

# E10 - Stomach Ulcer, Friendship, and Loss

Source: [Crunchyroll](#)

Translator:

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**[00:03]** ---

*I've got to deliver this oxygen!*

**[00:05]** ---

*The oxygen!*

**[00:06]** ---

*The oxygen!*

**[00:08]** ---

*The oxygen!*

**[00:10]** ---

If you keep pushing yourself too hard,  
you'll end up going down first!

**[00:13]** ---

I can't leave you alone right now!

**[00:16]** ---

You come with me.

**[00:18]** ---

Come with you?  
But I have this oxygen to—

**[00:20]** ---

Just shut up and come!

**[00:22]** ---

See? Check it out!

**[00:28]** ---

Even if we slack off,  
the body just keeps on moving.

**[00:32]** ---

You have to take it easy once in a while  
or you won't be able to work when it counts.

**[00:42]** ---

Oh man... Work sure is tough, huh?

**[00:46]** ---

Yep.

**[02:22]** ---

EPISODE 10:  
STOMACH ULCER,  
FRIENDSHIP, AND LOSS

**[02:24]** ---

Hey!

**[02:26]** ---

You're looking totally refreshed.

**[02:29]** ---

Have you learned to game the system more?

**[02:33]** ---

Thanks.

**[02:34]** ---

H-Hey, where's this coming from?

**[02:38]** ---

If it wasn't for you,  
I could've self-destructed that day.

**[02:42]** ---

Do you have to be such a straight arrow?  
You're embarrassing me, man.

**[02:54]** ---

Hey...

**[02:58]** ---

*As if we have any time to take it easy!*

**[03:00]** ---

*There's not enough oxygen to go around,*

**[03:02]** ---

*and that's why this body's  
starting to disintegrate!*

**[03:04]** ---

*Don't you care what happens to this body?*

**[03:07]** ---

*If we don't keep working,  
it'll be all over for this body!*

**[03:16]** ---

U-Um...

**[03:20]** ---

About the other day, I'm sor—

**[03:21]** ---

- Please forgive me!  
- Huh?

**[03:24]** ---

I had no idea what shape this body was in,  
and I left everything to you, Senpai.

**[03:29]** ---

My classmate and I both feel terrible  
about it, so since then,

**[03:32]** ---

we've been delivering  
all the oxygen we can—

**[03:33]** ---

No! I'm the one who should  
be apologizing to you!

**[03:37]** ---

I tried to take on the whole load  
and ended up lashing out at you.

**[03:42]** ---

I'm really sorry!

**[03:43]** ---

No! Please don't apologize!

**[03:45]** ---

Realizing that you have problems, too,  
kind of set my mind at ease.

**[03:49]** ---

Huh?

**[03:51]** ---

We're looking forward to being trained by you!

**[03:57]** ---

And I'm looking forward to it, too.

**[04:01]** ---

Hey! Any Red Blood Cells out there  
who have time to help out?

**[04:07]** ---

I wonder what's up.

**[04:10]** ---

Did something happen?

**[04:11]** ---

This is an emergency summons!

**[04:13]** ---

We need you to go somewhere  
with all the oxygen you can carry!

**[04:17]** ---

Where would that be?

**[04:18]** ---

The stomach.

**[04:23]** ---

*The stomach.*

**[04:24]** ---

*Stores food that has been swallowed,*

**[04:27]** ---

*sterilizing it with the gastric acid  
that it secretes from its walls.*

**[04:31]** ---

*In addition, it turns the food into mush*

*thanks to pepsin, a digestive enzyme,*

**[04:37]** ---

*carrying out the first step of digestion.*

**[04:40]** ---

This place is always such a sight to see.

The food's all mushy.

**[04:44]** ---

Yeah. We'd get dissolved just like that  
if we were to fall in.

**[04:49]** ---

Not bringing the rookies here  
was the right call.

**[04:52]** ---

Hey you two!

**[04:54]** ---

Is this any time to be taking a tour?

**[04:56]** ---

- Oh, right! Sorry about that!

- Oh, right! Sorry about that!

**[04:58]** ---

We're not here to have fun!

Huddle up right now!

**[05:07]** ---

I'm not really a fan  
of Old Man Gastric Chief Cell.

**[05:13]** ---

*Gastric Chief Cells.*

**[05:14]** ---

*Cells that are prevalent in the stomach lining.*

**[05:18]** ---

*They secrete pepsinogen, the precursor of pepsin.*

**[05:23]** ---

I'm going to lay it out for you  
from the get-go!

**[05:25]** ---

This is a blast furnace  
where energy's extracted from food!

**[05:29]** ---

Right now, it's the most dangerous  
place in this body!

**[05:32]** ---

I'm literally going to work you to death!

**[05:33]** ---

STOMACH

**[05:36]** ---

If you can't put your heart into it,  
then get out of my sight this second!

**[05:40]** ---

For us Stomach Cells,

**[05:43]** ---

keeping that powerful gastric acid under control  
is a job we risk our lives for!

**[05:46]** ---

MUCUS

**[05:47]** ---

But now, we're having  
a hard time controlling it.

**[05:52]** ---

Look.

**[05:54]** ---

An ulcer's developed in the stomach,  
and the gastric mucosa's been breached.

**[05:58]** ---

U-Ulcer?

**[06:01]** ---

Since the stomach's normally protected  
by the gastric mucosa,

**[06:03]** ---

it doesn't get dissolved  
in the gastric acid, but...

**[06:05]** ---

Now that the mucosa's damaged,  
it's being eaten away by the acid.

**[06:10]** ---

GASTRIC ACID  
MUCOSAL LAYER  
SUBMUCOSA  
INTRINSIC MUSCULARIS  
SUBSEROA  
SEROA

**[06:11]** ---

*Stomach ulcer.*

**[06:13]** ---

*Occurs when the layer of mucus  
that normally protects the stomach is reduced*

**[06:16]** ---

*until it's no longer able  
to neutralize the gastric acid,*

**[06:18]** ---

ULCER

**[06:19]** ---

*which then proceeds to eat away  
at the stomach itself.*

**[06:25]** ---

What the stomach needs most of all  
right now is oxygen.

**[06:28]** ---

The oxygen's not flowing well  
because of stress, so it's unable to digest.

**[06:33]** ---

Not only that, but the cells  
who repair the mucosa need oxygen, too.

**[06:39]** ---

If the serosa gets perforated, as well,  
this stomach will end up melting down.

**[06:44]** ---

So, whether we can stop that  
from happening or not

**[06:46]** ---

will depend on how hard you guys work.

**[06:50]** ---

I'm counting on you.

**[06:51]** ---

Okay!

**[06:54]** ---

What's that old geezer's problem?

**[06:57]** ---

Who does he think he is?

**[06:59]** ---

Don't worry. It's just a bluff.

**[07:02]** ---

It is, right? Just a bluff, right?

**[07:05]** ---

No.

**[07:07]** ---

That Gastric Chief Cell  
isn't the type to play around.

**[07:12]** ---

On the other side of the mucosa  
is a sea of gastric acid, huh?

**[07:15]** ---

I can't believe anyone could work forever  
in a scary place like this.

**[07:19]** ---

The old guy's kind of a jerk,  
but I'll give him props for at least that.

**[07:24]** ---

Come to think of it, the reason we're short so many  
Red Blood Cells might be because of this ulcer.

**[07:30]** ---

The blood's leaking and heading that way.

**[07:34]** ---

You mean they fell right into the sea  
of gastric acid? You must be kidding me!

**[07:40]** ---

*Emergency! The gastric acid-induced tear  
has reached Area C-13!*

**[07:44]** ---

Tear?

**[07:45]** ---

Area C-13 is...

**[07:47]** ---

right here!

**[07:52]** ---

The gastric acid's eroding?

**[07:58]** ---

Outta my way!

**[08:02]** ---

Subchief! Get that gastric mucosa fixed stat!

**[08:05]** ---

Copy that!

**[08:08]** ---

*Gastric Subchief Cells.*

**[08:09]** ---

*Cells that secrete the mucus  
that protects the stomach*

**[08:13]** ---

*from being damaged  
by gastric acid and pepsin.*

**[08:16]** ---

Platelets, close up the wound, will you?

**[08:19]** ---

Right, you don't have to tell us!

**[08:20]** ---

PLATELETS

**[08:20]** ---

Come on, guys, hurry it up!

**[08:22]** ---

Okay!

**[08:26]** ---

This is no time to get spooked!

**[08:27]** ---

If you don't want to end up  
like that, get to work!

**[08:30]** ---

Okay.

**[08:36]** ---

*Platelets.*

**[08:37]** ---

*A type of blood component.*

**[08:41]** ---

*They assemble  
wherever a blood vessel is damaged...*

**[08:44]** ---

*to block the opening  
and stop the bleeding.*

**[08:47]** ---

You other cells do all you can to help out!

**[08:53]** ---

I hate to say it, but around here,  
this is an everyday thing.

**[08:58]** ---

Gorging on alcohol and greasy foods...

**[09:01]** ---

And on top of that, smoking and stress...

**[09:04]** ---

Those bad lifestyle choices reduced the gastric mucosa  
which protects the stomach from gastric acid.

**[09:09]** ---

Is that also what caused the ulcer?

**[09:12]** ---

No, that wasn't the only cause.

**[09:14]** ---

Number one was...

**[09:16]** ---

Because of him.

**[09:18]** ---

Him?

**[09:20]** ---

At any rate, sorry to have to say this  
when you came out here to help,

**[09:24]** ---

but if you don't want to die,  
then feel free to leave! As you can see...

**[09:29]** ---

you won't even get to die  
a decent death here.

**[09:35]** ---

S-Sorry, I-I gotta...

**[09:38]** ---

Huh?

**[09:39]** ---

Hey! Where are you going?

**[09:42]** ---

Nothing we can do about that.

**[09:44]** ---

Having a spineless fool like that around  
would only hinder us.

**[09:50]** ---

No.

**[09:51]** ---

*He's worked just as hard as me until now.*

**[09:55]** ---

*I'm sure.*

**[10:03]** ---

What do you want from me?

**[10:05]** ---

I'm still scared!

**[10:08]** ---

My knees are buckling!

**[10:17]** ---

WHITE BLOOD CELL

**[10:21]** ---

What are the White Blood Cells doing here?

**[10:25]** ---

It's so messed up in here,  
I bet it would scare off even the bacteria.

**[10:33]** ---

Emergency!  
A shock to the gastric mucosa!

**[10:36]** ---

Gastric acid erosion!  
The lining will soon be torn!

**[10:39]** ---

What's this?

**[10:42]** ---

What's this shock?

**[10:49]** ---

The acidic gastric mucosa layer  
is being neutralized by alkaline ammonia!

**[10:53]** ---

The gastric mucosa is no longer under protection,  
and inflammation is about to ensue!

**[11:01]** ---

It's him!

**[11:04]** ---

They need oxygen and nutrients  
to repair the mucosa!

**[11:08]** ---

Don't stop! Deliver, deliver!  
We've got to stop the ulcer in its tracks!

**[11:19]** ---

If you fall from the wound, it's all over!

**[11:21]** ---

Watch out!

**[11:32]** ---

Uh-oh, the oxygen!

**[11:36]** ---

You...

**[11:40]** ---

I thought you'd run off for sure.

**[11:43]** ---

I happened to find the perfect capillary,  
so I was just taking a break, that's all.

**[11:47]** ---

Why don't you head over yourself?

**[11:59]** ---

The ulcer has reached  
the proper muscular layer!

**[12:01]** ---

VacA toxins are vacuolating  
the gastric mucosa!

**[12:05]** ---

The mucosal layer has been stripped away...

**[12:06]** ---

and there's no stopping  
the gastric acid erosion!

**[12:09]** ---

An enzyme that forms pores  
in the gastric mucosal layer?

**[12:12]** ---

How did such a thing...

**[12:15]** ---

What the cell is going on here?

**[12:19]** ---

Hey, look! There's something over there!

**[12:28]** ---

Is that a germ?

**[12:30]** ---

No way!

**[12:32]** ---

No germ is that gigantic!

**[12:34]** ---

Not only that, but it can actually survive  
in this sea of gastric acid?

**[12:39]** ---

That's right. That one right there...

**[12:42]** ---

is also what's causing this stomach ulcer.

**[12:45]** ---

A bacterium that can survive even  
in a place brimming with powerful acid...

**[12:49]** ---

H. pylori!

**[12:52]** ---

*Helicobacter pylori.*

**[12:55]** ---

*It releases an enzyme called urease,  
producing alkaline ammonia around itself.*

**[13:01]** ---

*This neutralizes gastric acids,  
allowing it to survive inside the stomach*

**[13:06]** ---

*and damage the gastric mucosa  
by secreting VacA toxins.*

**[13:10]** ---

*An extremely high percentage  
of stomach ulcers*

**[13:14]** ---

*are thought to be caused by the presence  
of this pylori bacterium.*

**[13:18]** ---

He's neutralizing the gastric acids with the ammonia  
produced by the enzyme urease

**[13:23]** ---

to make it possible for him  
to live inside this stomach.

**[13:27]** ---

He's planning to make all kinds of toxic  
substances to damage the gastric mucosa.

**[13:33]** ---

Hey! Hurry up with the repairs there!

**[13:36]** ---

Wh-What kind of a germ is that?

**[13:43]** ---

Is that...

**[13:45]** ---

White Blood Cell!

**[13:46]** ---

Come on!

**[13:49]** ---

Don't let the pylori wreak any more havoc  
on the gastric mucosa than it already has!

**[13:52]** ---

Roger that!

**[13:53]** ---

Get ready to die, you monster!

**[14:03]** ---

Whoa! Look out!

**[14:07]** ---

Come on!

**[14:08]** ---

Huh?

**[14:08]** ---

Let's deliver the oxygen!

**[14:10]** ---

Are you crazy?

When things are like this?

**[14:12]** ---

Isn't that why you came back?

**[14:16]** ---

Compared to what White Blood Cell and the others  
are going through, this is nothing!

**[14:24]** ---

No way out of it, huh?

**[14:28]** ---

We're going to make a run for it, then,

**[14:29]** ---

since this is the last place  
you'd want to loiter around in!

**[14:32]** ---

Are you ready?

**[14:34]** ---

Yeah. Our only option is to go!

**[14:36]** ---

Okay! On my count!

**[14:39]** ---

Three...

**[14:40]** ---

two...

**[14:41]** ---

one!

**[14:42]** ---

Run!

**[14:50]** ---

Dodge it!

**[15:03]** ---

All right, I'm good!

**[15:04]** ---

Okay! Here goes! There!

**[15:08]** ---

Okay, now it's your turn.

**[15:10]** ---

Thank you!

**[15:14]** ---

Almost there.

**[15:17]** ---

- Watch out!

- Whoa!

**[15:19]** ---

Ouch, ouch!

**[15:27]** ---

Hey, are you all right?

**[15:29]** ---

I'm fine. It's no big deal.

**[15:34]** ---

We should turn back, after all!

**[15:36]** ---

I'm okay, I swear!

**[15:53]** ---

If things go south,  
you tell me right away.

**[15:57]** ---

All right.

**[16:03]** ---

He sure doesn't know when to quit, this one!

**[16:07]** ---

I'm ending it now!

**[16:23]** ---

All right!

**[16:29]** ---

Unbelievable!

**[16:36]** ---

Aren't the tremors  
getting worse than before?

**[16:41]** ---

Hurry!

**[16:42]** ---

The gastric lining's about to be destroyed!

**[16:44]** ---

Run!

**[16:55]** ---

Look out!

**[17:34]** ---

Idiot! You're going to fall in!

**[17:35]** ---

P-P-Please let me go! My friend!

I have to save him!

**[17:40]** ---

Knock it off!

Do you want to die, too?

**[17:42]** ---

Please let me go!

He's not dead yet!

**[17:45]** ---

I know he's not dead yet!

**[17:47]** ---

Let me go! Let me go!

**[17:51]** ---

Let it go! It's too late now!

**[17:55]** ---

Hey, this way!

Seal up this wound, will you, Platelets?

**[17:59]** ---

Okay, move it now! Everyone, move!

**[18:02]** ---

Okay!

**[18:03]** ---

Wait! Please wait!

**[18:05]** ---

Hey! Get out of our way!

**[18:07]** ---

He's... He hasn't come back yet!

**[18:11]** ---

He?

**[18:13]** ---

Enough already! Didn't I tell you?

**[18:15]** ---

This kind of thing happens on a daily basis here!

**[18:18]** ---

You can't get sentimental every single time,  
or you'll end up putting the others at risk!

**[18:26]** ---

Hey, Red Blood Cells!

**[18:28]** ---

Quit your dawdling and keep that oxygen  
and those nutrients coming!

**[18:31]** ---

Okay!

**[18:40]** ---

*Yo! Good work!*

**[18:42]** ---

*When it comes to White Blood Cell,  
you totally go through this personality change.*

**[18:47]** ---

*Look, you don't have to slow down  
for my sake, okay?*

**[18:51]** ---

*Don't give me that!*

**[18:53]** ---

*Because of you...*

**[18:56]** ---

*I want to live just a little longer now, dammit!*

**[18:59]** ---

*Don't you remember  
how you risked your life to save me?*

**[19:02]** ---

*I can't leave you alone right now!*

**[19:05]** ---

*Your face is a mess.*

**[19:30]** ---

Hey, what's that?

**[19:32]** ---

Is it attacking the pylori?

**[19:35]** ---

*Clarithromycin.*

**[19:37]** ---

*An antibiotic.*

**[19:39]** ---

*It prevents the growth of bacteria  
by inhibiting their protein synthesis.*

**[19:39]** ---

DISINFECTION

**[19:44]** ---

I don't care what it is!

**[19:46]** ---

It's eradicating the pylori for us!

**[19:48]** ---

Attaboy! Kill that sucker!

**[19:51]** ---

You rotten Pylori Bacterium...

You can't croak fast enough for me!

**[19:56]** ---

*Pylori eradication.*

**[19:58]** ---

*Along with proton pump inhibitor therapy,  
which suppresses the secretion of gastric acid,*

**[20:03]** ---

*two types of antibiotics, clarithromycin  
and amoxicillin are taken for seven days.*

**[20:10]** ---

*Should any pylori bacteria remain after  
this first-line elimination therapy,*

**[20:14]** ---

*clarithromycin is replaced with metronidazole  
for second-line therapy.*

**[20:20]** ---

*Under these methods,  
eradication is mostly successful.*

**[20:23]** ---

All right!

**[20:27]** ---

It will be easier to work  
in this stomach now, won't it?

**[20:31]** ---

- It'll be the same.  
- Huh?

**[20:34]** ---

As long as this body doesn't change...

**[20:37]** ---

neither will our work environment.

**[20:41]** ---

It will always be a code black workplace.

**[20:49]** ---

Oh boy, am I wiped!

**[20:51]** ---

That was too much to take!  
A beast-class bacterium like that one!

**[20:56]** ---

Huh? Isn't that the rookie?

**[20:59]** ---

Hey! Good work!

**[21:05]** ---

Can't he hear us?

**[21:25]** ---

*I can't take your call right now.  
Please leave a message after the beep.*

**[21:31]** ---

*Hey! How long are you planning  
to skip work and laze around?*

**[21:35]** ---

ENUCLEATION CEREMONY

**[21:36]** ---

*We're super short-handed here!  
Get back here!*

**[21:39]** ---

*Hello? Hello? Are you there?*

**[21:40]** ---

I'm...

**[21:42]** ---

done.

**[21:43] ---**

*Hey, you can hear me, right?*

*I know you're there!*

**[21:45] ---**

I...

**[21:46] ---**

don't want to work anymore.

**[21:47] ---**

*Just get back here!*

**[21:49] ---**

*Hello? Hello?*

**[23:19] ---**

PREVIEW

**[23:20] ---**

A cell who can't work doesn't deserve to live.

**[23:23] ---**

DESPERATION

**[23:24] ---**

Due to a battle with an unknown pathogen,

**[23:25] ---**

GOUT

**[23:26] ---**

each area is showing signs of inflammation!

**[23:28] ---**

Do something about this work environment!

**[23:28] ---**

REBELLION

**[23:31] ---**

Open your eyes, dammit!

**[23:31] ---**

DESPERATION, GOUT, AND REBELLION

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