

The Consequence

by Capella Partnered with CARD



WHAT'S COVERED

This lesson will explore the consequence by defining and discussing the following:

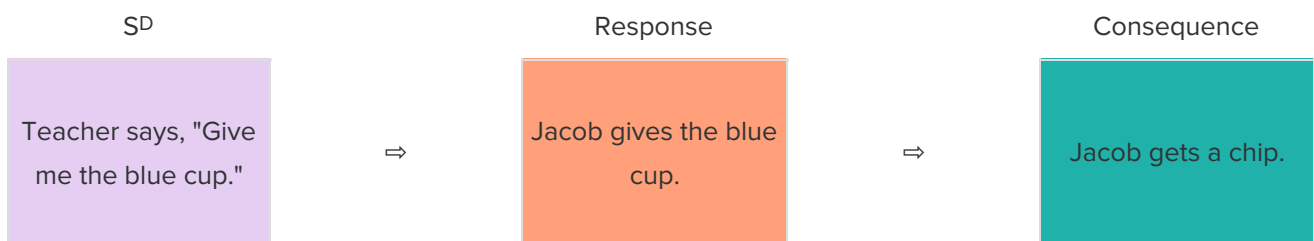
1. Consequences
2. Reinforcement
 - a. Positive Reinforcement
 - b. Negative Reinforcement
 - c. Types of Reinforcers
 - d. Frequency of Reinforcement
3. Error Correction
 - a. Informational No Procedure
 - b. Head-Down Procedure

1. Consequences

The **consequence** is the third and final part of the three-term contingency. It is defined as the outcome that occurs immediately following the patient's response.

The consequence determines if the behavior will increase or decrease over time. The type of consequence depends on the type of response that occurs.

EXAMPLE



The **SD**, or antecedent, is the teacher saying, "Give me the blue cup." The response is the patient, Jacob, giving the teacher the blue cup. The consequence is Jacob receiving a chip.

During discrete trial training (DTT), there are two possible consequences that can follow a response:

1. Reinforcement
2. Error correction procedure

The following portions of the training will look at each of these in much more detail.



TERM TO KNOW

Consequence

The outcome that occurs immediately following the patient's response

2. Reinforcement

As previously discussed, **reinforcement** is a type of consequence that happens after the behavior has occurred. It is defined as an immediate presentation of a desired stimulus or removal of an aversive stimulus that increases the future frequency of a response. It is something that occurs after a behavior that makes that behavior more likely to occur in the future.

It can involve receiving something (positive reinforcement) or having something non-preferred taken away (negative reinforcement).



HINT

Note that positive and negative are not good and bad in behavior analysis; rather, they are about adding or taking something away.

Reinforcement is used when a patient engages in a correct response, and it should be presented immediately following correct responses. The stimulus presented or removed is called the reinforcer (abbreviated as S_I).

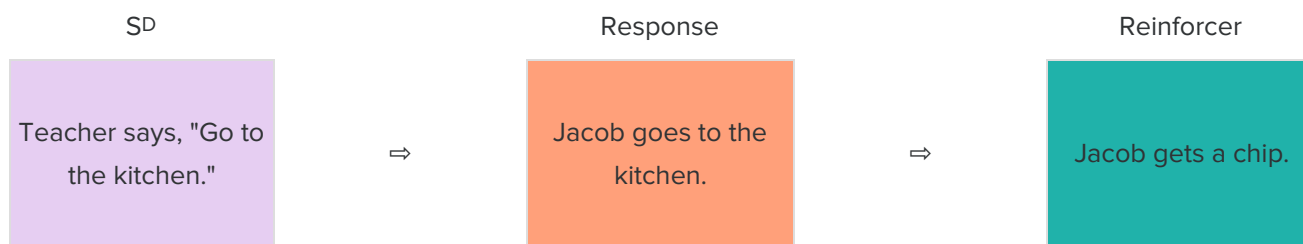


BIG IDEA

Reinforcement is the key to teaching new skills.



EXAMPLE

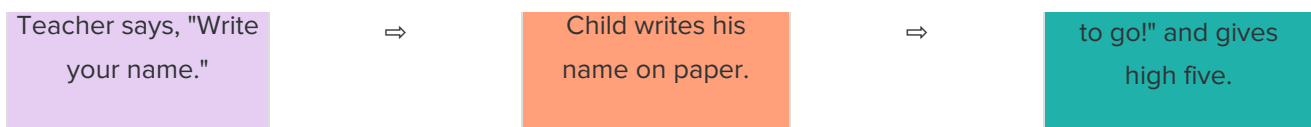


In this case, we are presenting a stimulus, the chips, to teach Jacob to go to the kitchen when someone says, "Go to the kitchen." We tend to repeat responses that either produce good things or eliminate bad things, so Jacob is more likely to go to the kitchen when he wants chips in the future.



EXAMPLE





In this case, we are presenting the \mathcal{SD} , “Write your name,” to teach the patient to write their name on their paper. They get a high five and verbal praise (“Way to go!”) when they correctly write their name on the paper. They are more likely to write their name on their paper when given this direction in the future.

TERM TO KNOW

Reinforcement

Immediate presentation of a desired stimulus or removal of an aversive stimulus that increases the future frequency of a response

2a. Positive Reinforcement

Positive reinforcement occurs when the patient is given something when the behavior occurs.

🔗 **EXAMPLE** Receiving a paycheck for coming to work.

Video Transcription

All right, you ready?

Match.

1, 2, 3, 4, 5, 6, 7. Seven. Whoo! Way to go!

Nice job.

What is it?

Pants.

Pants. Very good. Here you go.

Here you go.

Here you go.

[MUSIC PLAYING]

Touch nose. Ohh! Oh my goodness! That as super.

[CLAPPING]

That was a good job.



THINK ABOUT IT

Think of a time you were given positive reinforcement.



TERM TO KNOW

Positive Reinforcement

Occurs when the patient is given something when the behavior occurs

2b. Negative Reinforcement

Negative reinforcement occurs when the patient has something that is taken away when the behavior occurs. This usually consists of something undesirable, such as chores, homework, an uncomfortable situation, non-preferred food, etc.



EXAMPLE The patient is told that if they complete five of the eight math problems, they do not have to do the remaining three.

Video Transcription

Om, nom, nom!

[CRYING]

OK.

Yeah.

Do you not want it?

Jump around and say, "I don't want banana."

Buh-banana?

OK. Tell me what you want, then.



THINK ABOUT IT

Think of a time that you were given negative reinforcement.



TERM TO KNOW

Negative Reinforcement

Occurs when the patient has something that is taken away when the behavior occurs

2c. Types of Reinforcers

There are two types of reinforcers: primary and secondary reinforcers.

Reinforcer	Example	Description
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Primary	food drink	Also called unlearned or unconditioned, primary reinforcers, are things that reinforce our behavior from birth. They are typically the most powerful reinforcers. They do not have to be learned, thus they are considered unconditioned reinforcers.
Secondary	social praise money toys tokens a break	Also called learned or conditioned, secondary reinforcers are things that become reinforcers because they have been paired with other reinforcers. These are things that may function as reinforcers for a patient (preferences are going to differ for every individual).



THINK ABOUT IT

What are some of your own reinforcers?

Many things influence the effectiveness of a reinforcer including the condition of the patient's motivation.



THINK ABOUT IT

Can you recall something you learned earlier that alters the effectiveness of a reinforcer? Do you recall learning about motivating operations (MO)?

Deprivation from a reinforcer can increase reinforcer effectiveness.

EO	Reinforcer (Sr)	Reinforcer (Sr) Effectiveness
Patient hasn't eaten for a while.	Food	Is Increased.
Patient hasn't had anything to drink for a while.	Juice	Is Increased.
Patient hasn't played with favorite toy for a while	Favorite Toy	Is Increased.

Satiation of a reinforcer can decrease that reinforcer's effectiveness.

AO	Reinforcer (Sr)	Reinforcer (Sr) Effectiveness
Child just ate lunch.	Food	Is Decreased.
Child just drank a glass of juice.	Juice	Is Decreased.
Child just played with a ball.	Favorite Toy	Is Decreased.

In addition, the patient's current motivation can influence the effectiveness of a reinforcer.



THINK ABOUT IT

If your patient skipped out on breakfast, what do you think their current motivation will be?

As a behavior technician, you will need to be sensitive to MOs that may decrease the effectiveness of the reinforcers or consequences you use. Specifically, if you think your patient may be satiated with respect to a particular reinforcer, you will want to use a different reinforcer.

Video Transcription

--going to do? Which one are you going to do?

Oh, Mama.

Which one are you going to do? [INAUDIBLE]

Look at, Mommy.

OK listen, she'll be right back, but I got a surprise for you. You want to see it?

Yeah.

OK, come here. I'll show you. I'm going to show you. We've got something cool to play with. Do you know what this is?

Yeah.

It's squishy.

Squishy!

Yeah. Do you want to play with it?

Yeah

OK. [INAUDIBLE]

Also, consider the difficulty and amount of the task versus the amount of reinforcement.



THINK ABOUT IT

Which is more motivating? Answering one question and earning one gummy bear or writing a whole paper for 30 minutes and earning a two-minute break.

Video Transcription

We're watching. Happy Feet right now. And it has helped us in his feeding as per a suggestion.

Uh-oh.

We stop it and make it fun for him to take his next bite.

Take a bite.

[LAUGHS]

Take a bite.

[LAUGHS]

Yay!

[MOVIE PLAYING]

Not only did he feed himself his applesauce and laughed the whole time he fed himself six or eight bites of soup, which he's never done. He's done that two meals in a row, so looking forward to today.

[MOVIE PLAYING]

Finally, consider how freely the the patient has access to that reinforcement at other times. If the patient has unlimited time with the iPad outside of the session, will this still be motivating for them to “work for”?

2d. Frequency of Reinforcement

So, how often do you provide the reinforcer? There are two reinforcement schedules you will use:

- continuous reinforcement
- intermittent reinforcement

Continuous reinforcement is used when teaching new target responses and occurs after every correct response.

Video Transcription

OK. Give me the pizza.

Oh my goodness! You did such a good job!

[BLOWS RASPBERRIES]

[LAUGHTER]

[BLOWS RASPBERRIES]

Intermittent reinforcement is used to maintain behaviors previously learned or “mastered” (also known as “on maintenance”) and occurs after every two, three, four, five, etc. correct responses or after an average number of responses

Video Transcription

OK, look. Let's look at the cars. What color do you want do you want to play with?

Orange.

OK. I have a game. You want to play it?

Yeah.

OK, jump down. You want help?

No.

All right, you got it. Come over here. It's a fun game. Watch.

Let's see, can you put the orange under the chair? Ooooh. You got it. Nice job.

I got another one, look. Can you put it on top of the chair?

Yes.

Yay! Give me five. Give me five. Give me five. Oop, too slow. Give me five. Oop, too slow. Give me five. Oop, too slow. Give me five. Yes! You got it.

OK, can you put it behind the chair?

Yeah. Wyatt, good job!

Where is it?

It's behind. See, behind. You want to give me five again?

Yeah.

You think you're fast enough? Nope, too slow. Give me five. Nope, too slow. Ah! You got it. Good job.

Can you put it in front of-- wait, let's wait. One more. Can you put it in front of the chair?

Yeah.

Front. Let's try it again. Get the car. Can you put it in front of the chair?

Front!

Oh, so smart. Here it comes.

[MAKES BUZZING SOUND]

[SPEAKS INCOHERENTLY]

Oh, here you go. Thanks!



HINT

The BCBA for each patient you work with will tell you how frequently to provide reinforcement.

Typically, you will move from primary to secondary reinforcers. This means, for instance, moving away from food reinforcers to toy and activity reinforcers. Your BCBAs will tell you what kinds of reinforcers to use with each of your patients.

You will also typically move to natural reinforcers. Outside of the therapy environment, people don't usually give children candy or crackers or start blowing bubbles when they say "Hi" to another child, answer another child's questions, or join a conversation.

When we initially teach skills like greeting another child or responding to another child, we might use primary reinforcers such as food, or secondary reinforcers such as a favorite toy. However, our patients will only continue to greet peers or answer peers without behavior technicians present if we are able to transfer to more natural reinforcers.



EXAMPLE An example of a natural reinforcer for our patient saying "Hi" to a peer would be the peer saying "Hi" back.



HINT

Your BCBA will instruct you on how and when to move to more natural reinforcers with your individual patients.

And, as we just discussed, we also move from continuous reinforcement, or reinforcement following every attempted or correct response, to intermittent reinforcement.

3. Error Correction

Mistakes happen and that is ok! We do not always get things right the first or even the second time. However, we want to have a plan in place for how we will respond if and when those errors happen.



THINK ABOUT IT

Think of a time when it took you several tries to learn something, such as riding a bike, playing an instrument, or learning a new language.

Error correction, a procedure following an incorrect or non-response, focuses on decreasing errors in the future. Incorrect responses and no response should be treated the same: they should result in an error correction procedure.

There are two primary choices for error correction procedures, both of which are popular and both of which work well: informational no procedure and head-down procedure.



TERM TO KNOW

Error Correction

A procedure following an incorrect or non-response

3a. Informational No Procedure

The informational no procedure involves telling the patient that they made an incorrect response. This can consist of saying “No,” “Not quite,” “Nope,” “Uh-uh,” or the like.

The procedure is called “informational no” because you are merely trying to make it clear to the patient that they made an incorrect response. It is for feedback, not punishment, so a neutral tone should be used, not a negative or harsh one. The no response should not be aversive or patronizing; it should simply be informative.



While the informational no is presented neutrally and is not intended to be aversive, some ABA providers discourage providing the verbal feedback of “no” for incorrect responses. They may choose to use other phrases such as “not quite” or “almost.” As a best practice, you should always implement programs and procedures as outlined by your BCBA or supervisor.

➞ **EXAMPLE** The behavior technician is working with the patient, Zachariah, to learn to touch his nose.

A: Behavior technician says, “Touch your nose.”

B: Zachariah points to the behavior technician.

C: Behavior technician says “No” and repeats the \mathfrak{P} , “Touch your nose.”

Video Transcription

[CLEARS THROAT] Look. Red.

Yep.

No. Let's try it. Sit criss-cross. You got to look, OK? Red. There it is. Super job.

3b. Head-Down Procedure

Another choice for the error correction procedure is the head-down procedure. The head-down procedure consists of the behavior technician responding to the patient’s error by briefly looking away in a clear and noticeable way. The behavior technician could look at their lap, turn their head to the side, or look down onto a table.

➞ **EXAMPLE** The behavior technician is teaching the patient, Sasha, to touch the picture of a dog.

A: The behavior technician says, “Point to the dog.”

B: Sasha touches the picture of the cat.

C: The behavior technician looks away for a few seconds then repeats the \mathfrak{P} , “Point to the dog.”

Very little research has compared the informational no correction procedure to the head-down procedure. Different individuals and organizations have strongly held beliefs about which is better.

The head-down procedure may make it more difficult for the patients to determine when they have made an error. However, the informational no procedure may evoke more challenging behavior, especially for patients who find the word “no” aversive.



HINT

Defer to your BCBA about which of these error correction procedures (or others) you should use.

We will discuss additional prompting procedures in future units.



SUMMARY

In this lesson, you learned about the third and final part of the three-term contingency, **consequences**, which are the outcomes that occur immediately following the patient's response. You also learned that **reinforcement** is a type of consequence that happens after the behavior has occurred; it is an immediate presentation of a desired stimulus or removal of an aversive stimulus that increases the future frequency of a response. Reinforcement can involve receiving something (**positive reinforcement**) or having something non-preferred taken away (**negative reinforcement**). You learned that there are two **types of reinforcers**: primary (also called unlearned, or unconditioned) and secondary (also called learned, or conditioned). Regarding **frequency of reinforcement**, you discussed two reinforcement schedules that you will use: continuous reinforcement and intermittent reinforcement. Lastly, you learned about **error correction**, a procedure following an incorrect or non-response that focuses on decreasing errors in the future. There are two primary choices for error correction procedures, **informational no procedure** and **head-down procedure**.



TERMS TO KNOW

Consequence

The outcome that occurs immediately following the patient's response

Error Correction

A procedure following an incorrect or non-response

Negative Reinforcement

Occurs when the patient has something that is taken away when the behavior occurs

Positive Reinforcement

Occurs when the patient is given something when the behavior occurs

Reinforcement

Immediate presentation of a desired stimulus or removal of an aversive stimulus that increases the future frequency of a response