Microbe

Pathogen

Clostridium botulin (botulism)

When this species is in play you cannot play any food cards (salad, bread, milk, lasagna).
Resistance:

- Ampicillin
- Tetracycline

This microbe is responsible for botulism, a kind of food poisoning

-2

Microbe

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Resistance:

- Ampicillin
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This microbe is responsible for botulism, a kind of food poisoning

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Microbe

Pathogen

Clostridium dificile

When this species is in play you cannot play any "beneficial only" microbes (except using "Probiotics").
Resistance:

- Kanamycin
- Tetracycline

Antiobiotic-resistant C. dificile is an increasing problem in hospitals

-2

Microbe

Pathogen

Clostridium dificile

When this species is in play you cannot play any "beneficial only" microbes (except using "Probiotics").
Resistance:

- Kanamycin
- Tetracycline

Antiobiotic-resistant C. dificile is an increasing problem in hospitals

-2

Microbe

Pathogen

Yersinia pestis (plague)

Resistance:

- Kanamycin

This is the microbe responsible for bubonic plague

-2

Microbe

Pathogen

Yersinia pestis (plague)

Resistance:

- Kanamycin

This is the microbe responsible for bubonic plague

-2

Microbe

Pathogen

Salmonella enterica

Resistance:

- Ampicillin

A common source of food poisoning, often associated with poultry

-2

Microbe

Pathogen

Salmonella enterica

Resistance:

- Ampicillin

A common source of food poisoning, often associated with poultry

-2

Microbe

Pathogen

Mycobacterium leprae (leprosy)

Resistance:

- Tetracycline

Once a significant problem, leprosy is now treatable with antibiotics

-2

Microbe

Pathogen

Mycobacterium leprae (leprosy)

Resistance:

- Tetracycline

Once a significant problem, leprosy is now treatable with antibiotics

-2

Microbe

Opportunistic

Lactobacillus reuteri

Synthesizes vitamin B12 when in beneficial zone.
Not resistant

Humans are unable to synthesize this vitamin alone

V 2 -1

Microbe

Opportunistic

Lactobacillus reuteri

Synthesizes vitamin B12 when in beneficial zone.
Not resistant

Humans are unable to synthesize this vitamin alone

V 2 -1

Microbe

Opportunistic

Bifidobacterium longum

Synthesizes vitamin B1 (thiamine) when in beneficial zone.
Not resistant

Humans are unable to synthesize this vitamin alone

V 2 -1

Microbe

Opportunistic

Bifidobacterium longum

Synthesizes vitamin B1 (thiamine) when in beneficial zone.
Not resistant

Humans are unable to synthesize this vitamin alone

V 2 -1

Microbe

Opportunistic

Escherichia coli

Synthesizes vitamin K when in beneficial zone.
Not resistant

E. coli is normally an important part of your gut microbiome

V 2 -1

Microbe

Opportunistic

Escherichia coli

Synthesizes vitamin K when in beneficial zone.
Not resistant

E. coli is normally an important part of your gut microbiome

V 2 -1

Microbe

Opportunistic

Fusobacterium nucleatum

If less than 3 microbes in your beneficial zone at end of turn, becomes a pathogen. Returns at end of any turn you have 3+ microbes there.
Not resistant

Common in humans, but overrepresented in some health issues

1 -1

Microbe

Opportunistic

Fusobacterium nucleatum

If less than 3 microbes in your beneficial zone at end of turn, becomes a pathogen. Returns at end of any turn you have 3+ microbes there.
Not resistant

Common in humans, but overrepresented in some health issues

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Fusobacterium nucleatum

If less than 3 microbes in your beneficial zone at end of turn, becomes a pathogen. Returns at end of any turn you have 3+ microbes there.
Not resistant

Common in humans, but overrepresented in some health issues

1 -1

Microbe

Opportunistic

Lactobacillus rhamnosus

When this species is in your beneficial zone you can digest lactose and grains.
Not resistant

While generally considered safe (even used in probiotics), L. rhamnosus can also cause problems.

L/G 1 -2

Microbe

Opportunistic

Lactobacillus rhamnosus

When this species is in your beneficial zone you can digest lactose and grains.
Not resistant

While generally considered safe (even used in probiotics), L. rhamnosus can also cause problems.

L/G 1 -2

Microbe

Opportunistic

Prevotella melaninogenica

When this species is in your beneficial zone you can digest grains and plants.
Not resistant

P. melaninogenica lives in the mouth and can both help digest carbohydrates and lead to peridontal disease

G/P 1 -2

Microbe

Opportunistic

Prevotella melaninogenica

When this species is in your beneficial zone you can digest grains and plants.
Not resistant

P. melaninogenica lives in the mouth and can both help digest carbohydrates and lead to peridontal disease

G/P 1 -2

Microbe

Opportunistic

Treponema carateum

When this species is in your beneficial zone you can digest plants and lactose.
Not resistant

T. carateum has been known to cause human disease, but members of this genus may also be important in digesting fiber.

P/L 1 -2

Microbe

Opportunistic

Treponema carateum

When this species is in your beneficial zone you can digest plants and lactose.
Not resistant

T. carateum has been known to cause human disease, but members of this genus may also be important in digesting fiber.

P/L 1 -2

Microbe

Beneficial

Micavibrio aeruginosavorus

During your turn you may sacrifice this microbe to destroy a microbe in your pathogen zone.
Not resistant

M. aeruginosavorus is being studied as a living antibacterial

1

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Not resistant

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Microbe

Beneficial

Lactobacillus acidophilus

When this species is in play you can digest lactose.
Not resistant

This microbe is common in dairy products and probiotics

L **1**

Microbe

Beneficial

Lactobacillus acidophilus

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Beneficial

Lactobacillus acidophilus

When this species is in play you can digest lactose.
Not resistant

This microbe is common in dairy products and probiotics

L **1**

Microbe

Beneficial

Rothia mucilaginosa

When this species is in play you can digest grains.
Not resistant

R. mucilaginosa can degrade gluten in the human mouth but the importance of this is unknown

G **1**

Microbe

Beneficial

Rothia mucilaginosa

When this species is in play you can digest grains.
Not resistant

R. mucilaginosa can degrade gluten in the human mouth but the importance of this is unknown

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Microbe

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When this species is in play you can digest grains.
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Microbe

Beneficial

Rothia mucilaginosa

When this species is in play you can digest grains.
Not resistant

R. mucilaginosa can degrade gluten in the human mouth but the importance of this is unknown

G **1**

Microbe

Beneficial

Bacteroides ovatus

When this species is in play you can digest plants.
Not resistant

B. ovatus is found in most people and can help digest dietary fiber

P 1

Microbe

Beneficial

Bacteroides ovatus

When this species is in play you can digest plants.
Not resistant

B. ovatus is found in most people and can help digest dietary fiber

P 1

Microbe

Beneficial

Bacteroides ovatus

When this species is in play you can digest plants.
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B. ovatus is found in most people and can help digest dietary fiber

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Microbe

Beneficial

Bacteroides ovatus

When this species is in play you can digest plants.
Not resistant

B. ovatus is found in most people and can help digest dietary fiber

P 1

Event

Prebiotics

This card allows you to play an additional microbe this turn.

Prebiotics are non-digestable compounds that stimulate bacterial growth or activity

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Prebiotics are non-digestable compounds that stimulate bacterial growth or activity

Infection

Fungal Infection

If target player has less than three microbes in their beneficial zone they lose 2 health during each checkup. Discard when they have three or more microbes in their beneficial zone.

A healthy microbiome helps protect against fungal infections

-2

Infection

Fungal Infection

If target player has less than three microbes in their beneficial zone they lose 2 health during each checkup. Discard when they have three or more microbes in their beneficial zone.

A healthy microbiome helps protect against fungal infections

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Infection

Nosocomial Infection

Only playable on a player who has received antibiotics or a fecal transplant this game. Remove this card when a player gains health (not including checkups).

"Nosocomial infection" is the medical term for a hospital-aquired infection.

-4

Infection

Nosocomial Infection

Only playable on a player who has received antibiotics or a fecal transplant this game. Remove this card when a player gains health (not including checkups).

"Nosocomial infection" is the medical term for a hospital-aquired infection.

-4

Event

Salad

If you have the ability to digest plants, gain 1 health immediately for each microbe with that ability.

Feed those microbes

P 1

Event

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If you have the ability to digest plants, gain 1 health immediately for each microbe with that ability.

Feed those microbes

P 1

Event

Salad

If you have the ability to digest plants, gain 1 health immediately for each microbe with that ability.

Feed those microbes

P 1

Event

Bread

If you have the ability to digest grains, gain 1 health immediately for each microbe with that ability.

Not Wonder Bread

G 1

Event

Bread

If you have the ability to digest grains, gain 1 health immediately for each microbe with that ability.

Not Wonder Bread

G **1**

Event

Bread

If you have the ability to digest grains, gain 1 health immediately for each microbe with that ability.

Not Wonder Bread

G **1**

Event

Milk

If you have the ability to digest lactose, gain 1 health immediately for each microbe with that ability.

"Milk; it does a body good"

L **1**

Event

Milk

If you have the ability to digest lactose, gain 1 health immediately for each microbe with that ability.

"Milk; it does a body good"

L **1**

Event

Milk

If you have the ability to digest lactose, gain 1 health immediately for each microbe with that ability.

"Milk; it does a body good"

L **1**

Event

Lasagna

If you have the ability to digest plants, grains, and lactose, gain 4 health immediately.

Mmmmm. Lasagna.

P/G/L **4**

Event

Lasagna

If you have the ability to digest plants, grains, and lactose, gain 4 health immediately.

Mmmmm. Lasagna.

P/G/L **4**

Event

Fecal Transplant

This card removes all cards from your pathogen zone (regardless of resistance), you lose 3 health.

Seriously, these exist

-3

Event

Fecal Transplant

This card removes all cards from your pathogen zone (regardless of resistance), you lose 3 health.

Seriously, these exist

-3

Event

Vitamins

For each vitamin producing microbe in your beneficial zone, gain 1 health immediately.

Probably better in your gut than in a pill

V 1

Event

Vitamins

For each vitamin producing microbe in your beneficial zone, gain 1 health immediately.

Probably better in your gut than in a pill

V 1

Event

Vitamins

For each vitamin producing microbe in your beneficial zone, gain 1 health immediately.

Probably better in your gut than in a pill

V 1

Event

Homeopathy

Play this card for no effect whatsoever.

But hey, no side effects.

Event

Bacteriophage therapy

Destroy any one microbe in play.

Bacteriophages are viruses that attack only bacteria

Event

Bacteriophage therapy

Destroy any one microbe in play.

Bacteriophages are viruses that attack only bacteria

Event

Lateral gene transfer

Move any plasmid in play to another microbe within the same player.

Microbes love to share

Event

Lateral gene transfer

Move any plasmid in play to another microbe within the same player.

Microbes love to share

Event

Lateral gene transfer

Move any plasmid in play to another microbe within the same player.

Microbes love to share

Event

Probiotics

Draw cards from the deck and place the first non-pathogen Microbe in your beneficial area. Reshuffle deck afterwards. Does not count as playing a microbe this turn.

Probiotics are defined as microbes that have a putative health benefit when ingested

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Probiotics are defined as microbes that have a putative health benefit when ingested

Plasmid

Tetracycline resistance plasmid

Gives any single microbe resistance to Tetracycline.

A plasmid is a small circular piece of DNA containing genetic information

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Plasmid

Kanamycin resistance plasmid

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Ampicillin resistance plasmid

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Event

Change in health

Move any opportunistic microbe from beneficial to pathogen, or vice versa.

Changes in your health or the composition of your microbe can cause some species to run amok

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Change in health

Move any opportunistic microbe from beneficial to pathogen, or vice versa.

Changes in your health or the composition of your microbe can cause some species to run amok

Event

Antibiotic: Tetracycline

Target player may remove up to 2 non-tetracycline resistant microbes from their pathogen zone, and loses half of the non-tetracycline resistant microbes in their beneficial zone (rounded down) and 1 health. See "Plasmid" rules.

Once widely-used, resistance is now common

-1

Event

Antibiotic: Tetracycline

Target player may remove up to 2 non-tetracycline resistant microbes from their pathogen zone, and loses half of the non-tetracycline resistant microbes in their beneficial zone (rounded down) and 1 health. See "Plasmid" rules.

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Once widely-used, resistance is now common

-1

Event

Antibiotic: Kanamycin

Target player may remove up to 2 non-kanamycin resistant microbes from their pathogen zone, and loses half of the non-kanamycin resistant microbes in their beneficial zone (rounded down) and 1 health. See "Plasmid" rules.

Produced by Streptomyces kanamyceticus

-1

Event

Antibiotic: Kanamycin

Target player may remove up to 2 non-kanamycin resistant microbes from their pathogen zone, and loses half of the non-kanamycin resistant microbes in their beneficial zone (rounded down) and 1 health. See "Plasmid" rules.

Produced by Streptomyces kanamyceticus

-1

Event

Antibiotic: Kanamycin

Target player may remove up to 2 non-kanamycin resistant microbes from their pathogen zone, and loses half of the non-kanamycin resistant microbes in their beneficial zone (rounded down) and 1 health. See "Plasmid" rules.

Produced by Streptomyces kanamyceticus

-1

Event

Antibiotic: Ampicillin

Target player may remove up to 2 non-ampicillin resistant microbes from their pathogen zone, and loses half of the non-ampicillin resistant microbes in their beneficial zone (rounded down) and 1 health. See "Plasmid" rules.

From the penicillin family

-1

Event

Antibiotic: Ampicillin

Target player may remove up to 2 non-ampicillin resistant microbes from their pathogen zone, and loses half of the non-ampicillin resistant microbes in their beneficial zone (rounded down) and 1 health. See "Plasmid" rules.

From the penicillin family

-1

Event

Antibiotic: Ampicillin

Target player may remove up to 2 non-ampicillin resistant microbes from their pathogen zone, and loses half of the non-ampicillin resistant microbes in their beneficial zone (rounded down) and 1 health. See "Plasmid" rules.

From the penicillin family

-1

Event

Microbial Diversity

If you have at least 4 microbes in your beneficial zone, remove a microbe from your pathogen zone.

There appears to be a correlation between diversity of microbiota and health

Event

Microbial Diversity

If you have at least 4 microbes in your beneficial zone, remove a microbe from your pathogen zone.

There appears to be a correlation between diversity of microbiota and health

Event

Go to work sick

You lose 2 health and give a microbe from your pathogen zone to target player.

Stay home!

-2

Event

Go to work sick

You lose 2 health and give a microbe from your pathogen zone to target player.

Stay home!

-2

Event

Airplane trip

Each player passes one microbe in play to the player on their left (if that microbe is opportunistic, it moves to the same type of zone on the target player).

Sharing is caring

Event

Airplane trip

Each player passes one microbe in play to the player on their left (if that microbe is opportunistic, it moves to the same type of zone on the target player).

Sharing is caring

Event

Bus trip

Each player passes one microbe in play to the player on their right (if that microbe is opportunistic, it moves to the same type of zone on the target player).

Sharing is caring

Event

Bus trip

Each player passes one microbe in play to the player on their right (if that microbe is opportunistic, it moves to the same type of zone on the target player).

Sharing is caring

Event

Raid the pharmacy

Search the deck for any antibiotic of your choice (tetracycline, kanamycin, or ampicillin). Show to all players. Shuffle the deck afterwards.

We're not suggesting you do this

Event

Raid the pharmacy

Search the deck for any antibiotic of your choice (tetracycline, kanamycin, or ampicillin). Show to all players. Shuffle the deck afterwards.

We're not suggesting you do this

Checkup

Checkup

Every player scores their microbiome. Positive health for cards in the beneficial zone and negative health for cards in the pathogen zone. Health gain/loss indicated in the green/red circles.

Got a healthy microbiome?

Checkup

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