

Subtitle

_ Antibiotic Use.vtt

No.	TC In	TC Out	Subtitle
1.	00:00:09:05	00:00:13:09	Welcome to the Q-tips for Your Ears podcast series. During each
2.	00:00:13:09	00:00:17:10	session, we will highlight a new topic to improve health care
3.	00:00:17:10	00:00:21:07	quality and patient outcomes. My name is Dee Kaiser and my
4.	00:00:21:07	00:00:24:24	colleague Tammy Wagner is with me. Today. We are quality
5.	00:00:24:24	00:00:28:24	improvement advisors for the Great Plains Quality Innovation
6.	00:00:28:24	00:00:33:00	Network. Thanks for taking the time to join us. Our topic for
7.	00:00:33:00	00:00:36:23	today is antibiotic use or known as antibiotic stewardship.
8.	00:00:38:01	00:00:42:00	Hello, Tammy. Wondering if we could start by you telling us
9.	00:00:42:00	00:00:45:06	about antibiotics and why they are so important?
10.	00:00:45:22	00:00:50:15	Behind Dee and of course first I want to start out by saying
11.	00:00:50:15	00:00:54:24	every November the CDC has antibiotic Awareness Week and
12.	00:00:54:24	00:00:59:19	it's usually around the third week in November. So that's why
13.	00:00:59:19	00:01:02:19	we wanted to get this information out.
14.	00:01:03:14	00:01:07:06	So first, a quick rundown on what an antibiotic is.
15.	00:01:07:06	00:01:11:09	Antibiotics are medicines that fight infections caused by
16.	00:01:11:09	00:01:15:09	bacteria in humans and in animals by either killing the
17.	00:01:15:09	00:01:19:17	bacteria or making it difficult for the bacteria to grow and
18.	00:01:19:17	00:01:24:02	multiply. Bacteria are germ, they live in the environment and
19.	00:01:24:02	00:01:28:18	all over the inside and outside of our bodies. Most bacteria are
20.	00:01:28:18	00:01:32:17	harmless and even helpful to people, but some can cause
21.	00:01:32:17	00:01:33:12	infections.
22.	00:01:33:16	00:01:37:07	Such as strep throat, antibiotics only treat certain
23.	00:01:37:07	00:01:41:13	infections caused by bacteria such as whooping cough, urinary
24.	00:01:41:13	00:01:44:18	tract infections and, as I said, strep throat.

Subtitle

_ Antibiotic Use.vtt

No.	TC In	TC Out	Subtitle
25.	00:01:46:02	00:01:49:19	Antibiotics are also needed to treat life threatening
26.	00:01:49:19	00:01:53:19	conditions caused by bacteria such as sepsis, which is the
27.	00:01:53:19	00:01:57:22	body's extreme response to an infection. Antibiotics do not
28.	00:01:57:22	00:02:02:02	work on viruses, such as colds, runny noses, even if a person
29.	00:02:02:02	00:02:06:03	has thick yellow or green snot or mucus most sore throats.
30.	00:02:06:18	00:02:10:00	Flu and most cases of bronchitis, many sinus
31.	00:02:10:00	00:02:12:24	infections and some ear infections too.
32.	00:02:13:22	00:02:17:02	There are so many side effects that can happen when taking in a
33.	00:02:17:02	00:02:17:12	iotics.
34.	00:02:18:06	00:02:22:13	Rashes, nausea, diarrhea, yeast infections, severe and life
35.	00:02:22:13	00:02:27:05	threatening, allergic reactions, antibiotic resistant infections
36.	00:02:27:05	00:02:31:20	and see diff. As we talked about on another podcast. Now Dee, I
37.	00:02:31:20	00:02:36:11	know your daughter-in-law had a life threatening reaction to it.
38.	00:02:36:11	00:02:40:21	Antibiotic. She took a few years ago. Would you share? Sure.
39.	00:02:40:21	00:02:43:21	Might be glad too. So my daughter-in-law.
40.	00:02:44:13	00:02:49:23	Had developed a boil on her thigh from the gym that she went
41.	00:02:49:23	00:02:55:15	to. She is in the Air Force and the base gym is where she would
42.	00:02:55:15	00:03:01:05	go to work out. So she went into her doctor and was prescribed
43.	00:03:01:05	00:03:06:08	Bactrim, which is a common antibiotic for skin infections
44.	00:03:06:08	00:03:11:18	and a couple days she was on day two of that antibiotic. She
45.	00:03:11:18	00:03:15:09	started to notice her lips were swollen.
46.	00:03:16:06	00:03:21:12	So she went into the base ER, and they said that they thought
47.	00:03:21:12	00:03:26:13	it could be a reaction to the back drum, but weren't really
48.	00:03:26:13	00:03:31:23	sure. So she continued on. It, went home, and then the next day

Subtitle

_ Antibiotic Use.vtt

No.	TC In	TC Out	Subtitle
49.	00:03:31:23	00:03:36:20	her whole face was swollen her lips. And she had a tingly
50.	00:03:36:20	00:03:42:01	feeling pretty much all over and blisters on her back. So she
51.	00:03:42:01	00:03:47:06	went back into the the base ER, and they diagnosed her with a
52.	00:03:47:06	00:03:49:09	condition called Stevens.
53.	00:03:49:20	00:03:54:01	Johnson syndrome, which is a very rare side effect or
54.	00:03:54:01	00:03:58:23	disorder from lots of different types of medications, actually
55.	00:03:58:23	00:04:03:17	any type of a medication can cause this. But antibiotics are
56.	00:04:03:17	00:04:08:19	the ones that tend to cause this the most frequently. And when I
57.	00:04:08:19	00:04:13:19	say it's very rare, it's one to two people per million. Wow per
58.	00:04:13:19	00:04:18:23	year. And the one thing that put my daughter-in-law into a higher
59.	00:04:18:23	00:04:21:18	category is she is Southeast Asian.
60.	00:04:22:00	00:04:27:21	And they do have a gene that makes them more susceptible to
61.	00:04:27:21	00:04:33:15	certain types of medications. And one of those for her was
62.	00:04:33:15	00:04:36:01	this antibiotic backdrop.
63.	00:04:37:02	00:04:41:13	Uh, so of course she'll need to never take Bactrim or anything
64.	00:04:41:13	00:04:45:19	that's closely related to that type of a medicine. But what
65.	00:04:45:19	00:04:50:00	Steven Johnson syndrome is, it's a disorder of the skin and
66.	00:04:50:00	00:04:54:13	mucous membranes. It's usually a reaction to a medication or an
67.	00:04:54:13	00:04:58:21	infection, and it often begins with flu like symptoms. There
68.	00:04:58:21	00:05:03:02	can be painful red or purplish rash that spread spreads and
69.	00:05:03:02	00:05:07:08	blisters, and then the top layer of the affected skin dyes.
70.	00:05:07:10	00:05:12:12	Sheds and then heels. So there's Steven Johnson's syndrome. And
71.	00:05:12:12	00:05:16:19	then there's also Steven Johnson's syndrome, or S JS.
72.	00:05:16:19	00:05:21:07	They call it with toxic epidermal necrolysis, which is a
73.	00:05:21:07	00:05:25:20	big word that means the top

Subtitle

_ Antibiotic Use.vtt

No.	TC In	TC Out	Subtitle
			layer of the skin completely
74.	00:05:25:20	00:05:30:14	comes off. And people that develop this are treated in burn
75.	00:05:30:14	00:05:35:10	units because it's just like having a burn where all of your
76.	00:05:35:10	00:05:39:06	skin comes off. And she did have that. She was.
77.	00:05:39:10	00:05:43:20	In Alaska at the time when this happened and she was taken by
78.	00:05:43:20	00:05:48:00	jet ambulance down to watch Seattle, WA, where she was put
79.	00:05:48:00	00:05:52:01	in a burn unit because Alaska does not have a burn unit.
80.	00:05:53:23	00:05:59:15	And anyway, she had it. A total total skin from head to toe.
81.	00:06:01:06	00:06:04:11	And she received a pig skin graphs.
82.	00:06:05:19	00:06:10:09	Several times she had to go for debridement into the the
83.	00:06:10:09	00:06:15:07	surgical into OR to have that done. She was on a ventilator.
84.	00:06:15:07	00:06:19:20	She spent a month in the hospital and she the one thing
85.	00:06:19:20	00:06:24:13	that did happen to her is she did have to have her eyelids
86.	00:06:24:13	00:06:29:07	show sewn shut because of the damage to her eyes that this
87.	00:06:29:07	00:06:34:07	caused. So make a Long story short. She's doing very well the
88.	00:06:34:07	00:06:35:10	only leftover.
89.	00:06:35:12	00:06:39:06	Things she has is her tear ducts in her eyes. Don't make enough
90.	00:06:39:06	00:06:40:24	tears for her, so she has to.
91.	00:06:41:12	00:06:45:21	Umm put eye drops in but yeah, it was a very scary time when
92.	00:06:45:21	00:06:50:07	they left Alaska. The nurse on the jet layer told my son that
93.	00:06:50:07	00:06:54:14	she had about a 5% chance of survival. What a scary time. I
94.	00:06:54:14	00:06:58:23	remember seeing the photos now. Very scary. So scary. It was
95.	00:06:58:23	00:07:03:03	very scary, but she had a one year old little boy that she
96.	00:07:03:03	00:07:07:18	wanted to get home too. So and she did. And she did. So yes, so
97.	00:07:07:18	00:07:12:07	did just that. You know, people always think that an antibiotic

Subtitle

_ Antibiotic Use.vtt

No.	TC In	TC Out	Subtitle
98.	00:07:12:07	00:07:14:20	is the cure all. And in this case.
99.	00:07:15:01	00:07:17:23	It it caused something terrible.
100.	00:07:18:09	00:07:21:14	Umm, not that every time you take an antibiotic that's going
101.	00:07:21:14	00:07:24:14	to happen, but it's just something to always be aware of
102.	00:07:24:14	00:07:27:17	about. Think about when you're taking any medicine, you're
103.	00:07:27:17	00:07:29:21	taking any medication. Yes. Yeah, right.
104.	00:07:31:22	00:07:35:19	So thank you for letting me share that story for sharing.
105.	00:07:35:19	00:07:39:09	Yeah. OK. So now would, Tammy, would you explain what
106.	00:07:39:09	00:07:43:11	antibiotic stewardship is? You bet antibiotic stewardship is
107.	00:07:43:11	00:07:47:01	the effort to measure and improve how antibiotics are
108.	00:07:47:01	00:07:50:18	prescribed by doctors and other prescribers like nurse
109.	00:07:50:18	00:07:54:13	practitioners and physician assistants, and then used by
110.	00:07:54:13	00:07:58:14	people improving antibiotic prescribing. And it's use is so
111.	00:07:58:14	00:08:01:11	important to effectively treat infections.
112.	00:08:01:21	00:08:05:19	Protect people from the harms that can be caused by
113.	00:08:05:19	00:08:10:09	unnecessary antibiotic use and the need to combat antibiotic
114.	00:08:10:09	00:08:14:14	resistance. OK, so antibiotic resistance. What is that?
115.	00:08:15:08	00:08:19:10	In a public resistance can happen when germs like bacteria
116.	00:08:19:10	00:08:23:17	and fungi develop the ability to defeat the drugs designed to
117.	00:08:23:17	00:08:27:13	kill them. The more we use antibiotics, especially for
118.	00:08:27:13	00:08:31:20	reasons we don't need to take them for, the bacteria develops
119.	00:08:31:20	00:08:32:11	defenses.
120.	00:08:33:02	00:08:37:10	Some past antibiotic drugs are already useless against new
121.	00:08:37:10	00:08:41:17	resistant bacteria. This allows the resistance to grow and
122.	00:08:41:17	00:08:45:06	spread to other germs and

Subtitle

_ Antibiotic Use.vtt

No.	TC In	TC Out	Subtitle
			creates drug resistant
123.	00:08:45:06	00:08:49:23	infections. Or some people call them superbugs and those can be
124.	00:08:49:23	00:08:54:00	really hard to treat. Misuse and overuse of antibiotics
125.	00:08:54:00	00:08:56:15	contributes to this problem. OK so.
126.	00:08:58:10	00:09:02:16	What are? What are the health care people doing then, so that
127.	00:09:02:16	00:09:05:06	we don't develop these superbugs and?
128.	00:09:06:22	00:09:10:00	How are they helping with the misuse and overuse of
129.	00:09:10:00	00:09:13:19	antibiotics? Well, antibiotics have made many medical advances
130.	00:09:13:19	00:09:16:16	possible, so that's just transplants and cancer
131.	00:09:16:16	00:09:19:18	treatments as well as a treatment of sepsis. As we
132.	00:09:19:18	00:09:23:09	talked earlier, which is the body's overwhelming response to
133.	00:09:23:09	00:09:26:13	an infection. If antibiotics continue to lose, their
134.	00:09:26:13	00:09:30:02	effectiveness will lose the ability to treat many diseases
135.	00:09:30:02	00:09:33:12	and perform many routine surgeries. More than one out of
136.	00:09:33:12	00:09:36:21	every four antibiotics prescribed in the United States.
137.	00:09:36:24	00:09:40:15	Outpatient settings are unnecessary according to the
138.	00:09:40:15	00:09:45:01	CDC, each year almost 3,000,000 infections occur from antibiotic
139.	00:09:45:01	00:09:49:10	resistant bacteria and more than 35,000 people die as a result.
140.	00:09:49:10	00:09:53:20	In the US every year, antibiotic resistance adds \$20 billion in
141.	00:09:53:20	00:09:55:23	excess direct healthcare costs.
142.	00:09:56:15	00:10:00:18	Additional cost to society for lost productivity could be as
143.	00:10:00:18	00:10:05:02	high as 35 billion per year, and the hospital cost for a person
144.	00:10:05:02	00:10:09:04	with an antibiotic resistant infection can raise range from
145.	00:10:09:04	00:10:12:13	around 18,000 to 29,000 depending on the type of
146.	00:10:12:13	00:10:13:05	infection.

Subtitle

_ Antibiotic Use.vtt

No.	TC In	TC Out	Subtitle
147.	00:10:15:16	00:10:18:24	Tammy, can you explain who antibiotics affect? Yes,
148.	00:10:18:24	00:10:22:12	absolutely. Everyone, most people have had to take an
149.	00:10:22:12	00:10:26:15	antibiotic over their life for some reason or another. We don't
150.	00:10:26:15	00:10:30:07	know who will have mild, moderate or severe reactions to
151.	00:10:30:07	00:10:34:01	an antibiotic, and that can be scary. Yes. That's why I'm
152.	00:10:34:01	00:10:37:24	taking antibiotics only when needed is so important. We want
153.	00:10:37:24	00:10:42:01	antibiotics to work when we need them. Antibiotics, along with
154.	00:10:42:01	00:10:45:11	sanitation, cleaning practices and garbage disposal.
155.	00:10:45:13	00:10:50:07	Services and immunizations are some of the top advances in
156.	00:10:50:07	00:10:54:17	public health of all time. Definitely yes. So what is
157.	00:10:54:17	00:10:56:11	misuse of antibiotics?
158.	00:10:57:05	00:11:01:05	So misuse of antibiotics happens when a person is prescribed the
159.	00:11:01:05	00:11:04:15	wrong antibiotic or the wrong dose of an antibiotic, or
160.	00:11:04:15	00:11:07:21	possibly an antibiotic for the wrong length of time.
161.	00:11:10:08	00:11:13:04	So how can people with antibiotic resistance?
162.	00:11:13:23	00:11:14:11	Umm.
163.	00:11:15:07	00:11:19:09	What? What can they do to work towards a better stewardship or
164.	00:11:19:09	00:11:23:13	better use of antibiotics? Fully they can be antibiotics aware,
165.	00:11:23:13	00:11:26:24	have conversations with their medical provider about
166.	00:11:26:24	00:11:31:03	antibiotics, and, if prescribed, discuss the dose and length of
167.	00:11:31:03	00:11:34:02	time that they need to be on that antibiotic.
168.	00:11:34:18	00:11:39:01	Don't ask for an antibiotic from your medical provider. Ask what
169.	00:11:39:01	00:11:43:02	you can do instead of taking antibiotics. Make sure you wash
170.	00:11:43:02	00:11:47:06	your hands with soap and water for at least 20 seconds, or use
171.	00:11:47:06	00:11:50:15	hand sanitizer that contains at

Subtitle

_ Antibiotic Use.vtt

No.	TC In	TC Out	Subtitle
			least 60% alcohol.
172.	00:11:51:09	00:11:55:15	Cover your mouth and nose with a tissue when you cough or sneeze,
173.	00:11:55:15	00:11:59:07	or use the inside of your elbow and get your recommended
174.	00:11:59:07	00:12:02:13	vaccines, such as your flu vaccine COVID vaccine.
175.	00:12:03:23	00:12:08:11	Yes, very good tips there. So what will we do when antibiotics
176.	00:12:08:11	00:12:12:09	don't work anymore? Well, that's a good question, Dee.
177.	00:12:13:21	00:12:17:16	I'm gonna leave you with what? Scientists, Sir Alexander
178.	00:12:17:16	00:12:21:05	Fleming or the person who invented pellet penicillin
179.	00:12:21:05	00:12:21:16	stated.
180.	00:12:22:08	00:12:26:19	The thoughtless person playing with penicillin treatment is
181.	00:12:26:19	00:12:31:06	morally responsible for the death of the man who succumbs to
182.	00:12:31:06	00:12:35:22	infection with the penicillin resistant Organism. That is true
183.	00:12:35:22	00:12:40:11	for many antibiotics that no longer work for us now. Yes. So,
184.	00:12:40:11	00:12:44:18	yeah. So going into the doctor with a cold or a cough, an
185.	00:12:44:18	00:12:49:07	antibiotic isn't always what you need. No, it is not. And you
186.	00:12:49:07	00:12:51:12	need to look to your provider.
187.	00:12:52:06	00:12:56:13	Not request an antibiotic just because you have. Remember that
188.	00:12:56:13	00:13:00:15	green snotty nose, right. Right. That you need to allow the
189.	00:13:00:15	00:13:05:03	provider maybe to culture. OK to see if it is a bacteria and that
190.	00:13:05:03	00:13:09:05	takes a little bit of time. Usually a culture is, you know,
191.	00:13:09:05	00:13:13:10	24 to 48 hours after you've gone in. So you may not leave the
192.	00:13:13:10	00:13:17:02	doctor's office with something, but maybe for symptom
193.	00:13:17:02	00:13:21:10	management. OK, very good. And we know, of course, that if you
194.	00:13:21:10	00:13:22:07	have a virus.
195.	00:13:22:19	00:13:25:22	An antibiotic isn't going to do you any good unless you have
196.	00:13:25:22	00:13:26:11	some other.

Subtitle

_ Antibiotic Use.vtt

No.	TC In	TC Out	Subtitle
197.	00:13:28:02	00:13:31:15	Like an infection from the virus. It's like I know people
198.	00:13:31:15	00:13:35:14	get influenza, which is a virus, but then they develop anemia.
199.	00:13:35:14	00:13:39:10	And so then that would be the right time for an antibiotic. OK
200.	00:13:39:10	00:13:43:01	would need antibiotics. All right, we just need to learn to
201.	00:13:43:01	00:13:46:11	take them when needed because they are again absolutely
202.	00:13:46:11	00:13:50:04	needed. Right. We want to make sure they work for us when we
203.	00:13:50:04	00:13:53:18	take them. OK, very good. All right. Well, that was great
204.	00:13:53:18	00:13:56:04	information. Tammy, thanks so much for.
205.	00:13:56:13	00:14:00:00	All of that, we hope you enjoyed today's Q-tips for your ear
206.	00:14:00:00	00:14:03:09	session. We look forward to connecting with you next time.
207.	00:14:04:16	00:14:07:12	I do wanna say, Dee, that they can learn more.
208.	00:14:08:11	00:14:11:09	At greatplainsqin.org .
209.	00:14:12:00	00:14:16:20	Forward slash initiatives forward slash, improving patient
210.	00:14:16:20	00:14:21:14	safety, forward slash antibiotic stewardship and again the
211.	00:14:21:14	00:14:26:17	cdc.gov/antibiotic use also as another place they can get more
212.	00:14:26:17	00:14:31:15	information. Very good. That's wonderful. Yeah. OK. So until
213.	00:14:31:15	00:14:33:20	next time have a great day.