How Antibiotics Work 2019 – Descriptive Transcript

Time	Audio	Visual
0:00-0:02	How do antibiotics work?	Antibiotic pill
0:02-0:18	Pathogenic bacteria in the body cause infections, which can be treated by antibiotics	Person ingests the antibiotic pill, and it travels down the oesophagus and into the stomach. The pill disintegrates in the stomach and continues to move down the digestive system
0:18-0:23	Antibiotics can be bacteriostatic or bactericidal	"Antibiotics can be bacteriostatic or bactericidal. Static = to stop, Cidal = to kill"
0:23-0:31	Bacteriostatic antibiotics slow the growth of bacteria by interfering with the processes the bacteria need to multiply	One section of a bacterium shows three circles representing the three processes
0:31-0:42	These processes include: DNA replication	One of the processes is zoomed in to show a DNA molecule replicating
0:42-0:49	Metabolism	The next process is zoomed in to show molecules binding to an enzyme to activate it
0:49-0:59	Protein production	The third process is zoomed in to show a chain of amino acids forming to produce protein
0:59-1:03	No audio	A streptococcus is shown and zooms into one bacterium in the chain
1:03-1:15	Bactericidal antibiotics kill the bacteria, for example by preventing the bacteria from making a cell wall	The bacterium shows a wall on the surface and antibiotics, which attach to the wall and break it, removing the wall from the bacterium
1:15-1:19	No audio	The streptococcus structure has now broken
1:19-1:25	Antibiotics can be so-called broad-spectrum, affecting many different bacteria in your body	Four different shaped bacteria are surrounded by antibiotics
1:25-1:31	Including useful bacteria in your gut	The antibiotics attach onto all four bacteria
1:31-1:38	Some antibiotics are more narrow-spectrum, only affecting one or two types of bacteria	Four different shaped bacteria are surrounded by antibiotics
1:38-1:49	It is better to use narrow-spectrum antibiotics where possible. Most	The antibiotics attach onto just one of the four bacteria

	antibiotics have no effect on your immune system	
1:50-1:57	Antibiotics do not work on viruses because viruses have a different structure to bacteria	A yellow virus attaches itself to a pink host cell and transfers a strand of DNA into it
1:57-2:02	Viruses incorporate themselves into a host cell in our body in order to multiply	
2:03-2:15	Bacteriostatic antibiotics that affect bacterial DNA, metabolism, or protein production do not attack body cells and therefore do not slow the growth of viruses	The host cell turns from pink to yellow
2:16-2:29	Viruses do not have a cell wall and therefore bactericidal antibiotics that act on cell walls cannot kill viruses	Bacteria, viruses, and antibiotics move through the body