maximum recommended sugar intake. It is now advised that we get no more than 50 added grams of sugar a day, and ideally, only 25 grams. The Guardian reports that children get half the recommended daily maximum.

High glycemic foods, especially processed carbohydrates (white bread and pastries, etc.), have diverse bad effects on health. A recent study shows that such carbs wreck your diet not only by piling on empty calories, but also by affecting the brain in ways that increase hunger a few hours later. (See [http://well.blogs.nytimes.com/2013/06/27/how-carbs-can-trigger-food-cravings/?src=reco](http://well.blogs.nytimes.com/2013/06/27/how-carbs-can-trigger-food-cravings/?src=reco)

And try to avoid drinks and breads with “caramel color,” implicated as an immune system suppressant and carcinogen ([Science](https://www.sciencemag.org/content/309/5730/1682) vol. 309, 9 Sept 05, p. 1682; [http://hub.jhu.edu/2015/02/19/soda-caramel-coloring-cancer](http://hub.jhu.edu/2015/02/19/soda-caramel-coloring-cancer); [Consumer Reports](https://www.consumerreports.org), Feb. 10, 2014). A lot of pseudo rye and pumpernickel breads, cereals, and “wheat” breads use this brown dye, as do many sodas. Foods with caramel color have little nutritional value.

**Avoid colas** (diet or regular) for another reason, too: their phosphorus leaches calcium from your bones; a recent study showed that the more colas a woman drank, the lower her bone density (Harvard Women’s Health Watch [HWHW], Jan. 2010). Another recent study reveals that drinking one sugary soda a day “sharply increases [the] risk of heart disease,” apparently through its effect on levels of [HDL](https://www.ncbi.nlm.nih.gov/pubmed/24698143), [triglycerides](https://www.ncbi.nlm.nih.gov/pubmed/24698143), and [C-reactive protein](https://www.ncbi.nlm.nih.gov/pubmed/24698143). The same large-scale study indicates that diet sodas are no better for weight loss and cause problems of their own; they’ve been linked to metabolic disease, diabetes, high blood pressure, abdominal obesity and cardiovascular disease. (NYT 2-27-12; [Science](https://www.sciencemag.org/content/9/17/14) 9-17-14; [https://www.theguardian.com/lifeandstyle/2017/jan/03/no-evidence-sugar-free-diet-soft-drinks-aid-weightlossstudy](https://www.theguardian.com/lifeandstyle/2017/jan/03/no-evidence-sugar-free-diet-soft-drinks-aid-weightlossstudy). Aspartame was approved by the FDA under pressure from then-CEO of Searle, Donald Rumsfeld, and you know how reliable *he* was.

Both sugar and artificial sweeteners play havoc with the gut microbiota and blood sugar levels, but aspartame, sucralose, and saccharine seem to be worse than sugar (ibid). Drink water instead—but to avoid the environmental and health effects of plastic,* use your own glass bottle. Of course, wash it out with hot soapy water once a day.

You can make your own low-calorie iced tea with tea bags, a little mint (easy to grow in a dorm window) a sprinkle of ginger, or a little honey. Add powdered skim milk, ginger, cinnamon, and honey to green or black hot tea for a healthy chai that counters hunger pangs.

A study done by the National Institute of Health found that those who drink several cups of coffee a day [in the a.m., of course, so it doesn’t disturb sleep] were about 10 percent less likely to be depressed than those who did not drink it. And apparently it’s not because of the “caffeine high” -- Coke may give you a caffeine high, but *it’s linked to depression*, rather than lifted spirits.” ([http://www.huffingtonpost.com/2013/10/17/coffee-heatlhbenefits](http://www.huffingtonpost.com/2013/10/17/coffee-heatlhbenefits))

We are fortunate in Ithaca to have local organic coffee roasters like Gimme Coffee, and lots of other organic, shade-grown, fair-trade coffees available at Greenstar/Oasis (and on
Coffee is full of antioxidants and seems to improve thinking and mood. It is best if organic, filtered (through an unbleached filter), and made in glass, not plastic.  


In general, we eat too much in this country and restaurant portions are too large, and too high in fat, salt, and empty carbs. (http://www.nytimes.com/2009/09/10/opinion/10pollan.html?em)  

As a recent study shows, “Eating fatty food appears to take an almost immediate toll on both short-term memory and exercise performance.” Consumption of a diet high in saturated fats makes us much more likely to experience mental decline and dementia as we age (http://well.blogs.nytimes.com/2012/05/21/some-fats-may-harm-the-brain-more/?src=recg). Unsaturated and monounsaturated fats (like olive oil and walnut oil) are much better for you than margarine, butter and other saturated fats.

As the Harvard Health letter (10-18-12) cautions, those who want to avoid Alzheimer’s in late life should

**eat mindfully.** Emphasize colorful, vitamin-packed vegetables and fruits; whole grains; fish, lean poultry, tofu, and beans and other legumes as protein sources; plus healthy fats. Cut down on unnecessary calories from sweets, sodas, refined grains like white bread or white rice, unhealthy fats, fried and fast foods, and mindless snacking. Keep a close eye on portion sizes, too.

In short, eat only whole grain breads and cereals, organic if possible. “Good carbs” help you keep your weight down and regulate your insulin to keep it at a healthy level.  

http://opinionator.blogs.nytimes.com/2012/06/26/which-diet-works/. White flour and white rice are missing a lot of minerals and fiber, and can actually promote diabetes and heart disease through their effects on insulin.

Doctors have recently noticed a worrisome trend: more young people, in their 20’s and ‘30’s, are being diagnosed with colon or rectal cancer.  


The cause remains mysterious, but as readers of this *Times* article commented,

> “Is it possible that all the spraying and treating of our food with chemicals is starting to bite us back? …when we're dealing with the residues of hormone blockers, pesticides, herbicides, and insecticides in our foods no matter how small they are they do add up after 20 or 30 years. This is the first generation to be raised with high fructose corn syrup and GMOs, among other things. …After all, those substances sit in the colon for a while (longer if you're on the standard low-fiber diet we eat here in the US) so maybe they have some effect….you think it might have anything to do with the fact that whatever you eat nowadays has 1 ingredient that's food and the rest is all added chemicals? Geez, mebbe eating 50 years of that garbage has finally caught up with us?”

Those risks could probably be reduced considerably, and our microbiomes improved, by eating organic foods. Such foods are not only environmentally friendly, but contain more antioxidants and omega 3 fatty acids, and of course, far fewer pesticides. Organic agriculture lessens the pollution of soil, the killing of bees and other good insects, and all sorts of bad consequences (including unknown long-term effects of GMOs, and the known bad effects of the herbicides and pesticides that accompany their production).  

Industrial agriculture, in which animals are kept caged or packed in feedlots are not only cruel for the animals, but because they are more vulnerable to disease, they are given large quantities of antibiotics (nearly 30 million pounds of antibiotics were sold for livestock in 2011, the largest amount recorded to that point), and this threaten humans with antibiotic-resistant bacteria. 

Animals, especially cattle, are very inefficient converters of grain and grasses to meat for humans, and they contribute disproportionately to increased fossil fuel use and methane emissions (hence to climate change).* In you aren’t ready to give up meat altogether, you might try to stick with chicken, sheep, and shellfish or land-farmed fish that have fewer negative consequences for the environment. Grass-fed beef is nutritionally superior to meat from penned animals. (NYT “Well,” Oct. 25, 15). But raising large animals for meat is a very significant cause of increased greenhouse gasses. If you have to eat meat, choose meat from the smallest animals, and those raised and slaughtered humanely. That probably excludes most grocery store meat.

**YOUR FOOD’S CARBON FOOTPRINT**

The Farmer’s Market, local health food stores (Greenstar, Oasis), and the Piggery on 3rd street and route 13 carry organic, pasture-raised meats and produce that is non-GMO and free of pesticides. The Temple of Zeus (Goldwin Smith) and Mandible Café (Mann) are the best bets for campus sandwiches made with whole grain breads and free-range meats,
as well as tasty New York organic yogurts. Zeus also makes amazing soups, using Moosewood and Tibetan recipes. These are easily the best soups in Ithaca.

I think it wise to take vitamin D3 (c. 1000 mg or less) to protect bones, muscles, and general health, since many of us get far too little sun on our skin in this region. A study reported by the American Society of Anesthesiologists in 2007 reports that “one in four patients who have chronic pain issues were also found to have low levels of Vitamin D.” In fact, people with low levels of vitamin D appear to have a higher risk of death from all causes (http://www.nbcnews.com/id/25334302/#.VHlziUseZiE)

Fish is a good natural source, but always eat fish baked, broiled or poached, as frying destroys the omega 3’s. (Generally, fried foods should ALWAYS be avoided). Studies have shown that a deficiency of Omega 3 fatty acids can negatively affect mood. If you don’t eat much fish, whole grains, walnuts, flax seed, or other Omega 3 sources, you can at least take fish oil or flax seed capsules. Calcium, magnesium, and B vitamins may also support good mood. Junk food doesn’t, of course.

According to research done here and reported in the Cornell Chronicle, an apple a day really DOES keep the doctor away—boosts immune response AND helps your brain…may even ward off Alzheimers. Adding some blueberries, dark greens, red grapes, and a few low-salt nuts to a daily exercise regime is very smart. Keep (low-salt) nuts and apples in your dorm room or apartment. Littletree Farms, at the Farmers Market, sells nice dried apples to keep on hand for snacks.

You can get wonderful fresh apples at the Ithaca farmer’s market August-December. Black Diamond Farms has brought back a number of heirloom apples that you can’t buy in stores, and they are really delicious. Furthermore, they are not covered with wax, and use minimal pesticides. And their short transport distances (compared to Washington State and New Zealand apples) also benefit the earth. We are living in a state that produces wonderful apples; no need to import them!

The farmer’s market also has (in warm weather) excellent frozen yogurt and ice cream. Try Dennis’s (he also supplies Moosewood) and you may join me in regretting that Dennis doesn’t manage the CU Dairy. Our Dairy Store makes no low-fat ice creams or frozen yogurts, and fills its full-fat ice creams with excessive sugar, chemical flavors, colors, preservatives, and fillers that take a paragraph to list.

If you can tolerate a dubious taste, get flake (mild) nutritional yeast and stir two or three heaping teaspoons into OJ or water every morning (stir well, or it’s yucky; and I strongly advise the flake variety sold at Oasis/Greenstar, for taste). It’s loaded with B vitamins, trace minerals, and protein. It even discourages insect bites in summer, and when given to pets (a couple of brewer’s yeast tablets, or a tsp. a day), repels fleas naturally without toxic flea collars or drugs. Cats actually love the taste and our first cat lived to be 21 years old, never had a flea, and was seldom sick until the very end.
Pass on this tip to any pregnant women you know: Cornell research shows that eating a diet high in choline (from nutritional yeast or eggs) is very good for the baby’s cognitive development during pregnancy and nursing. Pregnancy vitamins typically contain little or no choline. Nutritional yeast is a good source of all B vitamins (and was shown in a 1979 Houston study to produce very healthy breast milk). For CU research:

*Studies on chemical leaching from plastic containers and endocrine disrupters dumped into our water supply get ever more worrisome. The quality of male sperm is decreasing at an alarming rate. If you want to have normal children, avoid plastic. Never eat or drink from plastic containers. Try to eat and drink only organic foods and beverages.


We should all avoid microwaving, drinking or eating in plastic. Virtually all plastic containers, even those without BPA, have been shown to contain estrogen-mimicking chemicals not good for your health or chances of having healthy children later. Chemicals in food packaging have also been linked to obesity and diabetes. See


A recent study reported in the NYT warns those who regularly drink beverages from cans or plastic bottles that “a common chemical in the containers can seep into beverages and raise blood pressure within a few hours.” “The research raises new concerns about the chemical bisphenol A, or BPA, which is widely found in plastic bottles, plastic packaging and the linings of food and beverage cans. Chronic exposure to BPA has been associated with heart disease, cancer and other health problems. But the new study is among the first to show that a single exposure to the chemical can have a direct and fairly immediate impact on cardiovascular health.

The study found that when people drank soymilk from a can, the levels of BPA in their urine rose dramatically within two hours – and so did their blood pressure. But on days when they drank the same beverage from glass bottles, which don’t use BPA linings, there was no significant change in their BPA levels or blood pressure.” (NYT Dec. 8, 2014, Well Blog) [Why hasn’t the EPA banned BPA as other countries have?]

One more tip on avoiding toxins on and in your body: don’t paint your nails. “A growing body of medical research shows a link between the chemicals that make nail and beauty products useful — the ingredients that make them chip-resistant and pliable, quick to dry and brightly colored, for example — and serious health problems.” The effects are particularly horrific for people who work in nail salons, “for manicurists who handle the chemicals and breathe their fumes for hours on end, day after day….The prevalence of respiratory and skin ailments among nail salon workers is widely acknowledged. ...Some of the chemicals in nail products are known to cause cancer; others have been linked to abnormal fetal development, miscarriages and other harm to reproductive health.” http://www.nytimes.com/2015/05/10/myregion/at-nail-salons-in-nyc-manicurists-are-underpaid.
To summarize simple eating tips: Don’t eat or drink from plastic containers. Eat mostly organic fruits and veggies and organic, cage-free, grass-fed animal products.

If you have little time to cook, Dr. Sanders recommends Amy’s organic frozen dinners. Dump the dinner on a ceramic plate (no plastic) and around it pile frozen organic veggies—spinach, kale, broccoli, carrots, peas, squash, beets, etc. When it’s cooked, or a minute before, you can add organic salsa or curry sauce to spice it up, and a bit of organic sauerkraut, like that made by Crooked Carrot (sold at the Piggery and Greenstar/Oasis). They have a new kind with nettle and garlic that is surprisingly tasty, and even healthier than plain sauerkraut.

Eat low-sugar organic yogurt, kefir or buttermilk if you aren’t lactose intolerant. Sauerkraut, kefir, and yogurt are all good probiotics, welcomed by your microbiome.

If you eat organic, lots of fruits and veggies, little or no meat, and no added sugar, your internal good bacteria should be abundant. [Meat and sugar can crowd out the good bacteria. So can antibiotics, so if you need them, when the course is done use plain or low-sugar organic yogurt and sauerkraut (or kimchi) to rebuild the good microbiota]. See the entire issue of Science devoted to “The Gut Microbiota,” June 12, 2012, esp. 1248-50, which I can send you as a pdf. For a summary, see:
http://www.nytimes.com/2013/05/19/magazine/say-hello-to-the-100-trillion-bacteria-that-make-up-your-microbiome.html?pagewanted=all

Despite the insistence of U.S. pharmaceutical companies on selling us a pill for everything, the best “medicine” is a good diet.

The Life-Changing, Spirit-lifting Value of Exercise

There’s one more thing we all MUST do: exercise. And not just for weight control, heart, and muscles. According to a Sept. 12, 2012 article in the NYT, “It is widely accepted among scientists that regular exercise transforms the brain, improving the ability to remember and think. And a growing and very appealing body of science has established that exercise spurs the creation of new brain cells, a process known as neurogenesis.” A study reported in the NYT (“Your Brain on Exercise,” 7-7-2010) found that “The brains of mice and rats that were allowed to run on wheels pulsed with vigorous, newly created neurons, and those animals then breezed through mazes and other tests of rodent I.Q., showing that neurogenesis improves thinking.” The less active you are, it seems, “the less neurogenesis you undergo. Your brain grows slower, less nimble, older.” One of the researchers, Northwestern chair of neurology, Dr. Jack Kessler says, “If ever exercise enthusiasts wanted a rationale for what they’re doing, this should be it.” Yet another article in Science on Oct. 10, 2013 writes, “While our muscles pump iron, our cells pump out something else: molecules that help maintain a healthy brain [and the well-known
mental benefits of exercise, from counteracting depression and aging to fighting Alzheimer’s and Parkinson’s disease. Now, a research team may have finally found a molecular link between a workout and a healthy brain.”

The “Dr. Mercola” on-line health letter adds that “10 months of regular, moderate exercise outperformed a leading antidepressant (Zoloft) in easing [depression] symptoms in young adults; 30-minute aerobic workouts done three to five times a week cut depressive symptoms by 50 percent in young adults” (11-22, 05; see also British Journal of Sports Medicine, April 2001, 35:114-117 and the recent report on the value of a meditation + running regimen: http://well.blogs.nytimes.com/2016/03/16/meditation-plus-running-as-a-treatment-for-depression/

_When asked how she can write so much, Joyce Carol Oates says she just works steadily, about eight or ten hours a day, and then spends a lot of time thinking about her work while she's running, walking, or bicycling. She says, "At such times the imagination floats free, and one can contemplate one's work with an almost magical detachment."

A brisk walk around Beebe Lake every day…takes about 20 minutes…can boost mood and energy and help you relax and sleep better. You can observe ducks, geese, beaver, blue herons, red-tailed hawk, osprey, deer, and if you’re lucky, perhaps even mink and otters, muskrats, and the red foxes that inhabit this area. You will feel better after your walk, no matter what is going on in your life.

Recent studies have shown that walking through a park lowers stress (NYT March 27, 2013, and July 22, 2015). “This is not unproductive lollygagging,” a scientist confirms; “It is likely to have a restorative effect and help with attention fatigue and stress recovery.” The second study confirms, “A walk in the park may soothe the mind and, in the process, change the workings of our brains in ways that improve our mental health, according to an interesting new study of the physical effects on the brain of visiting nature.”

Go all the way to the Arboretum on Forest Home Drive if you have time.
If you want to jog, so much the better. But even a brisk walk does wonders. Think of combining trips downtown with exercise by walking up and/or down the hill. Walking up hills is great for your leg and back muscles, and lungs. Hills are one of nature’s great gifts to good health. I had back problems before moving to Ithaca but years of walking briskly up hills cured them.

If allergies have led you to cut back on outside exposure, you might try the natural remedy—injections of minute amounts of the substances you are allergic to. (My own allergy and associated asthma attacks were cured with three years of shots, and I heartily recommend this natural way to conquer allergies).

In nice weather you can walk through the gorge. At other times, walking on the pedestrian path of the lovely Cascadilla Park Road (Ithaca’s “Switzerland Street”) is fun, and nicer than Buffalo St. It will take about 20 minutes from downtown to campus, faster
going downhill. Walking up hills is just a great exercise, whether in the arboretum or down to Cinemapolis and back. And by not burning fossil fuel, you are doing your bit to fight global warming while getting your exercise.

Try to walk unwired, and stay off your **cell phone** which is less relaxing than the sights and sights of nature, and makes you twist your head/neck in ways that undermine healthy posture and increase tension. Enjoy nature and (as poet Wendell Berry puts it) “The Peace of Wild Things.” If you walk in nature, look at it, listen to it. If you occupy your brain with social trivia, that comes at the expense of creative rumination and the de-stressing nature provides. I have found nature walks so productive for thinking that I try to carry a piece of paper and pen with me to write down complicated ideas.

*It is increasingly recognized that if you are constantly wired, to an iPod, cell phone, computer, etc., you rob your brain of reflection and rumination, sources of great creativity. Many scientists and writers/scholars have written about ideas that came to them while walking and reflecting. Many scientists and writers today worry that young people who are always wired, emailing or Facebooking, playing video games, are denying themselves the benefits of solitary contemplation (not to mention serious reading). There’s also recent evidence that too much time on social media can contribute to low moods and even depression. People tend to post only good news about their own lives, and the contrast with your perceptions of how your life is going can make you unhappy. We have also learned that Facebook conducts experiments on its users, like showing some people depressing news links, and others, happy news, to see how it affects their moods. As the recent study showed, one can lower the mood of hundreds of thousands of people by controlling the information they receive. (Thanks, Facebook).*


*The message: Get outside, unwired, with your brain un-tethered. Spend more time in nature, in reflection and in face to face human interactions, and less on social media.*

**Brain Focus**

The brain is more efficient when focused on one task at a time (surprise). A study done at the University of Michigan found that learning is enhanced by a walk in the woods. On the other hand, scientists have argued that “heavy technology use can inhibit deep thought and cause anxiety….heavy multitasking fatigues the brain, draining it of the ability to focus.” There are concerns that frontal (“executive”) lobe development may be impaired in the young who are heavily involved in communications multi-tasking. Are we damaging our brains, our very ability to concentrate and think deeply with all this social media bombardment? Contact with nature, is restorative. The scientists interviewed in the Times article “take pains in their own lives to regularly log off, “ and get outdoors. [http://www.nytimes.com/2010/08/16/technology/16brain.html?emc=eta1](http://www.nytimes.com/2010/08/16/technology/16brain.html?emc=eta1)

A UK study reports that repeated **phone calls or messages and incoming email indicators lead to an average ten-point decline in tested IQ**, an effect on cognition that is worse than smoking pot. *(The Guardian, April 22, 2005). Yet another report in the*
Times, “Hooked on Gadgets and Paying a Mental Price,” writes, “Scientists say juggling e-mail, phone calls and other incoming information can change how people think and behave. They say our ability to focus is being undermined by bursts of information…. Heavy multitaskers actually have more trouble focusing and shutting out irrelevant information, scientists say, and they experience more stress…. the idea that information overload causes distraction was supported by more and more research.”


According to a report in the NYT, “college students who texted while doing homework had lower grades, and students who texted during class took less detailed notes and had poorer recall.” Another experiment with college students showed that students who abstained from texting during a lecture retained more information and scored higher on a quiz.


Research also intriguingly suggests that if you study for an exam, you need a minimum 4.45 hours of sleep to consolidate the things you’ve learned. However, that learning is impaired if you work on the computer or engage in social media (Facebook, phone, email, etc.), or video games before you go to sleep. That may be because the brain stores emotional thoughts in preference to non-emotional (e.g., dry facts and logic) material. In addition, the bright blue-white light emitted by computers interferes with melatonin production that enables sleep. Try the experiment and forego social media or web sites with emotional content before exams. Do a little quiet reading in a real book, or under a yellowish (rather than bright white) light instead, or listen to classical music. For yet another clinical study on the sleep-denying dangers of white light (showing that “Reading on electronic devices before bedtime can disrupt the body’s circadian clock, making it harder to fall asleep and become alert in the morning”) see http://www.wsj.com/articles/open-the-book-close-the-e-reader-at-bedtime-1419272534?tesla=y&mg=reno64-wsj; and

(http://www.newyorker.com/science/maria-konnikova/why-cant-we-fall-asleep?%20mbid=nl_070715_Daily&CNDID=26737665&mbid=nl_070715_Daily&CNDID=26737665&s pMailingID=7885098&spUserID=ODlwMTcxMDQxMTkS1&spJobID=720797022&spReportId=NzIwNz k3MDIyS0: “[A]rtificial light can shift our internal clocks by four or even six time zones, depending on when we’re exposed to it. In one study, reported in the journal PNAS, people read either a printed book or a light-emitting e-book about four hours before bed, for five evenings in a row. The effects were profound. Those who’d read an e-book released less melatonin and were less sleepy than those who’d read a regular book; their melatonin release was delayed by more than an hour and a half, and their circadian clocks were time-shifted. It took them longer to fall asleep. The next morning, they were less alert. These resetting effects can result not just from prolonged reading but from a single exposure… to short-wavelength light for less than twelve minutes.”

One more reason to avoid spending too much time in front of a computer (and another one I can personally vouch for) is that, in the words of an online vision site, “red, burning and tired eyes go hand-in-hand with staring at a computer screen for too long, which can cause computer vision syndrome”. One reason is that you blink less when working at a
computer, which dries out the surface of your eye, making you more susceptible to eye infections. And the more exposure to blue-white light, the greater the risk of macular degeneration later in life.

**Note: some leading neurologists recommend that we minimize cell phone use for a different reason. Though all the evidence is not in, there is a strong suspicion that prolonged cell phone use may trigger formation of brain tumors in susceptible individuals. See, for example: [http://well.blogs.nytimes.com/2008/07/24/prominent-cancer-doctor-warns-about-cellphones/?em&ex=1217390400&en=b3a75965e9729958&ei=5087%0A](http://well.blogs.nytimes.com/2008/07/24/prominent-cancer-doctor-warns-about-cellphones/?em&ex=1217390400&en=b3a75965e9729958&ei=5087%0A), [http://www.nytimes.com/2010/11/14/business/14digi.html?src=me&ref=general](http://www.nytimes.com/2010/11/14/business/14digi.html?src=me&ref=general), or watch the video at [http://products.mercola.com/blue-tube-headset/?source=nl](http://products.mercola.com/blue-tube-headset/?source=nl) for the worst and less bad cell phones. I include this warning because I have had three students diagnosed with brain tumors in recent years. There are reports that “study participants with the highest level of cellphone use had a 40 percent higher risk for a type of brain tumor called glioma.” [http://well.blogs.nytimes.com/2010/05/18/questions-about-cellphones-and-brain-tumors/](http://well.blogs.nytimes.com/2010/05/18/questions-about-cellphones-and-brain-tumors/), and there has been a general increase in brain cancer among 20-29 year olds. A May, 2016 report in *Science* again links tumors to cellphone radiation: [http://www.sciencemag.org/news/2016/05/questions-abound-after-study-links-tumors-cellphone-radiation](http://www.sciencemag.org/news/2016/05/questions-abound-after-study-links-tumors-cellphone-radiation) Why take the chance? Most phone conversations and texting are not really necessary. They can, of course, create risks to life and limb if used while driving or crossing streets.

**Leave your car at home.** Very few people need a car in college or grad school. I lived as a student in Ithaca for four years, and as a Peace Corps volunteer, without a car, walking everywhere. If you live on a relatively flat route to campus, bike (with a helmet!) Biking is exhilarating. And if you haven’t done a lot of walking in your life, discover its joys, and benefits. Get in the habit of holding yourself straight, to your fullest height, abdominal muscles tucked in to help support your spine, imagining a string attached to the top-center of your head, pulling you gently upward. Walking with good posture will make you feel, as well as look, more confident; one of the easy little mental tricks.

Count the time walking to and from class as valuable exercise and cherish the opportunity for reflection. If you need any further encouragement, consider climate change, the major contributor to which has been American fuel consumption. With only five percent of the world’s population, we produce 26 percent of the carbon dioxide pollution from fossil-fuel burning You can’t really be an environmentalist and drive an SUV or other gas-guzzling car, or drive to places you could easily walk, bike, or bus to.

Avoiding vehicle transportation when we can walk or bike, and turning off lights when and where we don’t need it are the low-hanging fruit in the quest to fight climate change. If we all drove less, walked and biked more, we might convince the Cornell administration not to cover our remaining green space with parking lots and blazing white lights that make sky-viewing at the Fuertes Observatory all but impossible, kill insects and endanger birds, bats, and mammals (including people deprived of melatonin during sleep; and that deprivation is also associated with higher cancer rates). On light
pollution and the bad effects of excess light at night on people and animals see http://inthesetimes.com/article/15236/in_the_dark_about_light

[Special note on walking: avoid high heel shoes like the plague. Not only do you risk inability to quickly escape danger, or a serious fall, and painful surgery for deformed feet sooner than you imagine, but David Agus, a professor of medicine and an expert on inflammation “writes in ‘The End of Illness’ that you can ‘reduce your daily dose of inflammation’ by not wearing high heels, since these can inflame your feet and the inflammation could possibly affect your vital organs.” (New Yorker, Nov. 30, 2015). My son refers to high heel shoes as “stupid shoes.”

If You DO Get Sick,

there are some non-drug remedies that might help. Besides bed rest, lots of water, and hot soup, try natural saline “irrigation” of the nasal passages and sinuses. It’s also good for people with allergies, as well as other sinus and respiratory problems. The simplest version of the nasal wash is the neti pot with saltwater solution you mix yourself from salt packets (non-iodized) in boiled or distilled water (important to avoid infection). Neti pots work on the simple principle of mechanically washing the infected or allergenic mucus out of your nasal passages and sinus cavity, to avoid painful sinus infections that can turn into bronchitis or pneumonia. They also reduce allergies by washing out the allergens. This is a more sensible idea than waiting for a sinus infection to put you on antibiotics, which have their own bad effects on the systemic biota (“good” microbes) that do so many useful things for health. http://www.nytimes.com/2012/06/19/science/studies-of-human-microbiome-yield-new-insights.html?pagewanted=all.

Think of the health care savings if we employed more such natural remedies and healthy prevention practices in the U.S. You may hate doing nasal wash the first time; but after seeing that it shortens a cold or allergy attack, you will probably change your mind. (Just be SURE not to use plain tap water, as it can cause dangerous infections if the water contains fungus or bacteria. Boil up a jar of water, or buy distilled water for your neti).

Gannett and local drug stores sell neti pots, which come with packets of finely ground salt, to which you can add your (boiled or distilled) warm water.

But also wash your hands before eating anything you touch, of course, and keep them out of your mouth and eyes. Your mom was right. And be kind to others by washing hands after each nose-blows, and carefully covering the mouth when coughing. When a cold gets to the coughing stage, relief may be found in taking guaifenesin. Look for a brand that contains only this mucus-thinner, without all the other drugs, colors, and chemical additives you don’t need. One guaifenesin tablet, taken with a lot of water, will give you a blessed 4-5 hours without coughing, and protect your roommate.

Salt water gargling is a valuable remedy. It always makes a sore throat feel much better, and can tame a nagging cough. Many times I’ve felt a sore throat coming on and chased it away with a salt-water gargle. There is clinical evidence on this:
“In a randomized study published in The American Journal of Preventive Medicine in 2005, researchers recruited almost 400 healthy volunteers and followed them for 60 days during cold and flu season. Some of the subjects were told to gargle three times a day. At the end of the study period, the group that regularly gargled had a nearly 40 percent decrease in upper respiratory tract infections compared with the control group, and when they did get sick, “gargling tended to attenuate bronchial symptoms,” the researchers wrote.”

You might also try natural remedies like Sambucus, or other natural anti-virals made from elderberries (of these, the Italian concentrated extract sold at Greenstar (Gaia Organic Black Elderberry Extract) has a good amount of elderberry extract; read labels). In addition, you could try astragalus root extract, sold in capsules and used for many years in Chinese medicine, to boost your immune system. [Note that anyone being treated for cancer or organ transplant should not use these remedies; some drugs for those conditions suppress the immune system and their efficacy may be diminished by astragalus or Echinacea].

If you get stomach flu or food poisoning, remember the BART rule when you are finally able to keep something down: Bananas (ripe), applesauce (unsweetened) rice and toast (whole grain). Hot tea is good. Drink lots of liquids to make up for dehydration, which can slip up on you and send you to the hospital (or worse). Plain broth is ok too, and apple juice or cider with no added sugar. Eventually, add plain yogurt or kefir, and local organic sauerkraut or kimchi to restore good intestinal flora.

**To summarize:** at the very first sign of a sore throat, gargle salt water and take a standardized elderberry extract (one or two tsp a day, or as directed, while you are sick, then tapering off). Use the neti pot with sterile saline solution once or twice a day, to get rid of infected mucus in your nose and sinuses. These simple steps should shorten a cold or flu, and make it milder. At least, it usually works for me. Of course, hot soup, lots of water, apples, organic veggies, and sleep will help too.

I think flu shots in the fall or winter are also advisable. I hate to see students going through finals with influenza. Gannett has the mercury-free injection or nasal spray.

**A WORD ABOUT LYME DISEASE**

It is predicted that the Northeast will experience a large outbreak of lyme disease this summer and fall. Lyme is transmitted by the bites of ticks which get the disease mostly from biting the white-footed mouse, and the mice are usually brought to a yard or field near you by deer. If you get a red rash, perhaps nausea and fever, and feel you have flu in the summer, you may have lyme, and you should see a doctor immediately. I almost died from lyme disease in the summer of 2013. I had a very high fever for 4-5 days and was very nauseated, so got dehydrated, which almost did me in.
Another person in my family got lyme as well, with fewer initial symptoms but severe arthritis symptoms later. You really don’t want to get lyme. If you think you might have it, go to a doctor (don’t wait!) and get an antibiotic, which, if started early, will probably cure you. If you don’t know you have lyme and don’t start an antibiotic, you may have very serious consequences that last a long time. It can even go to your brain and diminish your cognitive functions (“lyme fog”). This is really a plague, and you want to avoid it. So, in the summer and fall, if you have been outside, or have a cat or dog that has, check every nook and cranny of your body every day before you go to bed, looking for ticks.

Gannet and other drug stores sell special tick-removing tweezers, with instructions on how to remove the tick. Or you can use tweezers, placing them under the head of the evil little monster and pulling him out without squeezing his body. Ticks carry other awful diseases besides lyme, some rather quickly fatal. I don’t like scaring you, but I also don’t want you to get a tick-borne disease. Read these articles: http://www.npr.org/sections/health-shots/2017/03/06/518065660/if-you-get-bit-by-a-lyme-infested-tick-here-are-5-tips; http://www.npr.org/sections/goatsandsoda/2017/03/06/518219485/forbidding-forecast-for-lyme-disease-in-the-northeast; http://www.npr.org/sections/goatsandsoda/2017/03/11/519518318/beyond-lyme-new-tick-borne-diseases-on-the-rise-in-u-s

If you want to educate yourself and others on good health, you might subscribe to the independent newsletter Environmental Nutrition (http://environmentalnutrition.com), and visit http://www.bioscienceresource.org or http://www.independentsciencenews.org

Care of the Mind

De-stressing. In addition to exercise, there are some effective **natural ways to relax**, get your anxiety, food cravings, and blood pressure down, fight insomnia, and generally improve wellbeing. One is meditation. A study reported in the NYT found that “stressed-out college students improved their mood through T.M., and those at risk for hypertension were able to reduce their blood pressure. That study, which was carried out at American University in Washington and included 298 students randomly assigned to either a meditation group or a waiting list found that

Students who were at risk of hypertension and practiced meditation reduced systolic blood pressure by 6.3 millimeters of mercury and their diastolic pressure by 4 millimeters of mercury on average.” (NYT 11-21-09 and http://www.nature.com/ajh/journal/v22/n12/abs/ajh2009184a.html)

Here’s another de-stressing method, from biofeedback training: Using the second hand on a watch, learn how to count four to six breaths a minute, making your abdomen rise…this is slower than normal, and helps break up the stress syndrome. You can breathe in to a count of four, and out to a count of four. Try to do this, sitting or lying in a relaxed posture, eyes closed, with gentle music in the background, for 10-15 minutes a day. But even less may help if done before an exam, or other stressful event.

A second technique is learning to warm up your fingers. Envision relaxing all the ligaments that wrap around the capillaries in your fingers, so they open up and let the
warm blood go coursing through. You can tape a little thermometer around one finger and see this happen; in about 15 minutes you can actually raise the temperature of your fingers or toes significantly. The logic behind the procedure is that when the mind feels stress, the ligaments in the extremities tighten to send the blood into the trunk and leg muscles so you can run away from the tiger. Sending the blood back to the hands and feet tells the brain, “No tiger here; relax.”

For professional direction, there is a psychologist downtown who does biofeedback training: Dr. Edward Sorel on Cayuga St. (273-1038). He is full of interesting information. For example, singing rhythmic, tuneful songs induces de-stressing RSA breathing. (This, and the time for quiet meditation may be the reason regular churchgoers and glee club members tend to be healthier and happier than those who don’t participate).

**Depression.** If you or someone you care about shows signs of depression, you may find useful information at: [http://www.nimh.nih.gov/health/topics/depression/index.shtml](http://www.nimh.nih.gov/health/topics/depression/index.shtml)

A summary of the signs of serious depression include unrelenting sadness, pessimism, hopelessness, desperation, anxiety, withdrawal, sleep problems, and perhaps

- Increased alcohol and/or other drug use
- Recent impulsiveness and taking unnecessary risks
- Unexpected rage or anger
- Expressing a strong wish to die

But less extreme symptoms include just finding it difficult to get out of bed in the morning, finding no joy or interest in the world around you.

Should you experience these feelings, take advantage of the resources at Gannett. Gannett and CAPS (<http://www.gannett.cornell.edu>) (607 255-5155). Suicide hotline: (607 272-1616).

A Weill Cornell professor summarizes talk therapy benefits as follows: “Numerous findings over the last two decades demonstrate how talk therapy alters the brain. Disabling conditions like clinical depression and anxiety can be treated effectively by understanding distorted patterns of thought, becoming aware of emotional conflicts that have not been conscious, or practicing new behaviors. Talk therapy is a potent treatment for serious mental disorders and not simply for the ‘worried well,’ as it is sometimes characterized.” (L.S. Sandberg, NYT 5-20-13)

You may have to try different counselors to find one with whom you connect. Many (perhaps most) brilliant people have suffered from depression or extreme anxiety, and there is also a genetic component to mood disorders. Thus, many are vulnerable to depression when encountering serious life stress. If depression or severe anxiety are affecting you or someone you know, it is important to realize that **this need not be a permanent condition.** With talk therapy (whether traditional or cognitive-behavioral...
therapy) and/or medication and some life changes, almost all depressed people can regain their ability to feel happiness, to take pleasure in the world.

Recently, programs have become available for self-treatment using methods based on cognitive behavioral therapy (CBT), which many professionals consider the most effective means of treatment for depression. For an introduction to online programs, like MoodGYM (an interactive self-treatment program developed by Australian psychologists) see Tina Rosenberg, http://opinionator.blogs.nytimes.com/2015/06/19/depressed-try-therapy-without-the-therapist/

Some people experience seasonal depression, which can be treated with antidepressants, or natural spectrum light panels (e.g. HappyLight, etc—used in the day time). http://well.blogs.nytimes.com/2015/11/24/light-treatment-may-work-on-nonseasonal-depression-study-finds/

Research suggests that cognitive-behavioral therapy works as well or better for seasonal depression, if you can find a therapist proficient in CBT. (HWHW, Jan. ’10). No reason not to try both, and to use online programs in absence of a good local CBT therapist.

“Toughing it out” without help is like refusing to wear eyeglasses for nearsightedness. Scientific studies indicate that depression untreated for a long period of time actually causes part of the brain (the hippocampus) to shrink. With treatment, on the other hand (whether talking to a professional clinician, taking medication, or both), new neuronal connections are formed that normalize serotonin and other brain chemicals. And, according to a study in the Am. J. Psychiatry, 2003, 160, 1516, " antidepressants may protect against hippocampal volume loss associated with cumulative episodes of depression." See also: http://www.theguardian.com/society/2015/jun/30/chronic-depression-shrinks-brains-memories-and-emotions

In short, it just doesn’t make sense to deny our brains the kind of help we would get for illness elsewhere in our bodies.

The right to happiness is acknowledged in the Declaration of Independence. Don’t ignore the philosophy of our founding fathers! Don’t deny yourself the possibility of a happy life just because of some brain chemistry glitch or unlucky life circumstances. Seize your right to experience joy. Work at finding happiness in your daily activities and observations of nature’s miracles, large and small, as well as the art, literature, cinema, music, dance, and knowledge exploration that so enhance our lives, and change our brain’s focus from dark thoughts to positive ones. Follow your curiosity to joy. Curiosity about the world is a great antidote to depression. Throughout history, people have overcome great odds to find purpose in life; it just takes creativity and determination. http://www.newyorker.com/science/maria-konnikova/the-secret-formula-for-resilience?mbid=nl_160423_daily&CNDID=26737665&spMailingID=8828585&spUserID=MTA5MjQwNDkzMDQ3S0&spJobID=902366567&spReportId=OTAyMzY2NTY3S0

And while you are working on finding joy in your own life, think of little things you can do for others. In particular, avoid harsh, demeaning words, hateful gossip, jokes or “funny” comments that rely on putting others down. People who need to put others down
have serious problems they should address with a professional. People who, without conscious motive to hurt, cause others pain have two remedies to feel better about themselves, and to avoid making the world a more stressful and unhappy place for others:

1. Be careful, **mindful** of the effect of your words and actions on others; and
2. Learn to say the magic words so many people (and countries) find hard to say: “I am sorry.” “I was wrong.” “Please forgive me.” Apology for hurt to others is very good for the soul, the beginning of wisdom.

Finally, try **poetry**…reading it, writing your own. As a Chinese poet wrote centuries ago, a poem “is a pearl formed around an irritant in the soft bivalve of the mind.” Here’s one nice example, from one of our best modern nature poets:

**Wendell Berry, “The Peace of Wild Things”**

When despair for the world grows in me  
and I wake in the night at the least sound  
in fear of what my life and my children's lives may be,  
I go and lie down where the wood drake  
rests in his beauty on the water, and the great heron feeds.  
I come into the peace of wild things  
who do not tax their lives with forethought  
of grief. I come into the presence of still water.  
And I feel above me the day-blind stars  
waiting with their light. For a time  
I rest in the grace of the world, and am free.  

(Collected Poems, © 1985).