

WHAT YOU CAN DO TO LIVE LONG AND WELL

A large part of longevity is dependent upon genetics. If your family members lived for a long time, chances are you will too. But, cautions Bradley Willcox of the Okinawa Centenarian Study, inheriting a solid set of genes doesn't make you bulletproof. "If you don't take care of the Benz, you'll be worse off than if you had a [cared-for] Ford Escort," he says. Here are a few tips to put plenty of miles on the odometer:

EXERCISE

Regular exercise not only helps to maintain flexibility, joint resilience and balance but it also keeps the mind alert and the cardiovascular system healthy. Walking and yoga are particularly good for maintaining fit abdominal muscles. A Canadian study published in the *Journal of Medicine and Science in Sports* found that participants with weak abs suffered a higher death rate.

STRESS REDUCTION

Asia's most elderly have suffered extreme stress in their lifetimes—multiple wars, hardship and the loss

ANY LENGTHS: Sudarshan Dheer, 66, drinks his own urine every morning, as prescribed by ancient Indian medical texts. He believes it will lead to a longer life

of loved ones. But many share a positive and easygoing attitude that lets them roll with the punches. A study of female centenarians done at the Boston Medical Center in Massachusetts found they tend to be less neurotic than average, as did a similar study in Japan. Gerontologists report that psychological health is far more important than physical health for maintaining well-being in later life.

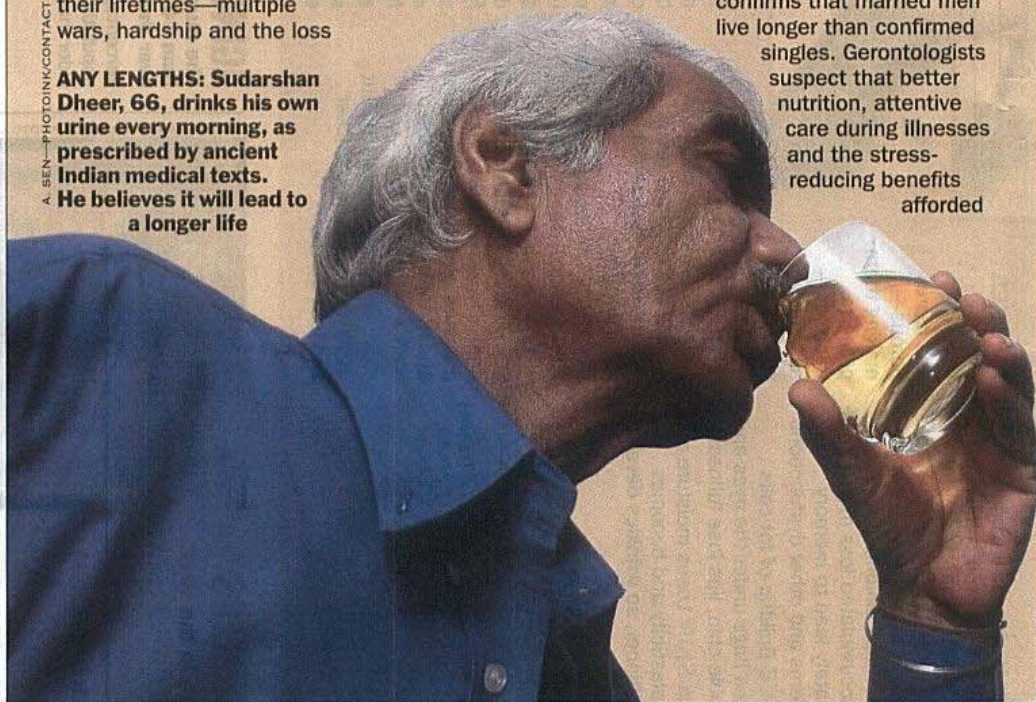
SEX

Dimming the lights and putting on some mood music might have more benefits

than simple stress reduction. A 1997 study published in the *British Medical Journal* tracked 918 men aged 45 to 59 for a decade and found that those who ejaculated less than once a month were twice as likely to die during the study period than men who had orgasms at least twice a week.

MARRIAGE

Increased sexual activity, however, does not mean that swinging singles have any advantage over their coupled counterparts. A 1996 report by the RAND Center for the Study of Aging confirms that married men live longer than confirmed singles. Gerontologists suspect that better nutrition, attentive care during illnesses and the stress-reducing benefits afforded



buying a coffin at the age of 61. Most of the locals get many decades of workaday use out of their sarcophagi before pressing them into service as eternal resting places. That's because the people of Pinghan and surrounding Bama county, located 250 kilometers northwest of Nanning in Guangxi province, are exceptionally long-lived. The county (pop. 238,000) has more than 74 centenarians and 237 residents who have reached their 90s. That's one of the highest per-capita concentrations of old-timers in the world, according to Chen Jinchao, a surgeon who for the past 10 years has run the Guangxi Bama Long Life Research Institute.

You won't find the county in the *Guinness Book of Records* because detailed official birth records only began to be kept there after 1949. But Bama is nonetheless renowned as a place where the sight of sprightly centenarians is no rarity. Elsewhere in Asia there are other, similarly fabled pockets of longevity, where, for reasons not fully understood, life expectancy exceeds global norms by wide margins. The Japanese, of course, live unusually long lives—reaching an average of 81.6 years. By comparison, in the U.S. the average life expectancy in 2002 was 77.1 and only 74.5 for men, about the same as Cuba's. Okinawa, the southernmost prefecture in the Japanese archipelago, boasts the longest-lived population on the planet, with an average life expectancy of 81.8. Meanwhile, Japan is currently home to the world's oldest man (Yukichi Chuganji, 113) and woman (Kamato Hongo, 115).

At Asia's other extreme, the average life expectancy in Afghanistan is just 43.1 years. But in neighboring Pakistan there is the geriatric oasis of the Hunza Valley. High in the country's northern mountains, it's a place of such pristine beauty and with such a reputation for fostering longevity that author James Hilton was inspired by a visit there to write *Lost Horizon*, the 1933 novel about an isolated valley called Shangri-La whose residents lived for hundreds of years. Another death-defying region, currently being studied by gerontologists, is a cluster of villages in Sunchang county located in South Korea's mountainous southwest, where some local farmers continue to work the fields until they are well into their 90s.

Is it something in the water? Why do some communities, located in disparate places and harboring very different cultures, seem to be built atop a fountain of youth? Scientific efforts to uncover the secrets behind these mysterious, mini Shangri-Las

have varied enormously in scope, ranging from a sporadic, amateur attempt by a busy general practitioner in the Hunza Valley to a quarter-century study in Okinawa during which researchers carefully amassed and analyzed data on everything from eating habits to the preferred hobbies of the oldest of the old (they enjoy playing the Okinawan three-string *sanshin* and singing traditional folk songs). There are tantalizing consistencies in research findings, offering priceless clues to aspiring centenarians on what it takes to live a long and healthy life.

You've heard some of the secrets of Asia's most senior citizens before (probably from your mother): eschew an excess of meat, eat your vegetables and get plenty of exercise. Other lessons from their lives are downright depressing, particularly for gastronomes who regard Asia as a place where one lives to eat rather than the reverse. For example, it's best to eat only until you are *hara hachi bu*, or "8 parts out of 10 full," as the Okinawan phrase puts it. An old wives' tale, perhaps, but scientific evidence has been steadily mounting for years that gives credence to this

“These days, making it to 90 isn't so hard, with a bit of luck and

by a steady home life are possible factors. Professor Jean Woo, head of Hong Kong's Sau Po Center on Aging, says stimulating

SLEEP

Shut-eye is essential for repairing daily cell damage, which over time could lead to



SPIRITED SENIOR: 103-year-old Hideko Arima still keeps customers company at her Tokyo pub, joining them for a nightly cup of whiskey with tea

cancer and breakdown of organ function. A recent survey by the American Cancer Society found that participants who slept an average of seven hours a day had the lowest mortality rates. Too much sleep, however, might be worse than not enough: nine hours per night was more risky than four. David Phillips, associate director of the Asia

FIT TO EAT: Simple peasant fare can lead to longer life spans

companionship in old age is an additional indicator of longevity.

CHILDBEARING

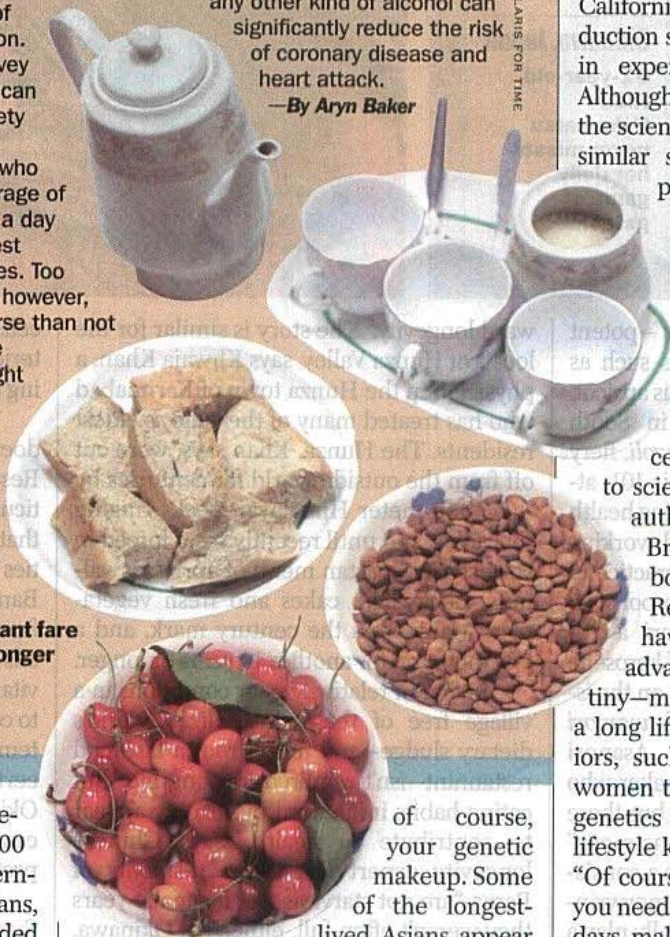
Mature couples may hesitate to have children, citing studies that link older mothers with an increased risk of birth defects. But a recent study in the British journal *Nature* found that women who begin childbearing in their 30s or 40s tend to live longer than average. An earlier Harvard study suggests centenarians are four times more likely than average to have had their first child while in their 40s.

Pacific Institute of Aging Studies, points out that excess sleep can lead to depression, sloth and mental inactivity—proven impediments to long life.

DIET

After good genes, smart eating habits might be the single most important longevity factor. The standard platitudes apply: fruits, vegetables and unprocessed carbohydrates such as rice should make up most of your diet; protein should come mostly from fish or legumes (lentils, chick peas or soy beans); and go easy on the red meat. Moderate consumption of alcohol is O.K. A long-term study by the Harvard School of Public Health and the Beth Israel Deaconess Medical Center shows that daily consumption of a glass of wine, beer or any other kind of alcohol can significantly reduce the risk of coronary disease and heart attack.

—By Aryn Baker



simple adage. A daily diet restricted to between half and three-quarters of the 2,100 calories recommended by the U.S. government appears to boost health in humans, and an equivalent reduction has extended the lives of lab rats.

But simply restricting your diet to watercress and celery won't get you to your personal centennial. There are no magic potions or simple regimens that automatically bestow longevity. It's the total package that counts: diet, exercise, mental attitude, family and societal support—and,

of course, your genetic makeup. Some of the longest-lived Asians appear to have an extended shelf life hardwired into their anatomy by their progenitors. "My parents and grandparents lived until they were in their late 80s and early 90s," says Hide Nakamatsu, a 1.47-meter-tall, 91-year-old bundle of life force wrapped in a white cotton frock, cotton gloves and a bright blue-and-white bonnet. The headgear is

SECRETS OF Longevity

necessary to shade her darting eyes during her daily game of gateball, a fiercely competitive Okinawan version of croquet that, in Nakamatsu's case, involves lots of running from one hoop to the next. Once she's dispatched her opponent's ball from the field with a sharp crack, Nakamatsu returns to the shade of palm trees sheltering the gateball court. None of her three children, 10 grandchildren or nine great-grandchildren has ever suffered a major disease, she says; they rarely go to the doctor. "I suppose it's something I gave them in my blood."

Nakamatsu is almost certainly right. Scientists are only just beginning to unravel how genetic makeup affects aging. But research published in recent months suggests that a single gene or group of genes appear to control the aging process. Scientists at Harvard University and the University of California say a gene related to insulin production seems to control the onset of aging in experiments on yeasts and worms. Although the research is in its early stages, the scientists say there is a high likelihood a similar system for control of the aging process exists in humans.

The most important genetic factor in longevity is no mystery. Women live longer than men all over the world, usually between five and seven years longer in industrialized nations. In Okinawa, as many as 86% of the centenarians are female, according to scientist Craig Willcox, one of three authors—including his brother Bradley—of the 2001 best-selling book *The Okinawa Program*. Researchers think women might have a not-yet-understood genetic advantage. But DNA isn't entirely destiny—men can improve their chances for a long life by avoiding destructive behaviors, such as heavy drinking, that most women tend to avoid. "From our studies, genetics accounts for about a third and lifestyle kicks in for the rest," says Willcox. "Of course, if you want to make it to 100, you need a very nice set of genes. But these days, making it to 90 isn't so hard, with a bit of luck and a good lifestyle."

Included in a "good lifestyle" is the avoidance of proven killers. Few of Asia's ancients smoke; if they once did, they kicked the vice long ago. Most will happily admit to taking a drink now and then, though, a habit whose benefits in moderation are well enough established that they are acknowledged even by such cautious institutions as the American Heart Association. The

—CRAIG WILLCOX,

one of the authors of *The Okinawa Program*

a good lifestyle.™