A study led by DMS's Brent Berwin, Ph.D., looking at how certain bacteria can resist attack from the immune system, was chosen for the Research Highlights section of *Nature Immunology*.

Teasing out factors in teen self-esteem

As almost everyone who has survived their teens knows, self-esteem can fluctuate widely during adolescence. Low self-esteem during this crucial period of development can contribute to depression, anxiety, eating disorders, destructive behaviors, and substance abuse.

Hoping to tease out some of the potential causes of low self-esteem among teens, researchers in DMS's Departments of Pediatrics and Psychiatry sifted through the responses from a large national survey. They identified a number of factors associated with low self-esteem and published their findings in the journal *Academic Pediatrics*.

Some factors are potentially modifiable and some aren't.

"We undertook this analysis to better understand how self-esteem in adolescents is affected by a number of modifiable risk factors, since self-esteem is an important determinant of risk behavior," says Auden McClure, M.D., one of the study authors.

Size: Previous such studies have yielded interesting results, but many have had small sample sizes and looked at a limited number of variables. This one used a large, representative national sample of 6,522 adolescents between the ages of 12 and 16. All were interviewed by phone.

The self-esteem measure was a composite of three survey items, including responses to statements such as "I like myself the way I am." Questions about demographics, social habits, sensation-seeking behavior, and school performance were also included. Some questions were addressed to the adolescents and some (regarding income, for example) to their parents or guardians. Respondents could use the telephone touch pad to answer sensitive questions, such as about alcohol use, to maximize honest answers.

Age: The risk factors identified by the survey can be divided into those that are potentially modifiable and those that aren't. Factors such as age and race, for example, were shown to be important. Older respondents tended to have lower self-esteem, while black respondents (especially girls) had higher self-esteem on average than whites or Hispanics. Higher household income and increased parental education were also associated with higher self-esteem.

But a number of factors associated with lower self-esteem can be modified, including being overweight or obese and watching a lot of television. Participating in team sports and doing well in school seemed to provide some protection from low self-esteem. Parenting style was also a factor; adolescents who felt their parents were attentive and set boundaries were less likely to suffer poor self-esteem.

Risk: The researchers note that bolstering self-esteem among adolescents by addressing these risk factors might help prevent more serious health and social problems later in life—one of the goals of their study. "As a pediatrician and researcher, I am always interested in how we can translate findings into practical advice for clinicians and families," McClure says.

As with many health issues, later problems could well be mitigated by a focus on prevention. Katherine Rowe

JAMES BOULETTE

Team sports seem to be a plus in teen self-esteem.

Relative risk of smoking

Taking a close look at data on colorectal adenomas yielded some intriguing results for researchers at Dartmouth's Norris Cotton Cancer Center. In an analysis of several thousand patients, they found that smoking for more than 15 years was associated with a 55% greater risk of developing colorectal adenomas. But for those with a family history of colorectal adenomas, smoking made little difference in their risk. "Patients with no family history should be counseled about smoking as a significantly added risk factor for adenoma occurrence," the authors wrote in the *Journal of Cancer Epidemiology*.

Caught red-handed

Many anesthesia providers are giving bacteria a free ride from one operating room to another, DHMC physician-researchers discovered. Led by anesthesiologist Randy Loftus, M.D., the team examined 164 cases, comparing bacteria from IV tubing and other equipment to bacteria isolated from the hands of anesthesia providers. Bacterial transmission to IV tubing, for example, was identified in 11.5% of cases; 47% were traced to the hands of anesthesia providers. "Contaminated hands of anesthesia providers serve as a significant source of . . . contamination in the operating room," the authors concluded in *Anesthesia and Analgesia*.