

# Do I Need an Antibiotic?

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The random use of antibiotics by people, especially taking them at the slightest pain in throat, or tonsils affects the immunity in the body. As the pain could be caused by a bacteria or a virus. But most patients ; according to the observation of the researchers and some of data collected by questionnaires and interviews, does not wait to see the cause of the disease, they immediately proceed to go to the pharmacy to buy antibiotics for both infection types: bacterial and viral. However viral infection does not need an antibiotic so taking it weakens the body's ability to defend against pathogens. This is problematic phenomenon is what made the researchers wonder how to help people find a diagnostic device before going to the doctor to distinguish between bacterial and viral infections, as antibiotics do not help but harm when taken in the case of viral infections, and how to help doctors to diagnose the type of inflammation in clinics without going to laboratories. solving this problem can be done by the device designed by the two researchers, which examines the presence of bacterial infection by observing the rise of a type of white blood cells (neutrophils) and other types of white blood cells lymphocytes (lymphocytes) than normal rates. If the infection is viral the device will tell the person to only rest and will tell the patient about the disadvantages of taking antibiotics in this case. However if it is bacterial, the device would tell the patient to go to the nearest doctor to be given the appropriate dose of antibiotics. With this device the researchers have increased the community's awareness of the risks of taking antibiotics without the need of them and help doctors speed up the diagnostic process instead of waiting for laboratory results.