major life activities. The ADA also protects people who are "regarded as" disabled, he pointed out. Arguably, someone denied a promotion because of a genetic risk factor would be regarded as disabled by the employer and therefore covered under the ADA.

Ideally, identifying genetic risks for disease should help tailor health care to individuals, said genetic counselor Jill Stopfer of the University of Pennsylvania Cancer Center in Philadelphia. For example, women with mutations in the genes *BRCA1* or *BRCA2* have a heightened risk of developing breast and/or ovarian cancer. Such women may choose to have frequent mammograms, take anticancer drugs such as tamoxifen, or undergo prophylactic removal of cancer-prone tissue, says Stopfer.

Fear of discrimination, however, deters some women from being tested, said attorney Kathy Zeitz of the Nebraska Methodist Health System in Omaha. Her daughter, who has a family history of breast cancer, refuses to undergo genetic screening for fear that she may someday be denied health insurance.

Future congressional action could render ADA-dependent legal strategies obsolete. Last year, lawmakers introduced seven bills that would protect people with genetic risk factors from discrimination in employment or insurance coverage or both. Although none passed, one (H.R. 306) has been reintroduced and several more are expected in the upcoming months. Legislation is urgently needed, as Collins summed up at the end of the conference, because no one is confident that adequate legal safeguards exist. *—L. Helmuth*

A prostate cancer link to papilloma virus?

Scientists in Germany have found a curious connection between prostate cancer and human papillomavirus (HPV), a common sexually transmitted pathogen.

While HPV has been associated with cervical cancer in women and may even cause it, any connection between HPV and prostate cancer remains controversial and unproved. Some studies have detected HPV in prostate tumors, but other work—including a U.S. study published in 1998—has not.

There are dozens of known HPV strains. Researchers report in the Feb. 15 CANCER RESEARCH that HPV-16, a strain linked to cervical cancer, turned up in considerable amounts in 10 of 47 samples of prostate-tumor tissue. In contrast, HPV-16 was present in such quantities in only 1 of 37 tissue samples from men without cancer. All of the samples in the study showed at least some HPV-16.

The cancer patients averaged 67 years of age, the control group 70. The controls had benign prostate hypertrophy, a common enlargement of the prostate not linked to cancer.

Previous studies of prostate cancer tissue have used a simpler measure of HPV that yields only a positive or negative reading. That method can result in some false-positive results, which contributed to the contradictory findings that have plagued this research for years, says study coauthor Jürgen Serth, a biochemist at the Medical School of Hannover. To gauge whether a tissue sample was positive for the virus, Serth and his colleagues used a threshold of 300 copies of the virus per 12,500 cells—finding that many more tumor samples exceeded this cut-off than did healthy-tissue samples.

"This is potentially a very important discovery," says Jonathan W. Simons, a molecular oncologist at Johns Hopkins Medical Institutions in Baltimore. "It's the first evidence of how the microbial environment—a virus itself—could promote prostate cancer."

Nonetheless, Simons cautions that the study doesn't show HPV-16 to be a "smoking gun" that causes prostate cancer. Serth and his colleagues agree. For example, it's not clear whether the virus inhabits cancerous cells themselves or simply is present in nearby cells. Roughly 60 percent of cells in prostate tumor tissue are not cancerous, Simons notes. Serth's team is now trying to ascertain whether the HPV-16 DNA they detected is in cancerous cells or not.

HPV shows up in more than 90 percent of cervical-cancer cells. It's unusual that the researchers found some HPV-16 even in benign tissues, says Howard D. Strickler, who coauthored the 1998 study finding no HPV in prostate tumors. "Their study would have been strengthened had they demonstrated that they were able to detect HPV at high prevalence in the cancers that we know to be HPV-associated, and not in related normal tissues," says Strickler, of the Albert Einstein College of Medicine of Yeshiva University in New York City. "Absent that sort of data, it's difficult to know about the sensitivity and specificity of this assay." *—N. Seppa*

Obsessions, compulsions span decades

Each day, a girl washes her hands for hours at a time to destroy the bacteria that, she tells herself, accumulate when she touches doorknobs. A man stops his car and retraces his path after any minor bump in the road, fearing that he has run over someone. People such as these often feel tormented by their obsessive thoughts and compulsive acts but cannot resist them.

While the symptoms of what psychiatrists call obsessive-compulsive disorder (OCD) disrupt daily life with dramatic bluntness, the long-term outlook for sufferers of this condition remains poorly understood. A 40-year investigation now offers a rare glimpse at the natural course of the disorder in a group of individuals who, for the most part, received no formal treatment.

A large majority of them exhibited substantial improvement, often within a decade of receiving an OCD diagnosis, hold Gunnar Skoog and Ingmar Skoog, psychiatrists at Sahlgrenska University Hospital in Göteborg, Sweden. However, only 1 in 5 individuals achieved full recovery; 1 in 3 continued to grapple with symptoms that interfered with their daily activities, and about 1 in 4 retained milder signs of the disorder.

A total of 144 people, all diagnosed with OCD at a psychiatric hospital between 1947 and 1953, participated in the study. Most were interviewed by Gunnar Skoog between 1954 and 1956 and again between 1989 and 1993; for 22, the second interview was with a close friend or family member and not the patient.

The study, published in the February ARCHIVES OF GENERAL PSYCHIATRY, contains several intriguing findings. People who developed obsessive-compulsive disorder before age 20, particularly males, had the worst prospects for improvement. Also, intermittent symptom flare-ups were the most commonly reported OCD pattern at the first interviews; at the second interview, participants most frequently cited symptoms that had lasted for at least 5 years.

Recovery within a few years of OCD's onset often heralded lasting gains but did not insulate patients against an eventual return of symptoms. Of 41 volunteers who had nearly or fully recovered from the disorder at the first interview, 20 maintained their improvement 3 decades later, while 8 had relapses after going largely without symptoms for more than 20 years.

Only 17 patients received a medication for OCD, clomipramine, that has become available in the past decade. Its use significantly helped 10 of them.

"This study will serve as a benchmark in our efforts to understand and treat OCD," conclude psychiatrist Lawrence H. Price of Butler Hospital in Providence, R.I., and his coworkers in an editorial comment in the same journal.

Despite limitations in their data and sample, the Skoogs' findings will aid efforts to evaluate the effects of new medications on the natural progression of OCD, Price's group says.

—B. Bower