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REDBOOK

Surprising Ways The Seasons Affect Your Body—And Your Mind

Whether
you feel mellow
or stressed, find it
easy to drop pounds or a drag, even
whether you're most likely to conceive now or
later, may have more to do with the time of year than
with everyday events. Do you know when you're at your peak?

BY KATHLEEN MCAULIFFE

WHEN YOU WAKE UP IN THE MORNING AND THINK ABOUT WHAT kind of day is ahead, maybe you should check the time of year, too. Because the season you're in can affect not only whether you need sunblock, an umbrella, or a heavy coat, but whether you catch a cold, eat too much, gain weight, get drunk, even how likely you are to have sex—and get pregnant.

It seems obvious once you think about it: Animals' lives are arranged around the annual cycles of light and weather, and we are, let's face it, animals. So it only stands to reason—and new scientific findings are backing it up—that our behavior, our moods, our health, and our love lives are subject to the forces of seasonal shifts.

Of course, we're not quite as biologically predictable as salmon swimming upstream every fall. "Not all people are affected the same way by the seasons; in fact, some are affected in exact opposite ways," notes Norman E. Rosenthal, M.D., director of seasonal studies at the National Institute of Mental Health and author of *Winter Blues*. "Everyone is wired differently, although women are, for unknown reasons, generally more sensitive to seasonal changes than men." Furthermore, the U.S. encompasses a variety of climates, from the temperate, rainy Pacific Northwest to the deserts of the Southwest to the snowbelt across the Midwest and Northeast, each with its own version of winter, spring, summer, and fall. Still, the bulk

kin are almost twice as likely to fell you now than in the warmer months, in part, experts believe, because the low humidity of winter dries mucous membranes in the respiratory tract, making you more susceptible to viral infections. Cold weather makes you more sensitive to pain but less sensitive to the effects of alcohol: Those who drink may therefore drink more. But you're less likely to get a migraine or an asthma attack on a nice, clear, cold day, according to Dr. Simonson.

YOUR MOOD As daylight decreases, we get an increase in biological-rhythm-regulating melatonin and a drop in serotonin, the "feel good" neurotransmitter in the brain, making us sleepier and less energetic. Only about 1 in 20 of us is dispirited enough by winter's shorter days to qualify as having seasonal affective disorder (SAD), but at least 50 percent of the population in the northern latitudes of the U.S. experience at least one of the mood or other changes with the seasons, according to a survey by the New York State Psychiatric Institute at Columbia-Presbyterian Medical Center in New York City.

In addition, there are fewer negative ions in the air (ions are electrically charged particles), which tends to make people more tense and irritable. Cold temperatures themselves are, however, energizing, Dr. Rosenthal notes, so if you are relatively immune to the depressing effects of limited daylight, you may find your spirit buoyed by winter.

"Hot fun in the summertime" is right—summ

of the population is exposed to "a significant winter" (and summer), according to Dr. Rosenthal, with spring and fall serving to shift the gears in between, and certain broad strokes emerge when scientists look for trends that ebb and flow in quarter-annual time.

Can a few degrees one way or another, or a little more or less daylight, really make that much difference? The field is in its infancy, but the more researchers probe, the more it seems it's the exception when seasons *don't* influence our mental and physical health. Beyond idle curiosity, knowing what is likely to hit us when means that we can be forearmed. If, to take just one example, you're not mindful of seasonal changes in appetite, you may find yourself eating up to 1,000 calories more a day in winter, according to Maria Simonson, Ph.D., director of the Health, Weight and Stress Clinic at Johns Hopkins Medical Institutions.

We've sorted out some of the strongest patterns observed—and noted the occasional individual variation—in our forecast of seasonal mood and body shifts.

Winter Doldrums

These really are dark days, in almost every way—more people cite winter as their least favorite season than any other, says Dr. Rosenthal.

YOUR HEALTH January through March are peak months for respiratory problems, flu, and ear infections, according to the National Center for Health Statistics. Cold viruses and their

SEX DRIVE AND FERTILITY Winter is more a time for making babies than delivering them. It's one of the lows for birth rates but tops the list for conception, reflecting a peak in late-summer births.

WEIGHT For many of us, winter means weightier. The dive in serotonin triggers cravings for sugary or starchy carbohydrates (which in turn help pump up serotonin), explains Judith Wurtman, Ph.D., head of the Nutrition and Behavior Studies Group at the Massachusetts Institute of Technology Clinical Research Center and author of *The Serotonin Solution*. We're also prone to pass on salads and other light foods and to find some heavier choices more appealing, says Dr. Rosenthal.

No wonder, then, that this is when you're likely to be at your highest weight all year—the average gain for those not making an effort to avoid it is up to seven and a half pounds, says Dr. Simonson. The silver lining is that cooler temperatures make your body work harder, burning more calories—negligibly, if you're just scooting from your door to your car, but significantly if you're working out outdoors. Exercising when it's in the teens outside will burn about 13 percent more calories and 35 percent more fat than the same effort at 70 degrees, says Dr. Simonson.

Spring Bounce-Back

Longer days, warmer temperatures, an explosion of life: Most of us share a sense of nature's annual renewal, and spring does usually mean (continued on page 98)

Hunger

Fertility

Mood



Births

Weight

er is our most sexually active time of the year.

Energy

Health

Sex



Love

Seasons & Health

(continued from page 56)

increasingly good news for both mind and body—with a few hiccups along the way.

YOUR HEALTH A number of studies show that the best weather for health is a temperature of 64 degrees and humidity of 65 percent—your prototypical beautiful spring day. As we spend more time outdoors, we benefit from exposure to negative ions, which are thought to revive vitality, while lower melatonin levels from the extra hours of daylight may help us shake off our winter sleepiness and lethargy. Accidents increase, though, in early spring because people are both out and about more and they have a heightened sense of youthfulness and invincibility, claims Dr. Simonson. (Fatal traffic accidents start to rise in March, after a low in February, and peak in late summer, according to the National Safety Council.)

YOUR MOOD Negative ions and light-spurred increases in serotonin both translate into good moods and high spirits, but it can take a little while to adjust to all this new happiness. “The scarcity of light in winter makes us extremely sensitive to it,” says Dr. Rosenthal. “So when light once again becomes abundant, we believe it might pour neurochemicals out onto the thirsty brain.” No surprise, then, that we get kind of drunk—a.k.a. spring fever. An extremely small number, however, are severely depressed by spring; surprisingly, spring and summer are the peak times for suicides.

For the rest of us, spring fever just means a sluggishness and distractibility that dissipate after our bodies have had a few days to catch up to the dramatic changes in day length and temperature. The same conditions that are ideal for health—64 degrees, 65 percent humidity—also make for the best mental functioning. But the pull from outside can be powerful: Although spring is one of the times our brains are sharpest, a study by Dr. Simonson found that clerical workers make some 1,000 percent more mistakes in warm weather, probably the simple result of daydreaming about being outdoors.

SEX DRIVE AND FERTILITY Your chances of conceiving are up to twice as good in spring (or fall) as any other time of the year. As documented in a report in the *Journal of Reproductive Rhythms*, it seems we are most fertile when the

sun shines about half the day and the temperature is a mild 50 to 70 degrees. You’re probably more in the mood, too: A study by the clinical psychobiology branch at NIMH found that as daylight increases, it damps down energy-draining melatonin production in women (men showed no such seasonal difference).

YOUR WEIGHT As serotonin levels bounce back, the desire to fill up on sweets and starches declines, says Dr. Wurtman, making it more feasible to start shedding any excess winter weight.

Sweet (and Sour) Summer

Most of us like the additional light, though too much heat can make summer more of a mixed blessing.

YOUR HEALTH Aside from asthma, allergies, and skin rashes picked up on outings, summer is a relatively healthy season. Colds, flu, and similar bugs are at an annual low. Light-triggered lows in melatonin make us feel more energetic, less sleepy. The more season-sensitive types get a further bonus in summer: Their nighttime body temperature is much lower than in winter, which is associated with sounder sleep and greater well-being.

Watch out when the temperature soars, however. Sweltering heat and humidity can nullify any boost in energy, making us sluggish as the body shunts blood away from the core to the surface in an effort to cool off, explains Dr. Rosenthal. Slowed reaction times contribute to a rise in traffic accidents, according to Dr. Simonson, and to make matters worse, the hotter you are, the drunker you get from a given amount of alcohol, says Peter Syapin, Ph.D., assistant professor of pharmacology at Texas Tech University School of Medicine.

YOUR MOOD For many people, summer is the happiest time of the year; a tiny minority of the population, however, gets summertime blues, which may be a failure of the body to adapt to the heat, speculates Dr. Rosenthal.

SEX DRIVE AND FERTILITY “Hot fun in the summertime” is right—this (notably late summer) is our most sexually active season, or so a number of studies of married couples and single men suggest. Fertility nevertheless drops to its lowest seasonal point, the result of sperm counts one-quarter to one-third lower in summer than in winter, reports a study from the Chemical Industry Institute of Toxicology. The

findings held even for men who worked in air-conditioned buildings or lived in cool climates, which suggests that something other than heat—perhaps the additional daylight hours—is the cause.

WEIGHT Since we’re less hungry and tend to eat lighter, June to September is prime time for losing the last of your winter weight—or to finally reach your goal weight. Although a given amount of exercise burns fewer calories than in winter, the combination of boosted energy levels and appealing weather makes exercise more likely, and summer odds on to be your thinnest time of year. (Of course, having to be seen in a bathing suit is a prime, nonbiochemical factor, too.)

Fall Revival & Relapse

YOUR HEALTH For most people, it’s back to that mid-60s-temperatures-and-humidity “perfect” weather for health, with cooler air providing some recharging after energy-sapping summer heat. A few unexplained oddities: There’s a second peak in skin disorders, and the high-water mark for appendicitis is October. Also, right before the first cold spell, there’s a rush of visits to the ER for asthma attacks, according to Dr. Simonson.

YOUR MOOD The sense of renewal many of us feel in the fall is probably just cultural, prompted by school starting and the revival of our regular lives after summer breaks. We are back to spring’s peak brain function, but also back to rapid shifts in the lengths of days, which can be hard on the minority whose bodies can’t keep up.

SEX DRIVE AND FERTILITY Conception starts to rise in fall, perhaps the result of rising male hormone levels.

WEIGHT If you’re not careful, weight will start to creep back on as serotonin levels drop and cold-weather cravings kick back in. But take care—launch an exercise program, shift your meal plans to hearty but low-cal fare—and you’ll be able to get through the dark days of winter without adding pounds.

That’s the real goal of this new seasonal research: to help us understand how light and dark, heat and cold, affect our well-being—and to give us tools to be our best, no matter what the time of year. □

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