

What are the schedules of reinforcement and when should I use each one?

The schedule of reinforcement for a particular behavior specifies whether every response is followed by reinforcement or whether only some responses are followed by reinforcement" - Miltenberger (2007, p.86)

1) Continuous Reinforcement (CRF)

Reinforcement is delivered after every single target behavior.

- **Use when:**
 - Teaching new skills
 - Pairing with a new client
 - Introducing a replacement behavior to reduce maladaptive responses

- **Example:**

Giving a token after every correct response, or an iPad shutting off every time the power button is pressed

- **Pros:**
Fast acquisition

- **Cons:**

Not sustainable long-term; behavior may extinguish quickly if reinforcement is removed

2) Intermittent Reinforcement (INT)

Reinforcement is delivered after some correct responses, but not all.

- **Use when:**

- Maintaining previously mastered skills

- **Example:**

- Delivering a token every few correct answers, or providing a break after a variable number of tasks

- **Pros:**

Greater behavioral persistence

- **Cons:**

Slower initial learning

Continuous reinforcement schedules are more often used when teaching new behaviors, while intermittent reinforcement schedules are used when maintaining previously learned behaviors (Cooper et al. 2007)

4 Types of Intermittent Reinforcement Schedules

To break it down:

- Fixed = Set, predictable
- Variable = Unpredictable, averages over time
- Ratio = Based on number of responses
- Interval = Based on time passed

1. Fixed Ratio (FR)

Reinforcement is given after a fixed number of responses.

- **Example: FR-3** = Reinforce after every 3 correct responses.
- **Note: FR-1** = Continuous Reinforcement (CRF), often labeled this way for clarity.

- ☑ Promotes fast responding
- △ May lead to short pause after reinforcement

2. Variable Ratio (VR)

Reinforcement is given after a varying number of responses, averaging to a specific value.

- **Example: VR-2** = Reinforce after 1, then 3, then 2 responses (average = 2).

- ☑ Produces steady, high-rate behavior
- △ Highly resistant to extinction

3. Fixed Interval (FI)

Reinforcement is available after a set amount of time, but only if the behavior occurs after that time.

- **Example: FI-5** = Reinforcement becomes available after 5 minutes. If the target behavior happens after the interval, it's reinforced.

- ☑ Builds time-on-task
- △ Often causes “scalped” responding—low at first, then increasing as time passes

Important Clarification about Interval Schedules: Reinforcement is not automatically delivered at the end of the interval. Instead, it only becomes available once the time has passed—and will only be given if the target behavior occurs after that point. In other words: time passing opens the window, but the behavior still has to happen to earn reinforcement.

4. Variable Interval (VI)

Reinforcement becomes available after a varying amount of time, averaging a target interval.

- **Example: VI-3** = Reinforcement may be available after 2 mins, then 4, then (average = 3 mins).

- ☑ Encourages steady, moderate responding
- △ Less predictable = more durable behavior over time

Schedule Type	Real-Life Example	Outcome Description
Continuous	Praise given every time the client claps her hands after you say "Clap"	Quick learning with potential extinction if praise is removed
Fixed-Ratio	A student gets a star for completing a whole worksheet of examples	High response rates, but pauses in work may occur after pay
Variable-Ratio	Lottery tickets bought with hopes of winning	High, steady engagement in behavior due to unpredictability
Fixed-Interval	Students receiving rewards for participation every 30 minutes	Moderate response rates with pauses after each reinforcement
Variable-Interval	Praise given to a student at random times throughout class	Consistent on-task behavior promoted by the unpredictability of reinforcement

REGARDLESS WHICH SCHEDULE OF REINFORCEMENT YOU ARE IMPLEMENTING ALWAYS PAIR PRAISE WITH TANGIBLE OR WITH ANY REINFORCEMENT

- **WHY?**
 - It helps fade tangibles over time
 - Praise builds intrinsic motivation
 - Everyone benefits from positive recognition!

What Do “Thicker” and “Thinner” Schedules Mean? These terms describe adjustments to an existing reinforcement schedule:

- **Thinner**

Less frequent reinforcement

- **Example:** Moving from FR10 to FR15 (child now needs 15 responses before reinforcement)
- **Used** to promote independence and reduce reinforcement over time

- **Thicker**

More frequent reinforcement

- **Example:** Moving from FR10 to FR5 (child only needs 5 responses)
- **Used** when a learner needs more support or motivation

- **Think:**
Thinner = Less reinforcement
Thicker = More reinforcement

Thinner and thicker schedules of reinforcement.

Differences between “Thinner” and “Thicker” reinforcement schedules

Thinner Schedule	Current Schedule	Thicker Schedule
FR15	FR10	FR5
FR8	FR5	FR2
FR150	FR100	FR50
FR55	FR50	FR45
More responses required Less Reinforcement		Less responses required More Reinforcement

Have a question?

Need aba clarification on something? Fill out the anonymous survey in the body of this email. For more resources, check out our BCBA library or reach out for more support.