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### **Vismita Gupta-Smith**

Antibiotics and COVID-19. What do you need to know about these two topics?

Welcome to Science in 5, I'm Vismita Gupta-Smith and we are talking to Dr. Hanan Balkhy today. Welcome, Hanan.

### **Dr Hanan Balkhy**

Thank you, Vismita. Nice to be with you today

### **Vismita Gupta-Smit**

Hanan, explain antibiotics and why they are important.

### **Dr Hanan Balkhy**

Antibiotics are therapies. They are agents that we use to treat infections. They could be for treatment of simple infections like an infection in the finger from a cut or an injury, or infections of people who are in the hospital. Basically Vismita, antibiotics are the reason why we have modern medicine today and we can do very complex surgical interventions and save lives.

### **Vismita Gupta-Smith**

Hanan, explain antibiotic resistance and why we should care about it.

### **Dr Hanan Balkhy**

So, antibiotics resistance is a characteristic of the bacteria themselves, not of the humans. A lot of people confuse the two. So, a bacteria, which is a living agent, has one aim, which is survival.

So, it will do whatever it can to change its genetic material to not become susceptible to the antibiotic. So, resistance, in simple terms, is when the bacteria no longer is killed by the antibiotic. The reason why that is concerning to us is if we

end up with no antibiotics to treat infections, we will basically be losing significant advances in

healthcare as we have it today.

### **Vismita Gupta-Smith**

Explain to us Hanan, why antibiotics and COVID-19 are a concern.

### **Dr Hanan Balkhy**

Again, there's a lot of misunderstanding or not the appropriate use of antibiotics taking place. And, the more the bacteria are exposed to antibiotics through treatments that are unnecessary, they will develop resistance. And with COVID, there's a very large expansion in the number of patients with respiratory disease

where patients might feel the urge to take an antibiotic, while in reality COVID is not a bacteria, it's a virus.

And, the use of these antibiotics will not treat them but it will create resistance among bacteria that already exists in our bodies. So, it's a very complex scenario, Vismita, but the bottom line is antibiotics should not be prescribed unless there's a clear medical indication for them.

### **Vismita Gupta-Smith**

So, to sum it up Hanan, could you tell us what is it that the public needs to know about COVID-19 and antibiotics?

### **Dr Hanan Balkhy**

It's very important to realize that we do not need to give antibiotics to patients who are isolated with COVID-19 in their homes, because they have mild disease.

And, to only be receiving antibiotics if they are significantly ill, where the healthcare provider is suspicious of – on top of the COVID-19 – the patient having a bacterial infection. And, this needs to be done by a prescription of a healthcare provider.

### **Vismita Gupta-Smith**

Thank you, Hanan. There you have it, Dr. Hanan Balkhy explaining antibiotics and COVID-19. If you find this information useful, please share it with your networks and be the source of trusted evidence-based information.

Until next time then. Stay safe, stay healthy and stick with science.