Microbiology: Not Just for Nursing Students Anymore

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If you haven’t taken a microbiology class in the last decade, you may not be aware of the intricacies of the superbug epidemic.

You likely can’t navigate through the myriad of probiotic products, or know what to do about the latest spinach, tomato or jalapeno scare.

After canvassing your refrigerator to ensure that it does not contain products harboring E. coli bacteria, you might be surprised to learn that having an abundance of E. coli in your intestines actually can be beneficial.

Likewise, after reading reports about life-threatening bacterial infections, you might be stunned to learn that one of every 30 people is unwittingly carrying one of the most lethal super bugs of the 21st century.

While these interesting facts about bacteria and their brethren might seem to be in conflict, an astute generation of students enrolled in microbiology classes can competently sift through media scares and live harmoniously with billions of microbes.

In addition to understanding how certain strains of bacteria are harmful while others are innocuous, students learn that intestinal E. coli help break down food and produce vitamin K, which helps with blood clotting.

They can explain that the superbug, Methicillin-resistant Staphylococcus aureus, can happily live in the mucous membranes of the nostrils, not usually posing a health risk.

Conversely, the absence of basic microbiological knowledge can seriously jeopardize a person’s health.

How can you address your own healthcare issues if you do not know how antibiotics work or why you have to take certain dosages for certain periods of time?

How can you learn to live with bacteria if you do not know where they reside, how they thrive or the composition of their structures?

A foundation in knowledge of microbes is essential for people who, whether they know it or not, are covered inside and out with millions of strains of these tiny organisms.

Microbiology students know that bacteria reside almost everywhere. Bacteria are, in fact, the most diverse and abundant group of organisms on earth, found in water, soil and air.

Students also learn that it is to their advantage to have bacteria. They cover our skin and prevent invasion, assist in food digestion and help develop and maintain our immune systems.

Students become aware of virulence factors, a distinguishing feature of “bad bacteria.” They also study the exponential growth of these microscopic life forms.

Antibiotic instructions no longer seem to be empty rules designed to wreak havoc on a person’s schedule once students learn how they frequently stop bacteria from reproducing, and allow the body to fight off the survivors.

These students comprehend the danger of stopping antibiotics too early and their personal role in preventing new super bugs.

They learn what clean means, and why it’s important, and why too clean could be a bad thing.

Microbiology laboratories, they may even ascend to the stage where they harbor on their own bodies and what products will kill them.

The largest benefit of a microbiology class is that these students become educated patient advocates, who are aware of their bodies’ health and can speak more confidently with their physicians.

These students, like their professors, are exceptionally aware of the power of education in everyday life.

A firm grasp of microbiology is essential for nursing students and those interested in a career in a medical field.

But it can also make life easier and a little more understandable for the rest of us.

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group that excludes the voice of the nation’s largest and fastest-growing ethnic population, Hispanics, and the colleges and universities they largely attend, Hispanic-Serving Institutions, would perpetuate the history of neglect of Hispanic education issues,” he wrote to Zelingo and Keller.

“Your advisory committee would be incomplete without bona fide Hispanic voices,” he argued.

Both the Times and the Chronicle are widely read by college officials.

The New York Times Company is a leading media company with 2007 revenues of $3.2 billion.

It includes The New York Times, the International Herald Tribune, The Boston Globe, 16 other daily newspapers and more than 50 Web site.

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