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New research reveals America's most-hated vegetable may hold the secret to a longer life

There is a great deal of hard science you never hear about from "natural-know-it-alls" or "Johnny-come-lately" experts in natural health.

I keep my eye on all of the important clinical-trial research (the kind the FDA has rigged up for drug studies). But I also understand how to read statistics and epidemiology-based research, as well as lab studies on animals, which can confound and confuse (sometimes on purpose) the typical doctor.

And that's what led me to an important new study—which should be of vital interest to everyone who wants to achieve the kind of healthy aging I discussed at length in April's Special Healthy-Aging Edition of *Insiders' Cures*.

Researchers have discovered that a compound found in one of the most hated vegetables in America—the "dreaded" lima bean—can help male fruit flies lower their glucose levels and improve their body composition. And that helped boost the flies' lifespan by a whopping *10%*.

Of course, most natural-know-it-alls have overlooked this study because it has to do with fruit flies, rather than people. But I'm going to share with you several key reasons why you shouldn't shoo away these findings. And why you really should eat more lima beans…

What most doctors don't know or won't tell you about scientific research

Several years ago, when I was directing the College of Physicians in Philadelphia, an American Medical Association official visited our offices.

I was startled to learn from him that a routine AMA survey of doctors found that only 9% of practicing physicians got their new medical information from the medical and scientific literature.

These doctors apparently didn't have time to read through the studies in medical journals. So they relied on the colorful pictures in drug ads, and the snappy literature left by the drug sales men and women waiting in their offices—or taking them out to expensive lunches, dinners, golf games, and meetings. (To its credit, the AMA has since come out with ethical guidelines and restrictions about accepting gifts from drug and medical-device company reps.)

Of course, I don't have to tell you how much of a mistake it is for anyone to rely on drug company propaganda for medical information. Particularly because Nature provides all kinds of clues (as well as cures) about what is going on with your body…and your health.

All it takes is the simple realization that our bodies are not machines like those created by medical technology, but rather organisms that were originally a part of Nature. In fact, research in biology, earth sciences, ecology, ethology, and other natural sciences is often highly relevant to understanding human health.

You won't catch the vast majority of other doctors reading all of these types of scientific literature. But I take note of findings from *all* of the natural sciences, and they often help

In this issue:

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me discover a health "breakthrough" when pieced together with other types of research sources. And then I report that breakthrough to you.

Which leads me to fruit flies and longevity...

The simple insect that can teach you how to live longer

Anti-aging, healthy aging, or life extension (depending on which term you prefer) is of great concern to many people. But there aren't many good, clinical, human studies in this field. That's because these types of real scientific studies take a long time to do—literally a human's lifetime.

(Also, the vast majority of research funding is tied up in expensive clinical trials for drugs—because the crony-capitalist mainstream is far more interested in studying drugs than natural remedies.)

So when I look for good scientific data from valid, well-designed studies on prolonging lifespan (versus the hype you typically hear from the "anti-aging" gurus), I often turn to experimental biology research using animal models.

Particularly fruit flies. After all, scientists have been studying these insects for over a century, following their entire lifespans over multiple generations.

Much of the basic science of genetics, for example, was originally determined in inexpensive fruit fly experiments (long before the billion-dollar, big-science Human Genome Project, which was the big government medical research boondoggle in between its two "decades of the brain" redundant research, and before the equally redundant Obama-Biden "cancer moonshot").

The lima bean study is a case in point. This research, which was conducted on fruit flies, is clear, simple…and compelling. Let's take a closer look.

The bean that could boost your lifespan by 10%

The study was published in February in the *FASEB (Federation of American Societies for Experimental Biology) Journal*.[1] As I noted earlier, experimental biology is important because there are studies that can be done more quickly and inexpensively (and often only) in animals rather than humans. And FASEB bands together relatively smaller, neglected fields of science and publishes their findings—which helps gain attention and public support for these types of studies.

(Full disclosure: I had a series of interviews for the FASEB executive director position about 12 years ago. One of the aspects of the job that interested me was that FASEB encompasses many different kinds of scientific research in experimental biology. But I decided it was another bureaucracy in which politics weigh more heavily than science. So I kept up my independent consulting medical practice and my writing, which eventually led to *Insiders' Cures*.)

Back to the study, which revealed the life-prolonging properties of prunetin, a type of flavonoid found in plants—particularly lima beans, but also in other legumes and prunes.

Previous studies have detailed prunetin's anti-inflammatory properties. But this study was designed to go much further.

Researchers wanted to determine whether prunetin can also affect lifespan, locomotion, body composition, metabolism, and gut health. What they discovered is impressive.

The researchers found that male fruit flies that consumed prunetin lived an average of three days longer than their counterparts that didn't receive prunetin. That's quite amazing when you consider the average lifespan of the fruit fly species the researchers studied is 30 days.

In essence, the prunetin fruit flies lived about 10% longer. Translated into human terms, that means prunetin could potentially increase a 70-year-old man's lifespan by *seven extra years*.

So how does prunetin do this? Well, the researchers found that the flies given prunetin had elevated activation of AMPK, an enzyme that helps cells (in both fruit flies and humans) produce energy. They believe the extra AMPK boosted the flies' fitness levels and improved their body composition.

Researchers found that the male fruit flies that consumed prunetin were able to climb up a test tube a whopping 54% faster than flies not given prunetin. And the prunetin flies had an impressive 36% reduction in glucose levels.

Interestingly, the researchers noted that the female fruit flies given prunetin didn't have the same longevity results as the males. They think that may be because female fruit flies already live longer than males, so prunetin may actually help the males catch up with the females.

The many reasons you should eat legumes and prunes

The editor of the FASEB Journal said, "This research shows the connection between diet and health is important for all living animals, no matter how complex or simple they are." He concluded: "It certainly doesn't hurt to add lima beans to more men's diets."

I would have said the same thing had I taken the job at FASEB. I also agree with the editor's qualification that "there is a lot of work that must be done before we would know if [prunetin] will be useful in humans." Which means, of course, that we need to keep the funding for experimental biology coming.

After all, previous studies have already shown us that lima beans and other legumes have plenty of lifesaving components.

Researchers have found that legumes are typically higher in protein than other plants (since they host nitrogen-fixing bacteria in their root nodules). And other studies show a link between lima beans and prostate health.

Legumes are also rich in biologically active plant alkaloids, flavonoids, and isoflavones—which have health benefits at the cellular level.

In fact, my favorite plant source for cellular hydration—aspal—comes from the South African legume that has been commonly known as rooibos or red bush.

There is, however, an important thing to keep in mind when it comes to choosing legumes. Soy is a legume, but it's also a common allergen. And, as I have warned before, almost all soy grown in the U.S. is genetically modified. You can avoid this by only choosing organic soy.

Along with legumes, prunes—or the more appetizing-sounding "dried plums"—are also packed with prunetin. Additionally, prunes are a very good source of vitamin C. And, of course, they're a well-known remedy for constipation and improved gut health.

The bottom line is that it's vital to increase the amount of research on plant compounds. That's because we typically find that if a plant compound is good for one aspect of your health, it's also good for other aspects of your health.

After all, that's the way Nature works. But sadly, most doctors don't know beans about that.

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Scientific secrets of successful aging

I often write that in addition to monitoring the amount of nutrients you get from foods and dietary supplements, you also need to know how many of those nutrients make it into your cells…and what happens once they get there.

For instance, I've explained before how this process is a major issue when it comes to so-called "antioxidants." Some of these compounds are inter-converted to oxidants and back to antioxidants depending on the environments they

encounter in your stomach, intestines, blood, liver—and ultimately in the cells of your brain and every organ throughout your body.

Metabolites are an important aspect of this cellular nutrition process. Researchers are increasingly paying attention to these small molecules produced by the cells during metabolism. In fact, they're finding that metabolites can provide valuable information on how diet, lifestyles, and diseases can contribute to aging.

The tiny keys that can unlock all sorts of health mysteries

Like this new Japanese study, health research often focuses on metabolites. And these tiny molecules can tell you a great deal about what is going on in your body.

Any food, supplement, or drug is first absorbed from the gastrointestinal tract and transported directly into your liver, where it's sequestered in a special compartment of your blood. And it's immediately metabolized by your liver before it's ever released into the general circulation of the rest of your body.

This same process also happens with cancer-causing chemicals. These carcinogenic poisons or toxins are quickly metabolized by the liver, in an attempt to neutralize and get rid of them, before they are even seen by the rest of the body's cells and tissues.

That's why it's important to understand the metabolites of carcinogens. Also, there are some biologically active substances such as nicotine (cotinine) and cocaine (benzoyl-ecgonine) that can only be detected by the presence and levels of their metabolites, since nicotine and cocaine are instantaneously metabolized in the body.

Which leads me to an interesting new study.

Japanese researchers analyzed the blood of younger and older people and found 14 metabolites that may be related to specific aspects of the aging process.

Basically, this means we may finally know some cellular reasons for why we lose strength and become more susceptible to chronic health problems as the calendar pages turn.

Let's take a closer look at this study.

Researchers discover the differences between young and old—at a cellular level

The researchers drew blood from 15 people ages 25 to 33, and 15 people ages 74 to 88.

The researchers focused on the participants' red blood cells, which make up about half of blood volume. Red blood cells in mammals have no nuclei and limited metabolic activity of their own. They are essentially just packets of hemoglobin to bind and carry oxygen from the lungs to the tissues of the body. They also have an average lifespan of only about 120 days, so they provide a window to recent and current metabolic status in the body. (That's one reason why red blood cells are used to measure blood alcohol levels in order to evaluate intoxication.)

The researchers used high-performance liquid chromatography to separate and analyze the metabolites in the red blood cells (a technology I helped develop from a NASA Astrobiology program in the 1970s).

As I noted above, the researchers found significant differences in 14 metabolites between the younger and older adults.

Specifically, half of the metabolites increased with age, and half decreased.

The decreased metabolites related to antioxidant and muscle activity, while the increased metabolites were biomarkers of reduced kidney and liver functions.

Help your cells age gracefully

So what can you do about these aging-related metabolites?

Well, the researchers simply said their findings demonstrate the importance of older adults consuming more antioxidants from foods and continuing to exercise their muscles.

This conclusion is consistent with the healthy aging advice I give you regularly. But based on other research I've reported, I would also add a few carefully selected supplements to your daily regimen as well.

Studies show older adults can almost always benefit from a high-quality B complex, 500 mg of vitamin C (divided into two daily doses), 100 mcg of selenium, and 200 IU of vitamin E.

Furthermore, older adults need to consume about twice the amount of meat and protein as currently recommended by clueless government dietary guidelines in order to maintain muscle mass—which helps to keep you strong and vibrant well into your "golden years." IC

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The simple, natural ingredient on your fruits and vegetables that can protect you from foodborne illness

You've probably been warned not to judge a book by its cover…and that beauty is only skin deep. But when it comes to food safety, it's all on the surface.

In an attempt to better understand what contributes to food contamination, researchers recently conducted an experiment on two dozen varieties of common salad greens and tomatoes.

What they found challenged the conventional wisdom that rougher surfaces (like a kale leaf) would hide viruses and bacteria and make them harder to wash away.

Instead, the researchers discovered that vegetables that have a waxy layer—which naturally protects the plant against diseases and dehydration—had fewer viruses on their surface after washing, compared to their non-waxy counterparts.[1]

The cleanest greens you can eat

Specifically, the researchers found a *thousand-times fewer* viral particles left on vegetables with a wax layer after being washed, compared to vegetables without this type of layer.

The waxiest produce (and therefore least likely to harbor viruses) included:

- Collard greens (Top Bunch variety)
- Kale (Starbor and Red Russian
- Cabbage (Alcosa and Gonzales)
- Tomatoes (Indigo Rose, Rose, and Sungold)
- Romaine lettuce (Outredgeous)

Other lettuces, endive, spinach, radicchio, arugula, and mustard greens had the lowest amounts of wax.

The science behind food safety

So why did the researchers focus on produce used in salads? Well, fruits and vegetables are exposed to viruses and other microbial contaminants in a number of ways. Among the top offenders are contaminated irrigation water, animal waste on the plants, and handling by farm workers.

When produce is cooked, it typically kills microbial contaminants. But when it's eaten raw, like in a salad, food safety can be particularly problematic.

To conduct the experiment, the researchers swabbed 24 varieties of raw salad greens and tomatoes with a swine virus that mimics human rotavirus—a common pathogen responsible for gastrointestinal infections. (There is a vaccine for rotavirus, but safety and ethical questions have made it the subject of great controversy).

The researchers washed the contaminated greens and tomatoes twice in a standard salt solution.

Then, they evaluated the surfaces of the vegetables at different levels of magnification. Not only were they looking for viruses, but also the amount and composition of waxes

Watch out for pesticides too

Of course, there are other contaminants on produce besides microbes that can cause health issues. Particularly pesticides.

According to the nonprofit Environmental Working Group, nearly three-quarters of conventional produce samples tested by the USDA in 2014 contained pesticide residues. And the really disturbing thing is that the pesticides remained on fruits and vegetables even after they were washed. And in some cases, even after they were peeled![4]

Every year, the EWG releases its "Dirty Dozen"—the 12 types of conventional fruits and vegetables that are most contaminated with pesticides.

The 2016 Dirty Dozen includes strawberries, apples, nectarines, peaches, celery, grapes, cherries, spinach, tomatoes, sweet bell peppers, cherry tomatoes, and cucumbers.

And the EWG notes that hot peppers, kale, and collard greens can be contaminated with insecticides and pesticides that are particularly toxic.

So how can you avoid these deadly chemicals? It's simple. Just eat organic produce—which, by law, can't be sprayed with pesticides, insecticides, or chemical fertilizers.

on the produce.

While viruses typically adhere to waxes at the molecular level, the researchers found that when a wax completely covers the surface of a fruit or vegetable, it repels water and makes it harder for viruses to stick.

While the researchers did their best to make this sound chemically complicated (and relevant), it's basically the same reason it's simpler to keep floors clean when they are waxed. As we all know, waxed surfaces are easier to wash—whether they're floors or fruits.

Hidden sources of wax on your produce

While wax may help cut contamination on produce, it's important to note that not all wax on fruits and vegetables is natural.

Conventionally and even organically grown produce may be artificially waxed to prevent moisture loss and dehydration, protect it from bruising during shipping, and increase its shelf life.[2]

That's why you'll often see wax on apples, cucumbers, eggplant, citrus fruits, peppers, and potatoes.

Some of this added wax is from natural sources like carnauba (from the carnauba palm tree), beeswax, and shellac (from the lac beetle). But some of it is petroleum-based.[3]

To ensure you're not eating petroleum, buy organic fruits and vegetables, which, by law, can only use natural waxes. Or you can buy directly from the grower—just visit your local farmer's market or sign up for community-supported (CSA) deliveries.

Unfortunately, the only way to remove any type of added wax is to peel the fruit or vegetable. And that can remove the nutrients that lie right below the skin.

So what have we learned? While you should carefully wash all produce before eating, your salad may be that much safer (and nutritious) if you load it up with kale, cabbage, collards, tomatoes, and red romaine. IC

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Why it's important to say "I don't" rather than "I can't"

The late Nancy Reagan (1921-2016) used to give good advice to "just say no" to unhealthy behaviors like "recreational" drugs (see the March 28, 2016 *Daily Dispatch* "Nancy Reagan knew the key to a healthy lifestyle").

Science and modern events have proven just how right she was with her basic message of abstinence, despite the ridicule of politically correct public health experts.

That's why I always share with you my common-sense personal tips for saying no to unhealthy behaviors. This month I am also reporting some interesting new research on the topic of *how* to "just say no" when subjected to peer pressures.

The easy way to establish a personal wellness policy

A few years ago, two professors of marketing set out to determine how much the language we use for saying "no" helps—or hinders—us in reaching our goals.

These professors conducted four studies in which they divided people into groups that used either "I can't" or "I don't" phrases.

For instance, in one study, 30 women participated in a wellness challenge that involved goals like exercising more or making better food choices. When faced with a temptation, one group of women was instructed to tell themselves "I can't." For example, "I *can't* eat pie." The other group used phrases like "I *don't* eat pie."[1]

After 10 days, only 10% of the "I can't" group was still meeting its wellness goals. But 80% of the "I don't" group remained on track.

The researchers think this happened because saying "I don't" involves someone's personal identity. Whereas saying "I can't" involves factors seemingly outside the person.

To put it another way, using "I don't" phrases establishes a personal policy. For instance, you might have the personal policy of "I don't eat sugar."

This sets expectations for both yourself and others, and provides a set of simple guidelines to help you

take control of your health, and have others respect them.

The death of abstinence—and the frightening toll on public health

Of course, I've known this basic truth almost as long as Mrs. Reagan did. But by the 1980s, the experts no longer wanted to rely on personal policies of abstinence and discipline, at least as a starting point, for addressing the drug epidemic. In essence, they weren't encouraging the "I don't use drugs" personal policy I just told you about.

That's still the case today, and look what it's done to us. Use and abuse of both prescription and so-called "recreational" drugs has reached epidemic levels and raised alarms at the local and national levels.

In fact, in the March *Insiders' Cures* ("Alert: New research shows pain pills are creating a deadly epidemic"), I reported about research showing how death rates among white, middle-class Americans have changed for the worse by a whopping 38% over the last 30 years, with use and abuse of both prescription and illegal drugs being the major factor.

But the current government so-called solution is to just spend more taxpayer money on treatment programs, rather than any abstinence and discipline initiatives.

And that's not the only health and wellness issue for which abstinence is now discouraged. As I wrote in a February *Daily Dispatch* ("The critical abstinence advice the government WON'T promote") abstinence is not even an option in many public-school sex-education programs.

Minors (well under the legal "age of consent") are taught everything about sex—*except* not to have it. And girls are being prescribed birth control prior to the "age of consent," and being injected with dangerous HPV vaccines that cause ovarian failure, with incalculable long-term damage to their reproductive and general health.

Bottom line: Abstinence is no longer considered part of our nation's arsenal against unhealthy behaviors (except when it comes to tobacco!). And that myth discourages the development of the personal policies that research shows are critical for healthy lifestyles.

Learning how to set your personal wellness policies

Of course, abstaining is sometimes easier said than done. Why? Well, much of it has to do with evolution.

Humans and canines are unique among apex predators ("top of the food chain") because we live (and eat) in groups. Other apex predators, such as bears in Eurasia and North America or the big cats in Africa, Asia, and the Americas, typically are solitary hunters.

They require a great deal of foraging range to supply the calories and nutrients they need. Meaning that many environments can only support a few of them. (So when they say, "There's room at the top," they don't mean apex predators.) Here in Florida, conservation biologists recognize that even some of the large state park lands are not large enough to provide forage for a single panther.

But humans work in groups, which has its pluses and minuses. It helps us survive, but it also works against establishing policies for setting personal boundaries. That's because saying "no" goes against the grain needed to form and maintain social relationships. The person being rejected doesn't feel good, and the person who's doing the rejecting can feel guilty and uneasy.

The way to get around this problem is to cite your personal policy. After all, how many times have you heard that something is "just policy" and "nothing personal"? If governments and institutions can totally paper over our lives with their impersonal policies, then we can certainly have a few personal ones for ourselves.

The benefit to these policies is they take away the onus of having to say "no" on a personal, individual basis. For instance, rather than telling someone you don't want to talk to him or her, you can just say, "Sorry, my policy is not to take phone calls at such and such a time." Such policies also provide an element of professionalism and predictability.

So how can you establish your own healthy lifestyle policies? Let's use the growing social epidemic of "busyness" as an example.

Practical tips to put personal "just say no" policies into action

It seems everyone is busy all of the time these days. But a large part of this problem stems from the inability to "just say no."

Sometimes, we all need to just say no to endless "meetings" that just waste time. Say no to volunteering at public school activities that focus on interacting with adult bureaucrats instead of with children. And say no to involvement in "charitable" health, environmental, and other "nonprofit" causes that are wasteful,

misdirected, meaningless—and even border on the fraudulent, as I have often warned about.

Hemingway once wrote, "Never mistake motion for action." Running around in constant motion does not automatically equate to meaningful action, accomplishments, or results.

In other words, the old admonition, "Don't just stand there, do something" (stated more than once to doctors in training during surgeries—with potentially dangerous consequences) does not always hold. Rather, John Milton's observation that "they also serve who only stand and wait" may often be the healthier policy.

So how can you accomplish this goal?

One option is to not accept work-related calls on Sunday, or Saturday, or both, depending upon your faith. Don't take phone calls outside of business hours. Encourage people who will be disruptive to your train of thought to communicate by email, instead of randomly picking up the phone, so you can get back to them at your convenience when you can focus on their issues (but still within a regular or predictable timeframe). Not everything is a fire that has to be put out. Tell them you are not a "fireman" or "emergency responder."

"Never mistake motion for action."

An added benefit to "talking" by email rather than phone is that you can communicate with people without fearing you are interrupting them, or calling at a bad time. And it's easier to just say no in an email than it is in a phone call or face-to-face.

You could also take a page from the late writer Edmund Wilson. He sent back a standard letter for the constant requests that took him away from his writing: "Edmund Wilson regrets that it is impossible for him to… read manuscripts, give interviews, contribute to, or take part in, symposiums or panels of any kind." Altogether, his amusing form letter listed 21 common time-wasting requests made of writers in which he would not take part.

Whichever method you choose, remember, "just say no," may represent your simplest mind-body practice of all in today's busy world. Nancy Reagan was right after all, may she rest in peace.

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NEWS BRIEF

The simple vitamin trio your brain, your mood, and your heart need every day

B vitamins figure prominently in natural approaches to preventing and reversing Alzheimer's disease and dementia. In fact, in Europe they call them "neurovitamins." And B vitamins are also important for the heart.

Which makes perfect sense. After all, one of the keys to brain health is having a healthy cardiovascular system. So, the heart and the head should go together in more ways than one.

A new study provides further evidence for the importance of this connection.

Researchers in South Korea gathered 48 people, age 65 or older, who had mild cognitive impairment.[1] The participants were divided into two groups. One group was given folic acid and vitamin B6 and B12 supplements daily (the study didn't list the dose, but other research has demonstrated active doses). The other group was given a placebo.

After 12 weeks, the researchers gave both groups cognition tests, and also measured their homocysteine levels—which are important for heart health.

The vitamin B group showed very highly significant improvements in cognitive function, serum homocysteine levels, and depression. Which once again proves that heart health, mind, and mood are all connected.

Unfortunately, as I've reported before, many Americans are deficient in B vitamins. And because these vitamins are most commonly found in animal sources like beef, pork, chicken, fish, and dairy, vegans and vegetarians may have particular trouble getting their daily dose of Bs.

That's why I recommend everyone take a high-quality B-complex supplement daily. Look for a product that includes at least 50 mg each of thiamine, riboflavin (B2), niacin/niacinamide (B6), and pantothenic acid, plus at least 200 mcg of folic acid/folate, 12 mcg of B12, and 100 mcg of biotin.