Consequence Interventions

by Capella Partnered with CARD

WHAT'S COVERED

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

1. Extinction
   a. Extinction for Attention Function
   b. Extinction for Tangible Function
   c. Extinction for Escape Function
   d. Extinction for Automatic Function
2. Differential Reinforcement Procedures
   a. DRO
   b. DRA
   c. DRI
3. Redirection
4. Time Out
5. Response Cost
6. Overcorrection
7. Consequence Interventions Plan Sample

BEFORE YOU START

This section includes punishment procedures; however, reinforcement procedures should always be used FIRST. A BCBA may deem it necessary to incorporate punishment procedures based on the overall severity and continuation of challenging behavior, but these instances should be the exception to the rule, and always be implemented in conjunction with reinforcement procedures. Because of this, you may be asked to implement punishment procedures as a behavior technician.

1. Extinction

Extinction is denial of the reinforcer for a previously reinforced behavior. Once the behavior no longer leads to the maintaining reinforcement, the patient will decrease future frequency of that behavior.

Extinction can be used for every function of behavior. It looks different depending on the function. This will be identified in the BIP.

Let's explore what extinction looks like for different functions of behavior.

TERM TO KNOW

Extinction
No longer giving the reinforcer for a previously reinforced behavior

1a. Extinction for Attention Function

If your BCBA has determined that the problem behavior is maintained by attention, they might ask you to implement a form of extinction called attention extinction. This is withholding attention (positive and/or negative) that has been previously given as a result of the behavior.
Attention extinction procedure includes the following:

- No longer provide attention for problem behavior (ignore ONLY the problem behavior).
- Essentially continue to do what you were doing prior to the inappropriate behavior.
- Do not provide eye contact or interact vocally with the patient.
- Do not provide redirection that involves providing attention.
- Do not talk about the patient's behavior in front of them to another person.

EXAMPLE

The Wrong Way (Reinforcement)				
A		B		C
Behavior technician is not paying attention to Adam.	⇨	Adam screams.	⇨	Behavior technician tells Adam to be quiet.

The Right Way (Extinction)				
A		B		C
Behavior technician is not paying attention to Adam.	⇨	Adam screams.	⇨	Behavior technician still does not pay attention to Adam.

In the wrong way example, the behavior technician is still giving attention to Adam when he tells him to be quiet.

In the right way example, the behavior technician does not deliver the reinforcer (attention). Of course, we would also combine this with an intervention to teach Adam how to appropriately gain attention, such as asking the behavior technician to play with him.

HINT

Remember, no longer deliver the reinforcer (attention) for a previously reinforced behavior. This decreases

the future frequency of the behavior.

Video Transcription

What cartoons do you watch?

We'll work on this.

We're working for this, remember? We need to pay attention. Pay attention.

Ow!

So ask Hugh again. I don't think he heard you.

1b. Extinction for Tangible Function

If your BCBA has determined that the problem behavior is maintained by access to tangibles, they might ask you to implement tangible extinction. This involves withholding access to a desired item or activity that had previously been given as a consequence of the behavior.
Tangible extinction procedure entails no longer providing access to the tangible item or activity the patient is attempting to obtain by engaging in problem behavior.

EXAMPLE

The Wrong Way (Reinforcement)

A		B		C
Steven is given a piece of a cracker.	⇨	Steven cries.	⇨	Steven gets whole cracker.

The Right Way (Extinction)

A		B		C
Steven is given a piece of a cracker.	⇨	Steven cries.	⇨	Steven has a piece of a cracker.

In the wrong way example, Steven is given the whole cracker (reinforcer).

In the right way example, Steven does not receive the whole cracker (reinforcer not delivered). We would also combine this with an intervention to teach Steven how to appropriately ask for a cracker, for example, using his PECS cards.

HINT

Remember, no longer deliver the reinforcer (cracker) for a previously reinforced behavior. This decreases the future frequency of the behavior.

1c. Extinction for Escape Function

If your BCBA has determined that the problem behavior is maintained by escape from demands, they might ask you to use a form of extinction called escape extinction. This procedure prevents the patient from escaping or delaying a task as a result of the behavior.
From a procedural standpoint, escape extinction is the continued presentation of a demand when the problem behavior occurs. It involves no longer allowing the patient to escape or "get out of" complying with demands contingent on problem behavior. Essentially, the patient is learning that engaging in inappropriate behavior doesn't get them out of non-preferred tasks or situations.

EXAMPLE

The Wrong Way (Reinforcement)

A		B		C
Yulia is given a math worksheet.	⇨	Yulia tears up her math worksheet.	⇨	Yulia does not have to do her math worksheet.

The Right Way (Extinction)

A		B		C
Yulia is given a math worksheet.	⇨	Yulia tears up her math worksheet.	⇨	Another math sheet is presented.

In the wrong way example, Yulia is allowed to escape from doing the math worksheet (reinforcer).

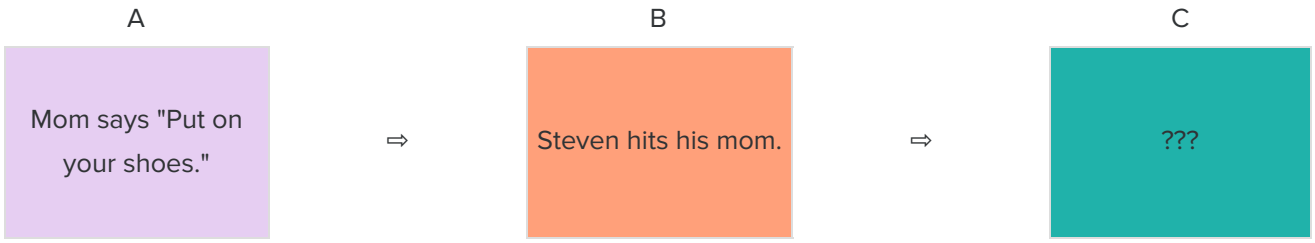
In the right way example, Yulia is not allowed to escape doing the math worksheet (reinforcer not delivered). We would also combine this with an intervention to teach Yulia how to ask for a break from or help with completing the task, possibly using a break or help card.

HINT

Remember, no longer deliver the reinforcer (removing the math worksheet) for a previously reinforced behavior. This decreases the future frequency of the behavior.

THINK ABOUT IT

Fill in the consequence to make this an example of extinction.



One example is the caregiver could ignore the hitting and persist in having Steven put on his shoes.

1d. Extinction for Automatic Function

If your BCBA has determined that the problem behavior is maintained by automatic reinforcement, they might ask you to use a form of extinction called automatic or sensory extinction. Also known as response blocking, this procedure involves physically blocking or interrupting the behavior when it happens.
This should only be used when instructed by the BCBA and using the least amount of physical contact as possible. We should never block the patient's body parts or senses (hold their arms, cover their ears or eyes, etc.).

Response blocking can also be identified as a positive punishment procedure if not withholding the functional reinforcer; the BCBA should carefully consider the risks and benefits of this procedure and closely monitor its implementation. Sensory extinction only occurs if the patient can engage in the behavior without contacting the sensory stimulation.

Automatic extinction procedure involves blocking the source of automatic reinforcement hypothesized to be maintaining the problem behavior. A more common term you might see in the BIP is response blocking.

Depending on the patient's problem behavior, response blocking could involve requiring the patient to wear a helmet, gloves, or other device. It could also involve physically blocking the patient from engaging in the response (e.g., blocking a patient from mouthing objects).

HINT

Mouthing is a term used to describe exploring objects with mouth, lips, or tongue.

It is important to note that we never completely block a patient from being able to move or sense something.

> EXAMPLE Elan flips the light switch in the living room on and off for visual stimulation. This has created problems because the change in lighting causes severe migraines for his caregiver. The BCBA implements sensory extinction by removing the light bulb in the living room. Elan switches the light on and off, but there is no change in the environment, so he stops playing with the light switch in the living room. Of course, Elan is taught that he can switch the lights on and off in a different room during specific times when he requests "lights."

When beginning to implement extinction, we may see an**extinction burst**, which is an initial increase in the frequency or intensity of the behavior.

> EXAMPLE In the past, people gave Trent tangible reinforcers such as candy when he cried. When the behavior technician and caregivers begin to implement extinction, initially, Trent cries louder and begins to throw tantrums, falling on the floor and kicking. Nevertheless, if they continue to consistently use extinction, Trent will stop crying in these kinds of situations.

THINK ABOUT IT

It's noted that your patient whines in an attempt to receive attention. While on a break, your patient starts to whine. Your BCBA has instructed you to put this on extinction. Describe how you would do this.

In this case, you could not do anything or continue doing whatever it was that you were doing before he started to whine. Do not provide attention (reinforcer) for the whining behavior.

THINK ABOUT IT

It's noted that your patient whines when asked to do tasks he doesn't want to do. While teaching your patient to pull up his pants, he begins whining. Your BCBA has instructed you to put this behavior on extinction. Describe how you would do this.

In this instance, you could continue teaching him to pull on his pants as if the whining hadn't happened or continue doing whatever it was you were doing before he started to whine. Do not provide escape (reinforcer) for the whining behavior.

After extinction has occurred, we may see a**spontaneous recovery**, which is when a behavior reappears after it was successfully placed on extinction.

> EXAMPLE Jan used to throw items to gain attention from his caregiver. Extinction was implemented and Jan no longer threw items to get attention. A few months passed and when Jan's caregiver was on the phone, Jan began throwing items. If Jan's caregiver continues to place throwing on extinction, the throwing will stop occurring in these types of situations.

BIG IDEA

Extinction procedures must always be implemented in conjunction with reinforcement procedures. In other words, we must teach the individual what to do instead of the challenging behavior in order to attain the type of reinforcement they are seeking. This next section will review some of those interventions.

TERMS TO KNOW

Extinction Burst
An initial increase in the frequency or intensity of the behavior

Spontaneous Recovery
The reappearance of a behavior after it was successfully placed on extinction

2. Differential Reinforcement Procedures

Differential reinforcement provides different levels of reinforcement for different behaviors. Reinforce desired behavior and do not reinforce (place on extinction) undesired behavior. Behaviors that receive reinforcement will increase and behaviors that receive no reinforcement will decrease.

There are three types of differential reinforcement that we will cover in this challenge:

- DRO: Differential reinforcement of other behavior

- DRA: Differential reinforcement of alternative behavior
- DRI: Differential reinforcement of incompatible behavior

TERM TO KNOW

Differential Reinforcement
Provides different levels of reinforcement for different behaviors

2a. DRO

Differential reinforcement of other behavior (DRO) refers to presenting a reinforcer contingent on the absence of a problem behavior for a specified period of time.
The BIP will specify the time interval that the patient has to go without engaging in the problem behavior to receive a reinforcer. At the end of the time interval, the reinforcer is delivered for any other behavior occurring besides the problem behavior.

An interval of time is selected that is reasonable for the patient to refrain from the behavior. If the challenging behavior occurs, reinforcement is not given at the end of the interval:

- Resetting DRO: The time interval immediately restarts on occurrence of the problem behavior.
- Non-resetting DRO: The time interval continues, and at the end of the time period, the interval restarts.

Either of these items will be specified in the BIP.

EXAMPLE A patient who engages in object mouthing could be on a DRO. The BCBA may say if the patient goes five minutes without mouthing an object, the patient should get access to a reinforcer, such as iPad time.

EXAMPLE if a behavior occurs every fifteen minutes, the DRO interval would be set for every ten minutes. If the patient engaged in the challenging behavior (hitting) during the ten-minute interval, they would not receive the reinforcer (candy) at the end.

Video Transcription

You're doing so good.

Nice hands!

You sure did, Max. Would you like a Chex? Awesome. Nice job. Now get one Chex. One chex. Nice job. Is it good?

He got two.

TERM TO KNOW

Differential Reinforcement of Other Behavior (DRO)
Presenting a reinforcer contingent on the absence of a problem behavior for a specified period of time

2b. DRA

Differential reinforcement of an alternative behavior (DRA) refers to when appropriate functionally alternative behaviors are reinforced, while problem behaviors are extinguished.

HINT

This can be used for any function of behavior.

It is best when the new appropriate response produces the same reinforcing outcome that the old inappropriate response produced. Sometimes the replacement behavior is a form of communication (this is called Functional Communication Training) that involves essentially asking for the reinforcer (attention, a toy, a break, etc.).

The BIP will specify the alternative, replacement behavior that you should reinforce.

> EXAMPLE Screaming and crying does not receive reinforcement. Asking for a break does receive reinforcement.

What do you do if the patient engages in the alternative response or communicates appropriately with the FCT response, but engages in problem behavior at the same time?

You should ignore the alternative or communicative response at this time, and wait until the patient engages in the desired response without engaging in problem behavior. If this is happening often, your BCBA may choose to use the last differential reinforcement procedure that will be discussed (DRI).

> EXAMPLE

Problem Behavior (Extension of Undesired Behavior)				
A		B		C
Steven has no crackers and no peanut butter.	⇨	Steven whines and cries.	⇨	Steven has no crackers and no peanut butter.

Functional Communication (Reinforcement of Desired Behavior)				
A		B		C
Steven has no crackers and no peanut butter.	⇨	Steven says "I want peanut butter."	⇨	Steven gets crackers and peanut butter.

In this example, our patient, Steven, is sitting at the table. His behavior technician has removed crackers and peanut butter from snack time.

- *Problem Behavior:* In this path, Steven begins to whine and cry and says "I want a cracker." Steven's behavior technician does not give him crackers and continues doing what they were doing before he started whining.

- *Functional Communication:* In this path, Steven says, “I want peanut butter” nicely, without whining or crying. The behavior technician then reinforces this appropriate alternative to whining.

Video Transcription

Om, nom. Nom, nom. Nom.

[CRYING]

OK.

Yeah?

Yeah, yeah!

Do you not want it? Nom nom?

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

No banana.

OK. Tell me what you want, then.

TERM TO KNOW

Differential Reinforcement of an Alternative Behavior (DRA)
Reinforcing appropriate functionally alternative behaviors, while extinguishing problem behaviors

2c. DRI

Differential reinforcement of incompatible behavior (DRI) is when the patient receives reinforcement for engaging in an appropriate behavior that makes it physically impossible to perform the problem behavior.

HINT

This is similar to a DRA, but the behavior is not functionally equivalent.

In this case, you reinforce a behavior that makes it physically impossible for the inappropriate behavior to occur at the same time. The alternative behavior is incompatible with the problem behavior.

> EXAMPLE An incompatible, alternative behavior for a patient who engages in hand mouthing is folded hands.

Using a DRI procedure, the incompatible behavior specified in the BIP should be reinforced using the reinforcement schedule specified in the BIP.

> EXAMPLE Suppose a problem behavior is a patient grinding their teeth. A behavior that they cannot do at the same time (incompatible) is using a chew tube. So the patient is taught to use a chew tube.

Video Transcription

Thanks for standing up. You've got to look at the paper.

Note, in the DRA example, it was possible to say “I want cracker” and whine simultaneously. Thus, the two behaviors were not incompatible. However, if the patient’s problem behavior had been hitting to get crackers and the alternative behavior had been signing “cracker” to get a cracker, this would have been an example of DRI in that both hitting and signing cannot occur simultaneously. They are said to be “incompatible” with one another.

In addition, this example involves the use of an appropriate alternative response that involves communicating that the patient wants the reinforcer. Thus, this incompatible behavior is also an example of Functional Communication Training (FCT).

IN CONTEXT

Suppose your patient has a tantrum when he can’t snap his pants after going to the bathroom. Your BCBA has instructed you to use FCT, a form of DRA, to teach Tommy to say, “Help me.” That is, when he is putting his pants on, you’ll prompt Tommy to say, “Help me” before he begins to have a tantrum.

What you will do if he does start to have a tantrum? What is this called?

You might wait for him to stop his tantrum and then prompt him to say, "Help me."

Keep in mind that it is not correct to prompt Tommy to say, “Help me,” while Tommy is having a tantrum. This is incorrect because if you help him during the tantrum, you are not putting the tantrum on extinction. And, though you are teaching an appropriate alternative response (asking for help), you are still reinforcing the whining by offering him help.

Results show that when an appropriate alternative behavior is taught but the inappropriate behavior is still reinforced, the patient learns the new appropriate response but also continues to use the old, inappropriate response.

Therefore, the correct thing to do in this case is called extinction.

Differential reinforcement can also intersect with token economies. Deliver tokens contingent on the target behavior and exchange tokens for the backup reinforcer:

- Number of tokens is determined by the BCBA.
- Tokens teach the patient the concept of delayed gratification.
- They are used in conjunction with differential reinforcement procedures.

TERM TO KNOW

Differential Reinforcement of Incompatible Behavior (DRI)
Giving the patient reinforcement for engaging in an appropriate behavior that makes it physically impossible to perform the problem behavior

3. Redirection

When the target behavior occurs, the BCBA may instruct the behavior technician to redirect the patient to engage in a more appropriate behavior. This can occur by providing an instruction in a neutral tone and physically prompting the patient to transition to the appropriate behavior or activity. This is often combined with response blocking or response interruption.

EXAMPLE Alec sometimes engages in tantrum behavior when he sees a tablet or cellphone. As the behavior technician transitions to the playground, Alec sees a peer playing on a tablet and begins to have a tantrum. The behavior technician redirects Alec to put his shoes on by instructing him to “Put shoes on” and pointing towards his shoes. When Alec’s shoes are on, they continue outside.

Video Transcription

All done. We'll watch him later, OK? We'll watch him later. We'll watch him later.

[INAUDIBLE]

No, we'll watch it later.

Computer! [CRYING]

We have to-- Jack, settle down. Settle down. We'll watch computer later.

It's not going anywhere.

[CRYING]

Hey, should we go jump on the bed somewhere?

[CRYING]

What do you want to do? Should we play [INAUDIBLE].

Daddy!

Should we go see Daddy?

See Daddy.

Ready? Oh, oh, oh! Uh oh! Just kidding! Should he go?

[LAUGHING]

Ah! Just kidding! Ah! Oh! You got him! You--

If you're happy and you know it, clap your hands. If you're happy and you know it, clap your hands. Yay! If you're happy and you know it, then your face will surely show it. If you're happy and you know it--

Stomp. Stomp.

Clap your hands, stomp your feet, say hooray.

4. Time Out

HINT

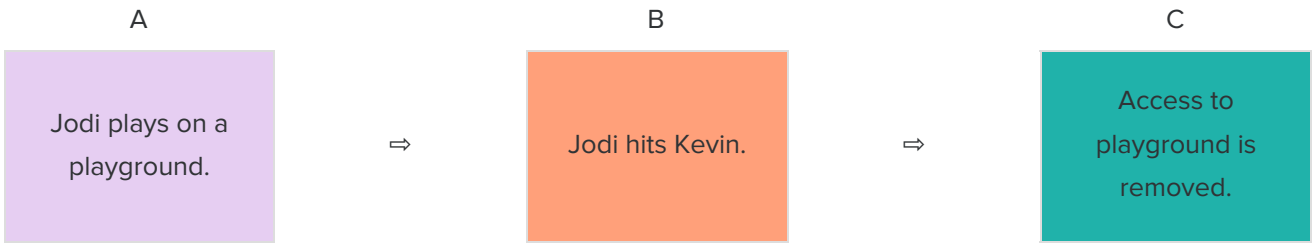
The next set of consequence interventions are punishment procedures. Punishment procedures should not be used unless the BCBA has exhausted all reinforcement-based interventions and deemed it necessary to use punishment-based interventions because of the overall social significance of the target behavior.

There are several different types of time out procedures. Some are aversive and potentially dangerous. Because of this, we are going to focus on non-exclusionary time-out.

Non-exclusionary time-out involves the immediate removal of access to a socially mediated positive reinforcer contingent on challenging behavior, which results in a decreased frequency of that response. This does not always mean taking a patient out of a preferred situation.

Note, time out should never involve closing a patient into a room as this would be considered exclusionary and an aversive, potentially harmful procedure.

EXAMPLE



In this example of non-exclusionary time-out, Jodi was playing on the playground and hit a peer. Access to the playground was removed. The playground is a socially mediated positive reinforcer and access was lost contingent on the challenging behavior (hitting).

This does not mean removing Jodi from the situation and sending her inside alone, rather her access to the playground equipment and peers would be removed and she would be asked to sit on a bench where she could still be monitored by the teacher. This should not be included in the BIP until the BCBA has exhausted all reinforcement procedures.

5. Response Cost

Contingent on the frequency with which the challenging behavior occurs, a specific amount of a reinforcer is removed. This should result in the reduction of the occurrences of the challenging behavior in the future, following these parameters:

- immediate
- response contingent
- removal of a portion of a reinforcer

This should result in a decreased frequency of that response in the future.
We often use token economies, stickers, or points during sessions so our patients can earn and then trade them in later for backup reinforcers, such as favorite toys, foods, or activities.

Sometimes the BCBA will also implement a response cost, meaning the patient would lose a token, sticker, or point for engaging in the challenging behavior. This should not be included in the BIP until the BCBA has exhausted all reinforcement procedures.

EXAMPLE

A		B		C
Johnny has five candies.	⇨	Johnny screams.	⇨	Johnny loses one candy.

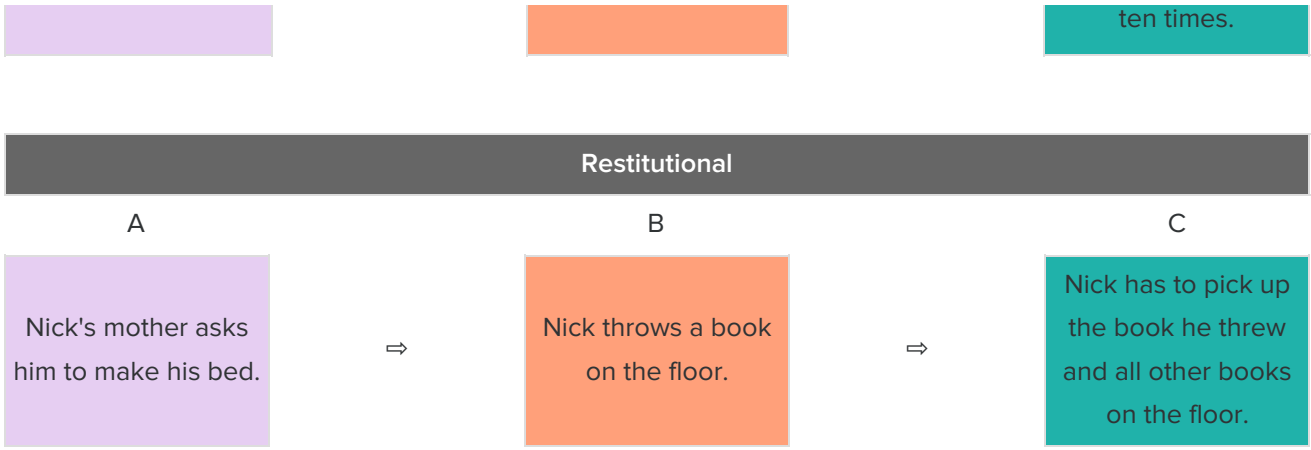
6. Overcorrection

When inappropriate behavior occurs, the patient is required to engage in effortful behavior related to fixing the damage caused by the behavior. There are two types of overcorrection procedures, positive practice and restitutional overcorrection:

- Positive Practice: Repeat a correct form of the behavior a specified number of times.
- Restitutional Overcorrection: Repair the damage or return the environment to its original state and then engage in additional behavior to bring the environment to a condition better than it was prior to the occurrence of the inappropriate behavior.

EXAMPLE

Positive Practice				
A		B		C
Josie wants to go swimming.	⇨	Josie runs at the pool.	⇨	Josie has to practice walking to the water



In the positive practice example, Josie engaged in an inappropriate behavior (running at the pool). She has to repeat a correct form of the behavior of getting to the pool, walking, ten times.

In the restitutional example, Nick engaged in inappropriate behavior (throwing the book on the floor). He had to repair the damage to his room by picking up the book and then return his room to a better state than it was before the problem behavior by picking up all of the other books that were on the floor.

These interventions should not be included in the BIP until the BCBA has exhausted all reinforcement procedures.

7. Consequence Interventions Plan Example

Here is an example of the consequence interventions portion of a BIP for Josiah in the scenario from the end of the last few tutorials.

Consequence Intervention Plan	Description
Functional Communication (tangible).	
Response Blocking	-Physically block each occurrence of the behavior. Make sure to avoid injuring yourself or Josiah while blocking. -Also, DO NOT provide any more attention than the absolute minimum reaction necessary to block the behavior. In addition, be aware that response blocking is NOT physical restraint. Do not restrain the Josiah.
Tangible Extinction	-Prevent Josiah from gaining access to preferred items/activities in any way when he engages in the target behavior. -Do not negotiate or decrease the delay to a preferred item/activity or increase the amount of preferred item/activity Josiah is already getting as a reaction to the target behavior. -If possible, act as though the behavior did not occur. If some reaction is absolutely necessary, avoid eye contact and give the minimum reaction necessary to keep people and

	property safe.
Functional Communication (escape)	-When Josiah requests a break, help, or a decrease in the amount of demands being placed on him, grant the request immediately. The duration of breaks from work will be 3 minutes.
Differential Reinforcement of Compliance	-Each time Josiah completes a request, give immediate access to a break from work and/or a positive reinforcer. The duration of breaks from work will be 3 minutes. -The positive reinforcers that will be delivered will be specified by Josiah's full-sentence mands. -The number of requests that are required to be completed in order to earn reinforcement will be gradually increased from 1 to 3. The criterion for the number of requests to be increased by 1 will be successful completion of a demand.
Escape Extinction	-Escape from tasks/demands / requests will not be given when the Josiah engages in the challenging behavior. -The same amount, difficulty, and rate of demands must continue, regardless of the behavior. Demands may not be postponed or negotiated in any way when Josiah is engaging in the challenging behavior.

HINT

Remember, consequence interventions change what happens after the behavior occurs.

Below is the full PDF again for reference.

SUMMARY

In this lesson, you learned about **extinction**, which is no longer giving the reinforcer for a previously reinforced behavior. The behavior no longer results in the maintaining reinforcement the patient expects, and as a result, there is a decreased future frequency of behavior. You explored what extinction looks like for the following different functions of behavior: **attention function**, **tangible function**, **escape function**, and **automatic function**. You also learned about **differential reinforcement procedures**, which provide different levels of reinforcement for different behaviors. Remember, the three types of differential reinforcement are **DRO**, or reinforcement of other behavior, **DRA**, reinforcement of alternative behavior, and **DRI**, reinforcement of incompatible behavior. You also learned about a consequence intervention called **redirection**, in which you redirect the patient to engage in a more appropriate behavior. Next, you covered a set of consequence interventions that are punishment procedures, including **time out**, **response cost**, and **overcorrection**. It is important to keep in mind that punishment procedures should not be used unless the BCBA has exhausted all reinforcement-based interventions. Lastly, you reviewed a **consequence interventions plan sample**, examining the consequence interventions portion of a BIP for a patient.

Source: FROM VOLLMER T.R., & IWATA B.A. (1992). DIFFERENTIAL REINFORCEMENT AS A TREATMENT FOR BEHAVIOR DISORDERS: PROCEDURAL AND FUNCTIONAL VARIATIONS. RESEARCH IN DEVELOPMENTAL DISABILITIES, 13, 393-417.

TERMS TO KNOW

Differential Reinforcement
Provides different levels of reinforcement for different behaviors

Differential Reinforcement of Incompatible Behavior (DRI)
The patient receives reinforcement for engaging in an appropriate behavior that makes it physically impossible to perform the problem behavior

Differential Reinforcement of Other Behavior (DRO)
Presenting a reinforcer contingent on the absence of a problem behavior for a specified period of time

Differential Reinforcement of an Alternative Behavior (DRA)
Appropriate functionally alternative behaviors are reinforced, while problem behaviors are extinguished

Extinction
No longer giving the reinforcer for a previously reinforced behavior

Extinction Burst
An initial increase in the frequency or intensity of the behavior

Spontaneous Recovery
When a behavior reappears after it was successfully placed on extinction