(CDC) also add weight to the argument that comprehensive tobacco control programs are helping. Cigarette smoking prevalence declined from 25.0% of the adult population in 1993 to 22.8% in 2001 (MMWR 2003;52:953–956), while cigarette use among high school students dropped from 28.0% to 22.9% between 2000 and 2002 (MMWR 2003;52:1,096–1,098).

But many public health officials fear that ever-steeper cuts to the funding for comprehensive anti-tobacco programs could jeopardize the progress that has been made.

“We need to think about reinvigorating our commitment to what we know works,” said Corinne Husten, MD, a medical officer with the CDC’s Office on Smoking and Health. “It costs a huge amount of money to do nothing. It costs far less to implement the proven strategies and prevent those costs.”

Indeed, the CDC estimates that 440,000 Americans die from smoking-related illnesses each year (150,000 from cancer), resulting in $75 billion in direct medical costs and $82 billion in lost productivity (MMWR 2003;52:842–844).

Implementing tobacco prevention strategies would cost a fraction of that, according to a report presented to Congress in November by the Campaign for Tobacco-Free Kids. The group estimated it would take $1.6 billion for all states to fund tobacco control measures at the levels recommended by the CDC.

Yet over the past two years, the states have cut total annual funding for tobacco control by 28% ($209 million), the report said. Just four states—Maine, Delaware, Mississippi, and Arkansas—fund tobacco prevention programs at CDC-recommended levels, while 33 states spend less than half of what the CDC recommends, the report said.

“The amount the states are spending on tobacco prevention today pales in comparison to the enormity of the problem,” Matthew Myers, President of the Campaign for Tobacco-Free Kids, said in a statement to a congressional hearing on the use of funds from the 1998 Master Settlement Agreement.

Glynn agreed. “State officials and legislators have, unfortunately, made decisions in recent years which divert Master Settlement Agreement funds from their originally intended use—the support of tobacco prevention and cessation programs,” he said. “Unless these decisions are corrected, the ASSIST data suggest that millions of lives may be lost from completely preventable tobacco-caused disease.”

TOMATOES BEAT LYCOPENE ALONE FOR PROSTATE CANCER PROTECTION

A recent study suggests whole tomatoes offer better protection from prostate cancer than lycopene supplements alone. The research, published in the Journal of the National Cancer Institute (2003;95:1,578–1,586), found that rats that were fed tomato powder (including seeds and skins) had a lower risk of dying with prostate cancer than rats fed either a control diet or the control diet supplemented with lycopene.

Several epidemiologic studies have suggested that lycopene-rich tomato products have a protective effect against prostate cancer. But the question of whether lycopene acts alone or in concert with other components of tomatoes has been difficult to ascertain.

Researchers from Ohio State University and the University of Illinois, Urbana-Champaign addressed this question with a rat model of prostate carcinogenesis. They randomized 194 male rats treated with the carcinogenic regimen of N-methyl-N-nitrosourea and testosterone into six diet groups. The first three groups had unrestricted access to their food; one group received a control diet, the second and third groups received an otherwise identical diet containing either lycopene (161 mg lycopene/kg diet) or whole tomato powder (13 mg lycopene/kg diet). The other three groups...
were randomized to the same three food sources, but in addition, their food intake was restricted by 20% (they were fed 80% of the average daily intake of rats in the free-feeding group).

Rats on the free-feeding tomato powder diet had a 26% lower risk of dying with prostate cancer and a 21% lower overall mortality rate compared with animals on the control diet; reductions in disease-specific and overall mortality were statistically significant. By contrast, lycopene supplementation did not significantly affect either outcome. Calorie-restriction significantly reduced prostate cancer-specific mortality (by 32%) but did not significantly affect overall mortality.

“This study suggests we need to put at least as much emphasis into looking at whole foods as cancer preventive agents and not just single substances derived from them,” said study co-author Steven Clinton, MD, PhD, Associate Professor of Hematology and Oncology, and Human Nutrition at Ohio State University.

He also noted that the finding that energy restriction reduces tumor growth supports the recent ACS study published in the New England Journal of Medicine (2003;348:1,625–1,638), which found that obesity is a contributing factor in many cancers, including prostate cancer. “I think what we’re seeing in animals is probably relevant to humans and reaffirms concern about excess caloric intake and lack of exercise that are now really common in our society,” Clinton said.

No significant interactions were observed between the effects of food restriction and tomato powder, suggesting the benefit of these two interventions might be additive.

While the findings don’t challenge the view of lycopene as an important compound in prostate cancer prevention, they do suggest it works best in the presence of other compounds found in tomatoes and other foods. “Perhaps there’s been too much emphasis on the reductionist approach that a whole food can be replaced by one component,” said Clinton.

Rather, he recommends what the ACS and the National Cancer Institute promote: a varied diet rich in fruits and vegetables, with at least five servings a day. “I try to tell my patients it’s reasonable to consider including tomato products within that recommendation … epidemiological studies suggest men would do well to eat five to seven servings of tomato products each week.”

What kind of tomato product is best has not been firmly established, Clinton noted. “Whole tomatoes and processed – juice, soup, sauce – all can be considered healthy ways to get tomato products,” he said. “Right now I’d use the word ‘variety’.”

**CAN CONDOMS HELP CLEAR HPV?**

Two studies from the Netherlands may suggest that consistent condom use can speed the regression of human papilloma virus (HPV)-related lesions on the cervix and on the penis and shorten the time it takes to clear HPV infections. The researchers believe that their findings add to the evidence that condoms can be a useful tool in the prevention of HPV-related cancers, though some experts consider the issue still unresolved.

Researchers from VU University Medical Center in Amsterdam and Albert Schweitzer Hospital in Dordrecht described their results in two articles in the International Journal of Cancer (2003;107:804–810 and 811–816). Both studies involved long-term (8 to 10 years) monogamous heterosexual couples in which the women had cervical intraepithelial neoplasia (CIN).

In the study that evaluated the effect of condom use on cervical lesions, women were randomized into two groups: one that used condoms during sexual intercourse for at least three months (64 women assessed) and one that