

Use Less Stuff

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Suburban Sprawl—Bad for People and the Planet *by David Suzuki*

Last fall, millions of children around North America went back to school. But most didn't walk or ride their bikes. No, these days most of those kids were driven. And it's making them fat.

In fact, our suburban, car-centric society is partly responsible for the near-epidemic levels of obesity for all age groups in North America, according to recent reports in the *American Journal of Public Health* and the *American Journal of Health Promotion*.

Researchers developed a "sprawl index" to measure patterns of development in communities across the United States. Then they compared the levels of suburban sprawl with the health of 200,000 people

living in those communities based on responses from a national health survey.

Their results show a startling correlation between sprawl and obesity. In fact, people living in the least dense, most sprawling communities were likely to weigh six pounds more than those living in the most dense, compact communities.

There was also a strong relationship to chronic disease - those living in sprawling communities were found to be more likely to suffer from high blood pressure.

By designing decentralized suburbs, with little pedestrian or bicycle access to schools, offices, shopping and recreation, we have essentially engineered physical activity out of our daily lives. For many people living in

the suburbs, the car (or, more and more often, the SUV) is by far the most convenient transportation choice to daily destinations. Many suburbs lack safe bicycle or pedestrian routes. Some don't even have sidewalks!

So, while more than 70 per cent of their parents walked or rode bicycles to school, just 18 per cent of today's schoolchildren in the U.S. do the same. In fact, more than 90 per cent of all urban trips in the U.S. are by car, while just six per cent are by foot or bike. Canadian cities are, on the whole, more bicycle and pedestrian friendly. Today, 12 per cent of our urban trips are made by foot or bike, but we still pale in comparison to the Dutch and the Germans, who walk or bike to some 40 per cent of their destinations. These European countries also have lower incidence of obesity and heart disease.

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Secret Lives of Your Stuff — Coffee

The Oklahoma Department of Environmental Quality is encouraging citizens to examine and rethink their consumption habits during the fourth Oklahoma Use Less Stuff Week from April 18-25, 2004. DEQ's Bryce Hulsey announced, "During the April 22 Earth Day season, the DEQ wants to provide food for thought for Oklahoma citizens about their everyday habits with our Use Less Stuff Campaign. This article examines the entire journey our morning coffee makes on its way to our cup." The following information is provided by John C. Ryan from his book, *Stuff--The Secret Lives of Everyday Things*.

One cup of coffee takes 100 beans that grew in Columbia on a small mountain farm cleared of forest systems for cattle ranching and coffee and fruit trees. Pesticides were necessary due to the removal of birds and other insect eaters. The beans were picked by hand, the pulp is removed (2 pounds per pound of beans) and dumped into the Cauca River where it consumes oxygen needed by fish. The beans are dried in the sun and shipped to New Orleans on a freighter made in Japan from Korean steel made from iron mined in Australia and fueled by Venezuelan oil. In New Orleans, the beans are roasted with oven burning natural gas from Texas—then

packaged in four-layer bags made of polyethylene, nylon, aluminum foil and polyester. Finally, they are trucked to a warehouse in Oklahoma City or Tulsa and delivered by a smaller truck to our neighborhood grocery. The beans are carried out in a sealed, wax-lined paper bag and a large brown paper sack made at unbleached kraft paper mills in Oregon. One-fifth gallon of gasoline was burned during the five-mile round trip to the market.

Before we can conjure up our brew, we will need a grinder. We measured beans into a disposable plastic scoop molded in New Jersey and spooned it into a grinder which was assembled in China from imported steel, aluminum, copper and plastic parts and powered by electricity generated by wind farms for OGE Energy Corp. We dumped the ground coffee into a gold-plated mesh filter made in Switzerland of German steel and Russian gold and put it into a plastic and steel drip coffeemaker

Oh, yes! We must use water for our brew. Eight ounces of tap water from a processing plant is poured into a coffee pot; originally the water *(Continued on Page 3)*



Bottled Water — Problems and Solutions

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THE PROBLEMS

Personal Health

Americans spend more than \$10,000 a minute for something that is readily available for free: water. Why do we shell out from 240 to over 10,000 times more per gallon for bottled water than we do for tap water? Perhaps we've given in to the marketing and advertising hype that bottled water comes from pristine springs and lakes. Or maybe because of the taste or the perception that bottled water is better regulated, safer or purer than tap water. However, according to government and industry estimates, about one fourth of bottled water is bottled tap water (sometimes, but not always, with additional treatment).

In 1999, the Natural Resources Defense Council (NRDC) finished a four-year study of the bottled water industry. Some of the issues the organization looked at were bacterial and chemical contamination; federal and state programs governing bottled water safety and testing; and sources of bottled water. Their results were published in an in-depth report available at www.nrdc.org/water/drinking/bw/bwinx.asp.

The study found that tap water is often better regulated than bottled water and has to meet more stringent standards at both the federal and local levels. Cities must test their water for chemical contaminants at least once a quarter, but bottlers must only test annually. While the US Food and Drug Administration does have bottled water standards in place, these are not nearly as strict as those for tap water. In addition, according to the NRDC, 60 to 70 percent of the bottled water sold in the US is exempt from FDA's rules because these regulations do not apply to water packaged and sold within the same state. The International Bottled Water Association (IBWA) argues, however, that FDA regulation covers all bottled water because the components involved—packaging, ingredients and industrial facilities—must comply. In any case, among the thousand bottles tested by the NRDC, about one-fifth contained chemicals such as toluene, xylene, or styrene, known or possible

carcinogens and neurotoxins.

One of the more surprising findings from the study is that a city's tap water cannot have any *E. coli* or fecal coliform bacteria, while bottled water is allowed a certain amount of these bacteria. In addition, most cities' tap water must be tested for *Cryptosporidium* or *Giardia*, common water pathogens that can cause intestinal problems, including diarrhea. In contrast, bottled water companies are not required to conduct these tests. City tap water must also be filtered and disinfected, but there are no federal filtration or disinfection requirements for bottled water.

Tap water must also meet standards for toxic chemicals that can leach from some plastics) but the bottled water industry is exempt from these regulations.

Lastly, many people reuse disposable PETE plastic bottles, a study published in the Canadian Journal of Public Health in November 2002 confirms reused water bottles also make good breeding grounds for bacteria since thorough cleaning is difficult.

Environmental

Usually water is bottled in plastic packaging. Plastics are made of petroleum, a non-renewable resource that requires new fossil reserves to be extracted all the time. By choosing to drink tap water, we can conserve this valuable resource and reduce our dependence on oil. The plastic manufacturing process is also associated with toxic byproducts, such as styrene and benzene, which are released in the air and cause not only pollution, but respiratory problems and may cause cancers as well.

Here in Oklahoma, most bottles will end up in landfills. The World Wildlife Fund estimates that about 1.5 million tons of plastic are used worldwide to make water bottles and according to the Environmental Protection Agency, plastics are the fourth largest category of municipal solid waste.

Obtaining water from an underground pipe is more energy efficient and uses far fewer natural resources than bottled water because of the transportation of bottles in trucks across the country or by ships around

the globe. Besides consuming non renewable natural resources, such as petroleum, their transport also contributes to pollution, noise and overcrowded highways and streets.

THE SOLUTIONS

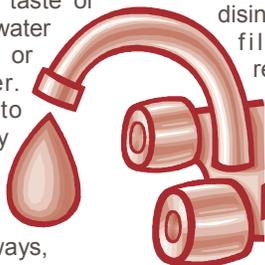
What to look for . . .

Types of Bottled Water

All bottled water is not created equal and approximately 25% of it is drawn from the same reservoirs that provide our tap water. There are essentially three kinds of bottled water: natural mineral water, spring water, and purified water. Under the EU definition, **natural mineral water** is "microbiologically wholesome water, originating in an underground water table or deposit and emerging from a spring tapped at one or more natural or bore exits."

The sources of these waters are protected from pollution, but since they are not disinfected, they can contain microflora. In Europe, mineral water's reputed health benefits can be traced back to Roman times, but the actual benefits of these minerals (which include calcium, magnesium, sodium, potassium, silica and bicarbonates), are regarded today as minimal. In the US, natural mineral water is defined as having at least 250 parts per million total dissolved solids, according to the International Bottled Water Association (IBWA), and derives from springs or boreholes drawing from a protected underground water source. In the EU, the water's source must be included on the label. **Spring water** is similar to mineral water, but needn't have a constant mineral composition and is usually cheaper. The label must state the water's source. **Purified water** is taken from lakes, rivers, or underground springs and has been treated to rid it of minerals and contaminants, all of which makes it almost identical to tap water. Its source need not be stated; Pepsi Co's popular Aquafina and Coca Cola's Dasani brands fall into this category.

In addition to these major categories, (Continued on Page 4)



Secret Life of Coffee *(continued from Page 1)*

came from Lake Atoka where it is pumped nearly 200 miles for Oklahoma City consumers. The pump was probably powered by a coal-fired electricity generating plant in Muskogee, with the coal transported to Oklahoma from Wyoming.

Back in the kitchen, an element heated the water to more than 200° F with power generated by an OG&E gas-fired power plant. The hot water seeped through the ground coffee and dissolved some of its oils and solids. The brew trickled into glass carafe and was poured into a mug made in Taiwan. Later, we washed the mug using two gallons of water.

Cows like to wade into streams and drink and graze on streamside grasses and willows, so the water gets warmer and muddier, making life difficult for the sunfish and bass living in the stream. Some conservation-minded farmers fence cattle out of waterbodies to minimize such impacts.

If you used cream, you stirred in one ounce of cream from a grain-fed dairy cow in Union City. The two teaspoons of sugar you measured out came from cane fields (former sawgrass marshes) in Florida. Water that used to flow across these marshes and into the Everglades is now drained into canals and sent directly to the ocean or irrigates fields, where it picks up nutrients and pesticides. Populations of all vertebrates—from turtles to storks—have fallen 75 to 95 percent in Everglades National Park.

When examining the waste involved, we find that the cow's manure

was rich in nitrogen and phosphorus. Since the soils of the cow pasture were unable to absorb all the manure, it washed into the stream when it rained, fertilizing algae which absorbed oxygen from the water, making life more difficult for the fish living in the stream. Two hours later, your body metabolizes the coffee and most of the water and nutrients are passed into the Oklahoma City sewer system where it is mixed with other organic and inorganic waste. The wastes then traveled under the streets of the city to Oklahoma City's sewage treatment plant on the North Canadian River in Jones where the solids were filtered, concentrated, digested and sterilized with screens, settling tanks, bacteria and chlorine. An engineer deemed the sewage sludge clean enough for agriculture and a trucker hauled it to someone's wheatfield for use as fertilizer and soil conditioner. A pipe carried the treated liquids a mile into the North Canadian River.

Coffee is the world's second largest legal export commodity (after oil) and is the second largest source of foreign exchange for developing nations. The United States drinks about one-fifth of the world's coffee. If you drink two cups a day, you'll down 34 gallons of java this year, made from 18 pounds of beans. Colombian farms have 12 coffee trees growing to support your personal addiction. Farmers will apply 11 pounds of fertilizers and a few ounces of pesticides to the trees this year. And, Columbia's rivers will swell with 43 pounds of coffee pulp

stripped from your beans.

Okay, you don't want to give up coffee—What can you do? Cut back on drinking coffee—it stains your teeth and makes you jumpy anyway. (And nobody likes coffee breath, either!) Buy organic, shade-grown, fair trade coffee. Coffee grown under the shade of mixed trees requires few or no chemical inputs; the leaf litter replenishes soil nutrients and the variety of tree species benefits birds and discourages pest outbreaks. Also, the farmers growing and picking it are making a living wage from their work. Many brands of sustainably produced coffee are available through the internet and a few local stores. Contact Use Less Stuff campaign coordinator, Susie Shields, at <Susie.shields@deq.state.ok.us> for more information.

"Article written from Stuff: The Secret Lives of Everyday Things, by John C. Ryan and Alan Thein Durning, copyright 1997 Northwest Environment Watch, Seattle;

INFORMATION ON ORGANIC, SHADE-GROWN, FAIR TRADE COFFEE

globalexchange.org/campaigns/fairtrade/coffee/

newdream.org/consumer/buycoffee

fairtradefederation.com/memcof

organicconsumers.org/Organic/faircoffee

coffeetea.about.com/cs/ethical/

changemakers.net/journal

thegreenguide.com

Suburban Sprawl

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The emphasis on the car is not only making us fatter, it's causing other health problems, like asthma. More cars on our roads means more air pollution, which can trigger asthma attacks and other respiratory problems. It also means more global warming, which is likely to lead to greater health problems in the future, from increased air pollution, to extreme weather events and increased exposure to new diseases.

Governments want to promote healthy lifestyles and have budgets for public awareness campaigns to encourage people to be more active. But it's absurd and counterproductive for people to have to get into their cars and drive to the gym! According to the U.S. Center for Disease Control, simply burning an extra 100 calories per day, or 20 minutes of walking, is enough exercise to help people lose weight and curb the disturbing obesity trend.

To buck that trend, we have to re-engineer physical activity back into our lifestyles. That means redesigning our cities to be more dense and compact, with better bike paths and pedestrian-friendly walkways. It means changing development patterns so that "going out" does not always involve walking into the garage, climbing into an SUV, clicking the door opener and driving five kilometers. It means fewer strip malls with vast parking lots that are accessible only by car. It means making stairways more accessible and more attractive so people use them. It means widening sidewalks and narrowing roads. More important, it means cleaner air, better health, reduced global warming and a better quality of life.



Read more from the author of this article on the David Suzuki website: www.DavidSuzuki.org. Article printed with Foundation permission.

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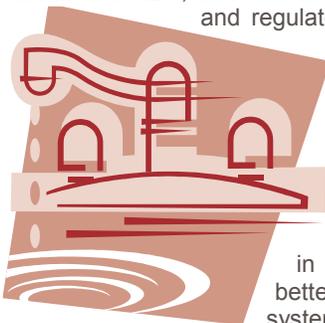
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Bottled Water (Continued from Page 2)

there are more specialized sub-varieties distinguished by the IBWA. **Artesian water** originates from a confined source that has been tapped and whose water levels stand at some height above the top of the aquifer. **Fluoridated water** contains added fluoride and is mostly marketed for infants. **Sparkling water** often comes from a spring and is naturally carbonated. **Soda water** or seltzer, whose source is often tap water, is considered and regulated by the FDA as soft drink (not bottled water), whose standards are less strict than those for bottled water.



Water Filtering Systems

Although Oklahoma's drinking water is generally quite safe, if you are concerned about what's in your tap water, you might feel better if you installed a water filtering system. At 30 to 50 cents per gallon, filtering your tap water is not only more cost effective than buying bottled water, but it also gives you control over what chemicals or substances are removed from the water you drink. Compare this to 89 cents to more than \$2 per gallon for bottled water delivery to your home and the cost and environmental benefits of an at-home water filtration system become apparent. Additionally, filtered water keeps the plastic used for bottled water out of our landfills.

There are many types and brands of water filters available, from the simple carafe, which you can purchase from most mass merchandisers and houseware stores from \$18, to the more complex whole-house systems that need to be professionally installed by a plumber. Carafes and pitcher water filters usually filter water through a granular carbon filter and they are most effective for lead and chlorine removal as well as the cheapest. Another popular type is the faucet-mounted filter, available for the sink, shower head or refrigerator water dispensers, which works the same way as pitcher water filters. Remember to change the filter often, according to manufacturer's instructions.

Reverse-osmosis systems, typically expensive and difficult to install, operate by pushing water through a membrane, then flushing away a few gallons of contaminant-containing water for every gallon purified. These systems remove industrial chemicals, heavy metals, nitrates and

asbestos, but not chlorine byproducts, radon or certain pesticides.

Thermoses

Stainless steel and ceramic thermoses offer a sturdy, hygienic solution to carrying hot or cold liquids with you. Particularly for hot or acidic liquids, which can encourage higher amounts of plasticizer leaching in plastic bottles, thermoses are essential.

Bottled Water from Local Sources

When purchasing bottled spring water, look for one whose source is located closest to where you are (the label on spring water must state the source of the spring). The farther away the source of water, the more non-renewable fuel was used to transport it. This not only increases our dependence on oil, but also pollutes our environment. A shopping list on the Green Guide website (thegreenguide.com) suggests brands of water bottled at a source close to your area.

What to look out for . . .

Plastic vs. Glass Bottles

Sometimes, when you're stuck outside for hours or at an event, you can't avoid drinking bottled water. So when you have to, choose water bottled in glass. Manufacturing plastic resin creates more toxic emissions than manufacturing glass—producing a 16 oz. PET bottle generates over 100 times the toxic emissions to air and water than making the same size bottle out of glass. If glass is not available, look for bottles made out of plastics #1 (PET or PETE) or #2 (HDPE)—this code, indicating the type of resin used, is usually found at the bottom of containers and bottles. Plastics made out of this type of material are more readily recyclable.



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