Smokers show ‘clear disadvantage’ in speeded motor tasks

Smoking can affect your physical health — that’s something nearly everyone knows today. But its effects might reach even further, into the areas of thinking and reasoning, according to research done at Washington University.

Robert D. Hill, Ph.D., a psychologist who did postdoctoral work at the University, found that older adults who had smoked 10 or more years, are at a disadvantage at speeded motor tasks, compared to non-smokers and ex-smokers. His findings were reported in the July issue of the Journal Psychology and Aging.

“We know that the effects of nicotine on younger people actually enhance performance,” says Hill. “That’s pretty clear. Nicotine facilitates attention and vigilance. But over the long haul, nicotine and other materials may detract from cognitive function.”

Studies done at the University of Reading in England have shown that injections of nicotine — a central nervous system stimulant — enhance attention. Whether that happens with smoking is unclear, says Hill, an assistant professor of educational psychology at the University of Utah. His study dealt with the residual effects of smoking, “We’ve all been told over the years about the bad health effects of smoking,” she says. “Here’s an example where it may also be affecting our behavior.” — Martha Storandt

Smoke had the lowest “speed of response” when taking the test pictured above. It involved crossing vertical lines over 95 horizontal lines as fast as possible.

Smokers, on average, got about 45 percent of the digit symbols correct. The mean score for non- and ex-smokers was about 51 percent and 53 percent, respectively.

Another test involved crossing vertical lines over 95 horizontal lines as fast as possible. Researchers added the number of lines a participant crossed, divided that by how many seconds it took the volunteer to do so, and multiplied the number by 100 to arrive at what they called “speed of response.”

Smokers had the lowest speed of response — 140. Non-smokers and former smokers’ average scores were approximately 180. “For smokers, we saw a slow-down of the connection between thinking and doing,” says Emily LaBarge, a psychometrician and research associate at the Memory and Aging Project who gave and scored the tests. “Smokers were slower on these tests.” And, she points out, “their lungs weren’t involved.”

Rita Emmerson, a research psychiatrist, says Hill’s study points up what some researchers have known intuitively all along: Growing old doesn’t necessarily entail poor memory and loss of intellectual capacity. “We’re only beginning to understand how health-related behaviors affect the quality of life during aging. The kind of research that Bob Hill is doing will enable us to understand this process better.”

Emmerson is associate director of the Neuropsychology Research Laboratory at the Veterans Administration Medical Center in Salt Lake City.

Both Hill and Storandt note that one of the limitations of the study was its small size. “No one has ever looked at older people who smoked for a long period of time and over a range of tasks,” says Hill. “But one problem has been finding those people, because those who have smoked for so long often become sick and thus don’t qualify for the study.”

In his article, Hill says that the role of nicotine was not specifically addressed. “It is likely, however, that health-related properties associated with smoking status may have contributed to the cognitive declines seen in this study. For example, smoking has been shown to significantly decrease lung volume, obstruct airways, and generally lower overall pulmonary function leading to anoxia in older adults.” Anoxia is a deficiency of oxygen reaching body tissues, resulting in permanent damage.

Because the long-time smokers in Hill’s study were disease-free, he believes it is likely that they were more resistant to physical or cognitive decline than the general smoking population. He suggests that decrements in speeded performance may be more evident in less hardy smokers. Hill intends to continue working with older smokers, investigating the

Loevinger’s work on ego development is symposium topic

The contributions of Jane Loevinger, Ph.D., who designed the classic Sentence Completion Test for measuring personality development, will be the subject of a symposium at the American Psychological Association meeting in New Orleans, August 11-15. Loevinger, the William R. Stockenberg Professor Emerita of Human Values and Moral Development at Washington University, also will give an address on her work during the gathering. The title of her talk is “Measurement of Ego Development: Quantification Strategy and Empirical Results.”

Loevinger refined the Sentence Completion Test over a period of 25 years, starting in the 1950s. It evolved from an instrument written just for women to one designed to be useful “for all kinds of people in all kinds of circumstances,” she says. The test has had wide applications in clinical and cross-cultural studies. It has been translated into foreign languages ranging from Norwegian to Vietnamese. And Loevinger has seen her intent to make the test applicable to “all kinds of people” fulfilled. “Even in such diverse cultures, the test has proven reliable.”

The Sentence Completion Test measures development by showing how the words people use can be read as clues to personality. Specifically, the test consists of 36 “sentences,” or fragments, that participants are asked to complete. Fragments might say, for example, “Most men think that women...” or “If my mother...” A person taking the test applies their own sentiments to “impulsive” at the lower end to “integrated” at the top. Loevinger notes that most adults fall somewhere in the middle. Americans, she says, tend to be somewhere between the “conformist” and “conscientious” stages.

The conformists see things in terms of right and wrong, says Loevinger, and think people ought to conform to stereotypes. Their means of describing emotion are banal. The conscientious stage is represented by persons who are aware of individual differences who see patterns of behavior and who are able to express finer shadings of emotion. Where the conformist is likely to adhere rigidly to rules, the conscientious individual is more likely to go by his or her own standards.

Although the test has been revised over the years, the scoring manual published in 1970 has not. And that, Continued on p. 2

Jane Loevinger

Continued on p. 2
Art gallery receives accreditation

The Washington University Gallery of Art, cited as "a university art museum at its best," has received accreditation from the American Association of Museums (AAM).

In its report, the AAM noted that the gallery "has served the museum profession for more than 80 years, certifies that the museum operates at a professional level and provides quality service." The gallery has received national attention in 1985 with the exhibit "Jean Dubuffet: From His Art to the Last Retrospective before the artist's death that same year. "Partis in Japan, "The Japanese Encounter With European Painting" put the gallery in the national spotlight again in 1987. The show featured 75 Impressionist oil paintings, "never before seen in the United States, by Japanese artists who were influenced by Western-style oil painting."

Professionally standards, the gallery always displays selections from the permanent collection, which includes works by Pablo Picasso, Henri Matisse, Jackson Pollock, William de Kooning, Frederick Church and Thomas Cole.

"After working several years on the accreditation process, I am proud that the Gallery has received the endorsement and recognition of the AAM for pursuing the highest professional standards," says Joseph D. Kenen, II, gallery director.

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The next exhibition season will be "many of the (exhibits in the gallery) can be described as art historical in the best sense," states the text of the accreditation committee's report. "That is, they treat fresh and exceptionally interesting topics often suggested by scholarly research. The results frequently reveal new aspects of the theme or bring works together in unexpected and enriching combinations."

"The Gallery of Art has received the richness of the cultural life of both the university and St. Louis."

Loevinger

Continued from p. 1

Faculty are promoted

The following faculty have been promoted with tenure on the Hilltop, Medical and Dental School campuses.

Granier et al.

Palmer O. Bessey, as associate professor of biology, effective Oct. 7, 1987; Garrett M. Broder, as associate professor of radiology, effective Oct. 7, 1987; David W. Ferguson, as professor of surgery (cardiothoracic surgery), effective Oct. 7, 1987; George A. Gates, as professor of otorhinolaryngology, effective Oct. 7, 1987; Christopher J. Langle, as associate professor of anesthesiology, effective July 1, 1989; Michael I. Miller, as associate professor of electrical engineering, effective July 1, 1989; Herbert Neuburger, as associate professor of psychiatry, effective Oct. 7, 1988; Charles L. Roger, as professor of surgery (cardiothoracic surgery), effective Oct. 7, 1988; Steven M. Rothman, as associate professor of pediatrics and of neuropathology, effective Oct. 7, 1987; John W. Turk, as associate professor of medicine, effective July 1, 1989; Jonathan S. Turner, as associate professor of computer science, effective July 1, 1989; and Paul F. White, as professor of anesthesiology, effective July 1, 1989.

Appointment with tenure

Gary Keith Ackers, as professor of biological chemistry, effective July 1, 1989; Christopher I. Bynum, as professor of systems and controls, effective July 1, 1989; Daniel C. Culp, as professor of fine arts, effective Aug. 15, 1989; Louis P. Dehner, as professor of dermatology, effective July 1, 1989; Helen Donis-Keller, as professor of genetics, effective July 1, 1989; Philip H. Dyvig, as John E. Simon Professor of assistant professor of sociology in psychiatry; Garret M. Breeden, to associate professor of genetics; Michael L. Brut, to associate professor of medicine; J. Richard Burgess, to associate professor of dermatology; Charles E. Cantor, to associate professor of pediatrics; David B. Clifford, to associate professor of medicine; Carlos A. Crocetti, to associate professor of nutrition; Bray E. Crosson, to research associate professor of psychology, Octavio de March- basso, to associate professor of clinical ophthalmology; Joseph L. Gieseking, to associate professor of clinical ophthalmology; Stephen H. Dinwiddie, to associate professor of psychiatry; Wayne C. Drevets, to assistant professor of psychiatry; Richard F. Escott, to associate professor of clinical ophthalmology; Michael S. Ford, to assist...

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Karen L. Tokarz, J.L.M., professor of law and director of mission education, published an article, titled “Pioneers in the Legal Profession: The History of Women in the Bar of Mis- souri,” in the St. Louis Bar Journal. She also attended the first in a series of semiannual meetings of the House of Representatives Judiciary Committee on proposed constitutional amend- ments for the purpose of judicial selection in Missouri. She also attended the midyear meeting of the Association of American Law Schools Standing Committee on Clinical Legal Education.

Robert E. Wiltenburg, Ph.D., adjunct associate professor of English, delivered a paper, titled “The Unnecessary Epic: Milton’s Creation and Fall,” at the annual meeting of the Northeast Modern Language Association, held in Wilmington, Del.

V. Leroy Young, M.D., associate professor of plastic and reconstructive surgery at the School of Medicine, is the recipient of the Tiffany Award, given by The Society for Aesthetic Plastic Surgery to the mem- ber who delivers the best scientific presentation at the society’s annual meeting. Young was recognized at the society’s 22nd annual meeting, held in Orlando, Fla., on May 11. The presentation, “The Relationship of Retrobulbar Hema- toma to Nasal Gynoid Mon- thays,” was given at the beginning of the year’s scientific meeting.

Have you done something noteworthy?

Have you Presented a paper? Won an award? Given a lecture? Edited a book? Published a treatise titled NEPA Law and Litigation with the University for the 1989-90 academic year. The membership fee is $10; newcomers are invited to attend the next meeting, held Jan. 12, at 10 a.m. at the University of Missouri-Columbia law school. For information, call Alexander Madill Professor of Law Robert E. Wiltenburg, 894-2763.

Have you been elected to a position? Published a treatise titled NEPA Law and Litigation with the University for the 1989-90 academic year. The membership fee is $10; newcomers are invited to attend the next meeting, held Jan. 12, at 10 a.m. at the University of Missouri-Columbia law school. For information, call Alexander Madill Professor of Law Robert E. Wiltenburg, 894-2763.

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**CALENDAR**

**Wednesday, Aug. 30**
Free for more info., call 889-5561.

**Monday, Aug. 7**
8:30 a.m. to 5:30 p.m. WU Pre-convulsion Ensemble Concert, "Music for a Summer Evening," directed by Richard L. Brown, WU professor in music. On the patio behind Blewett A Hall. To register or for more info., call 889-5561.

**Wednesday, Aug. 30**
4:30-6:30 p.m. WU Wind Ensemble Auditions. To schedule an appointment or for more info., call 889-5561.

**Wednesday, Aug. 30**
6-8 p.m. WU Symphony Orchestra Auditions. To schedule an appointment or for more info., call 889-5561.

**EXHIBITIONS**
"Washington University Permanent Collection." Through Aug. 31. Gallery of Art, Steinberg Hall, upper and lower galleries. 10 a.m.-5 p.m., Monday through Saturday; 1-5 p.m. weekdays. Free for more info., call 889-4523.

**MISCELLANEOUS**
**Monday, Aug. 7**

**Tuesday, Aug. 15**
5:15-6:30 p.m. University College Workshop for employers considering entering or re-entering college. Sandwich supper provided. 10 a.m.-3 p.m., Jan. 26. To register or for more info., call 889-6777.

**Monday, Aug. 28**
10 a.m.-4 p.m. Women's Society and Women's Panhellenic Association's Educational Fund-raising Plant Sale. 8 a.m. to 3 p.m. in Wohl Center. From 6 a.m. to 6 p.m. Friday, Aug. 25. Prices for the plants will range from $1.50 to $25.

**Calendar Deadline**
The deadline to submit items for the Aug. 31-Sep. 5 Calendar of the Washington University Record is Aug. 18. Items must be typed and size 12, double-spaced, 10 lines per inch, and admit slip cost. Incomplete items will not be published. Items should include name, date, time, location, cost and identification and the title of the event. Also include your name and telephone number. Send items to Jill Weber, admissions, Box 1070, or by electronic mail at p72245JW at WUVMC.

**Smoking**
(continued from p. 3)
whether their performance at psycho-therapy is going to help if they do it habit. "This deserves further research," he says. "The only thing it may be is that psychologists and others should consider when working with older people.

Hill suggests that a logical next step would be to look at older smokers' performance in driving or flying planes as well as other tasks that require reaction time. "We are not talking here about an acute difference — that is, we wouldn't tell someone to smoke a cigarette, then drive a car and see what happens. What we would look at would be chronic, long-term smoking. Take a pilot who smokes and one who doesn't and put them in a simulator to see their reactions," says Hill. And, based on his findings in the first study, Hill wasn't surprised to find that the smoking pilot's response time is slower than his cigarette-free counterpart.

**Female-headed homeless families are on the rise**

Paul M. Heerde, to assistant professor of anesthesiology; Geoffrey P. Harris, to associate professor of clinical psychiatry; Frederick G. Hicks, to assistant professor of clinical psychiatry; Glen L. Horton, to assistant professor of pediatrics and pathology; Paula M. Karinen, to assistant professor of medicine; Harry L. Knopf, to associate professor of clinical ophthalmology; James E. Krause, to associate professor of neurology; David C. Lacey, to assistant professor of pathology; Alan P. Lyes, to associate professor of medicine; Carl A. Lyes, to associate professor of clinical medicine; Carol A. McDonald, to assistant professor of clinical medicine; Richard P. MacDermott, to professor of medicine; Christopher S. McCulloch, to assistant professor of surgery; John A. McDonald, to professor of medicine; Robert P. Mecham, to assistant professor of pathology; Richard P. Mcllough, to assistant professor of surgery; Kenneth M. Murphy, to associate professor of medicine; Robert P. Minton, to associate professor of medicine; Scott R. Sale, to assistant professor of clinical medicine; Kenneth B. Schechtman, to research assistant professor of medicine; Mark S. Poler, to assistant professor of anesthesiology; Michael W. Rich, to assistant professor of medicine; Daniel R. Presgrave, to assistant professor of instrumental music; Martha Storandt, Ph.D. (left), professor of psychology, served as adviser to the postdoctoral student who conducted the study, and Emily Gallacher, a psychopharmacologist and research associate at the University's Memory and Aging Project, gave and scored the tests.

Young, black, undereducated, single women raise their children at a rate that has alarmed researchers to data analyzed by a doctoral student in the George Warren Brown School of Social Work. According to a recently studied group of homeless families from 1983-88 who were residents of the Salvation Army's Family Haven, a 54-bed shelter for homeless families located at 7741 Lindell Blvd. Her study will be published in Affilia: The Journal of Women and Social Work. In November, Johnson's advisor on the project, Michael W. Sherraden, Ph.D., associate professor of social work, calls her work "the homeless' original and important contributions." The percentage of black families who suffered an immediate loss of income or withdrawal from subsidized housing was higher than for other races.

Johnson's study of 42 percent in 1983 rose to 85 percent in 1988. The average age of the female head of the household in 1988 was 27 years old. On average, more than half had either not finished or never entered high school.

The Family Haven residents also were asked to list the reason for their homelessness. About one-third of all families blamed housing conditions, which included eviction, foreclosure, fire, building condemnation, overcrowding, substandard housing and lack of utilities. One-fourth listed friction with family or friends, and 17 percent reported marital dissolution or abuse.

About 10 percent were transient or stranded families, eight percent had experienced an immediate loss of income and three percent gave other reasons. Five percent cited mental health problems.

"The continued combination of low AFDC allowances and federal withdrawal from subsidized housing can only mean a continuing increase in family homelessness," Johnson said.

**Promotions**
(continued from p. 2)

John C. Perlmutter, to assistant professor of clinical medicine; Carole J. Williams, to assistant professor of clinical medicine; William J. Wiggins, to assistant professor of psychology; Dr. Marilyn J. Adler, to professor of medicine; Robert C. Albin, to assistant professor of medicine; Patricia L. Anderson, to assistant professor of pediatrics; Richard A. Angrist, to associate professor of medicine; Alan E. Arminski, to associate professor of medicine; David H. Perlmuter, to assistant professor of pediatrics; Joshua B. Beers, to assistant professor of medicine; Harold L. Lait, to assistant professor of medicine; Mabel L. Purkerson, to professor of medicine; and Patricia A. Weis, to assistant professor of psychology.

**Fund-raising plant sale in Wohler Center**
More than 60 varieties of plants, ranging from begonias to rubber trees, will be sold during a giant plant sale from 10 a.m. to 4 p.m. Monday, Aug. 28, in the north lobby and terrace of the Wohler Center, 6515 Wydown Blvd. Prices for the plants will range from $1.50 to $25.

The annual plant sale is sponsored by the University's Women's Society and the Women's Panhellenic Association. Proceeds will go to both the Women's Society's Scholarship Fund and to the Women's Panhellenic Association's education fund.

For more information, call 889-5678 or 889-5105.