Medically speaking, behavior is the things we do, or don’t do; it’s what and how much we eat (or don’t eat) and drink. It’s the countless little choices we make over the years: Such as, “Another beer? Sure!” or “I’m going to go for a walk around the block,” or even, “Oops! I forgot to take my blood pressure medicine again.” Behavior is how you live your life. And actually, says Michael Smith, Ph.D., director of the new Johns Hopkins Center for Behavior and Health, behavior includes a lot more – and has a much greater impact on our health – than most of us realize.
“Unhealthy behaviors account for as much as 60 percent of all medical care costs in the United States,” says David Hellmann, M.D., Vice Dean of Johns Hopkins Bayview Medical Center and Chairman of the Department of Medicine, whose efforts were instrumental in getting the new Center started. “Even if someday the human genome project can perfectly predict all diseases, it won’t matter if we cannot also get patients to adopt healthy behaviors. The promise of medicine depends on improving behavior.”

In the disease world, there’s a cast of bad behavior thugs, whose mug shots might as well be on “Most Wanted” posters in doctors’ offices. A few of the worst offenders:

• Poor diet, inactivity, and lack of exercise: “Being a couch potato paves the way to obesity and may contribute to frailty,” says Hellmann. Obesity itself is a condition that keeps bad company; it opens the door to high blood pressure, heart disease, cholesterol problems, stroke, diabetes, and circulation problems, elevates the risk of some cancers, and even causes knee and back problems.

• Cigarette smoking: Not only increases the risk of lung cancer and chronic obstructive pulmonary disease, but of other cancers and heart disease, as well.

• Drug addiction: In addition to other health problems, drugs that are injected carry the risk of hepatitis C, HIV, and other blood-borne illnesses.

• Alcohol addiction: Too much alcohol poisons the body, and liver problems, including cirrhosis, come from the body’s inability to process it. Even excess use, not at the addiction level, contributes to obesity.

Then, there are some behavioral issues that might not seem nearly as harmful as the ones just mentioned, like “medicine adherence.” Why is this important? It can be crucial in keeping someone with, say, congestive heart failure, from needing to be readmitted to the hospital.

And then there’s sleep. Sleep? Really? Just ask Frank, age 47. He’s a lousy sleeper. On a good night, he may get five hours. His doctor doesn’t know about Frank’s sleep troubles. It would be nice if he did, because Frank’s glucose level is a bit high. Lack of sleep is known to cause the body to release hormones that increase insulin resistance and glucose intolerance – and often, simply getting at least seven hours of sleep a night is enough to turn this around. Or ask Jenny, age 34, who gets even less sleep than Frank. Although her mother has begged her to get some help, Jenny has refused, because she doesn’t want to become addicted to sleeping pills. Like an estimated 80 percent of people who suffer from insomnia, Jenny has never mentioned the problem to her doctor. She doesn’t know that cognitive behavioral therapy – which does not involve a single pill – could transform her life.

“There are these really intimate connections between very basic behaviors such as eating, sleeping, daily physical activity, and health. We are just scratching the surface.”

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SILENCE IS NOT GOLDEN
With many conditions involving behavior, the silence in the doctor’s examining room is often deafening. Important conversations are not taking place. Smith, who also is Director of Behavioral Sleep Medicine, has seen this happen for years. This is why one of the first goals he has set for the new Center for Behavior and Health is to get conversations started – between doctors and patients, and also between doctors and the Center’s experts in behavior, who could make a major difference in the course of a patient’s illness. “We want to start the conversation within Hopkins Medicine about behavior so that it can become part of routine health care at Hopkins, and that we can be a model for other places.”

Hellmann, a rheumatologist, has seen the high price of this kind of silence. “I trained at the University of California-San Francisco” when the AIDS epidemic broke out,” he says. “San Francisco was ‘Ground Zero’ for AIDS. No one knew the cause initially,” and patients were sent to the Rheumatology Division. “We had no treatments, and patients died quickly; their first admission was often their last. Academics wanted to focus on cure and vaccine,” he adds, “but no one wanted to focus on behavior – the one thing that we knew early on would make a difference. So many people died. I attended so many funerals and felt so badly that the profession and the country did not respond better. I swore that if I ever got to the other side and could marshal resources, I would do something to help improve the promotion of healthy behaviors.”

Smith knows well that changing behavior is easier said than done. But he also knows that it is not as hard as many people expect. “Often, physicians as well as patients see these changes as insurmountable,” he says. “Yet a vast body of research in the science of changing behavior suggests otherwise.”

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“JUST SCRATCHING THE SURFACE”
The Center is an interdisciplinary endeavor involving experts from the Departments of Medicine, Pediatrics, and Psychiatry and Behavioral Sciences. “With an issue as complicated and subtle as behavior, collaboration is essential,” says Hellmann, who has emphasized communication and teamwork in his Pyramid model for academic medicine. One of the goals of the Center for Innovative Medicine, which he directs, is to tear down the “silos” that compartmentalize specialists and often hinder progress.

Each month, the Center for Behavior and Health brings in visiting scholars to deliver a lecture, talk to faculty and staff, and consult on several pilot projects. Says Smith: “Phase One is really just getting people in different areas of medicine talking. We all have a different language, so we need to find a way to get people all on the same page. What do we mean by health-related behavior, and how do we change it systematically – how do we bring the science of behavior change to the practice of medicine?”
The level of help that people need to deal with behavior issues varies, Smith adds. While some people may need to see a psychologist or a psychiatrist, others may do better with some practical, nuts-and-bolts help from a nurse. Others may be helped by timely encouragement from their physicians. And before any of this can happen, the behavioral problem needs to come to light in the first place.

“Although smoking is now routinely asked about by cardiologists and many primary care physicians, many other behaviors aren’t,” Smith says. “Their doctors really should be asking about these things; patients actually want to talk about it. A lot of doctors never talk to their patients about obesity, for example, but in surveys, patients say that they would like for their doctor to talk to them about it. But doctors often don’t know how to bring it up; they don’t have a language. So that’s what we’re trying to do, get them some help with that very basic problem – the elephant in the room that has been largely neglected, but that can dramatically impact health and health care.”

**Changing behavior is easier said than done. But it’s also not as hard as many people expect.**

Smith and colleagues hope that technology can be of help here. They are working with Information Technology experts to develop ways – a patient’s own health website, perhaps, or a specially designed, confidential app that a patient and physician could both use – for patients to identify any particular problems they’d like to talk with their doctor about at the next appointment. “Keeping in mind that physicians are already inundated with information,” Smith says, “we would need to keep this process simple, perhaps red-flagging a problem that needs attention.”

Behavioral experts know that tracking and monitoring a problem is essential to long-term change. The details are still being worked out, but Smith’s idea is to have something that would not be disruptive for patients to use consistently – Wi-Fi-enabled scales, for instance, for people tracking weight loss; or the ability to input data by text message. “It must be something that patients can do easily, and that they want to do because it will improve their health.”

In the long run, changing behavior is going to save money “as patients address the problems that are complicating their medical treatment,” Smith notes. At a recent lecture, one of the Center’s guest speakers, Edward McAuley, Ph.D., from the University of Illinois-Urbana and Champaign, discussed groundbreaking research on physical activity and the risk of dementia. Just walking a few hours a week, he discovered, can prevent shrinking of the hippocampus, the brain’s center responsible for memory, which is affected in dementia.

“There are these really intimate connections between very basic behaviors such as eating, sleeping, daily physical activity, and health,” says Smith. “We are just scratching the surface.”