How Antibiotic Resistance Arises – Descriptive Transcript

Time	Audio	Visual
0:00-0:03	What is antibiotic resistance?	Bacteria move through the body
0:04-0:15	Bacteria naturally evolved to develop ways of not being killed by antibiotics. When this happens, these bacteria are known as antibiotic-resistance bacteria	Arrows point to each individual bacterium
0:17-0:28	Antibiotic resistance can be caused by genetic mutations in the bacterial DNA that lead to a change in the cell wall structure, metabolism, DNA replication, or protein production	One bacterium is zoomed into to show a strand of DNA, an arrow points to an AT pair being replaced by a GC pair within the strand
0:28-0:33	The antibiotic can then no longer affect its target structure or process	Zooms back out to show the whole bacterium
0:45-0:51	When bacteria are exposed to antibiotics, the resistant strains have a selective advantage	Bacteria have blue spots surrounding them to represent antibiotics. The antibiotics target some of the bacteria and remove them
0:51-0:55	And they survive and multiply, mainly in the gut	The remaining bacteria each duplicate to double the amount in the body
0:55-1:04	The overuse and misuse of antibiotics speeds up this process and contributes to the high level of antibiotic resistance seen today	