



# Contingent Intrusive Substance & Stimuli

## Definition

Consequences are administered using any of the following three procedures:

- **Taste Aversion**—Use of a substance with an unpleasant taste (e.g., mouthwash, vinegar, lemon juice, water).
- **Aromatics**—Use of a noxious odor held under the student's nose (e.g., crushed garlic).
- **Water Mist**—A spray of water mist to the student's face.

These procedures reduce behavior by presenting an aversive, intrusive consequence immediately following an inappropriate behavior. In this case, inappropriate behaviors refer to aggressive or injurious behaviors to self or others.

## Things to Do

- ✓ Define the behavior.
- ✓ Say, "No!"
- ✓ Use the intrusive substance or stimuli.
- ✓ Redirect the student.

 **Define the behavior.**

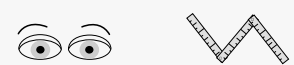
Define student's aggressive or injurious behavior using observable and measurable terms. For example, this is too vague . . .

Nina is aggressive when she attacks others.

Instead . . .

Nina is aggressive when she bites others.

. . . is a behavior that you can see and count.



**Observable & Measurable**

- Easily observed
- Countable
- Beginning/end
- Repeatable

Initially, limit the use of the following procedures from 15 minutes to 1 hour each day. During this time, determine what side effects may be present from use of these aversive substances (notably aromatics). After the effects of the intervention are positively demonstrated, begin extending the intervention over longer periods of the day.



**Limit Use of Procedure**

**Taste Aversion**

Can reduce vomiting, biting, self-abuse, rumination (i.e., regurgitating food), and pica (i.e., eating nonfood substances—like crayons, chalk, or dirt).

**Aromatics**

Can reduce severe aggression, self-abusive behaviors, and trichotillomania (i.e., twisting or pulling one's hair).

**Water Mist**

Can reduce severe aggression and self-abusive behaviors.

 **Say, "No!"**

When the inappropriate behavior occurs, say "No!" in a loud, firm voice. It helps to also describe the target behavior. For instance, "No hitting!" or "No eating crayons!" The object is to condition the verbal reprimand with the aversive consequence.

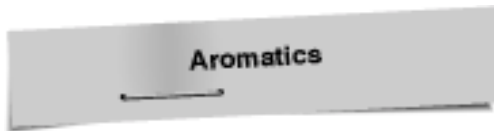


## ✓ Use the intrusive substance or stimuli.

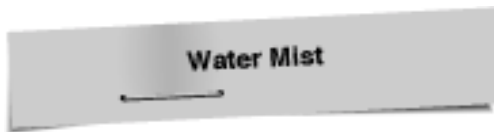
Pair the intrusive substance or stimuli with the verbal reprimand.



Squirt a very small amount of the noxious-tasting solution into the student's mouth. Typically no more than 2 fluid ounces of the solution are ingested in any one day.



With the thumb and index finger, break a capsule of aromatic ammonia and immediately place it under the student's nose. If necessary, hold the student's head in position for about 5 seconds.



Direct the spray at the student's face. Do not wipe the mist from the student's face. However, the student may be allowed to do so.

## ✓ Redirect the student.

Redirect the student to an appropriate activity or to the original activity in which the student was occupied. Remember to reinforce the student for compliance.

### Examples

#### Example 1

Amber has a habit of regurgitating food—resulting in weight loss. No medical cause for her problem has been found. The IEP team, in consultation with Amber's physician, decides that a mixture of lemon juice and water should be used each time Amber ruminates (i.e., brings up food). The mixture is sprayed into Amber's mouth each time she begins to gag. Gradually, the regurgitation behavior disappears.

#### Example 2

Theo is pulling his hair from his head. The problem is escalating to the point that Theo has numerous bald spots. Staff members try positive

reinforcement and overcorrection procedures but are unsuccessful. So the IEP team consults with Theo's family physician. Afterwards, they decide to place a container of crushed garlic under Theo's nose each time he pulls his hair. Now Theo pulls his hair much less frequently.

#### Example 3

Whitney has a tendency of self-injuring herself. She'll bite herself to the point of drawing blood. Staff members have tried several interventions—all to no avail. Following an IEP team's visit with Whitney's physician, staff members are instructed to use a brief spray of mist each time Whitney begins to bite herself. Now Whitney seldom bites herself.

## Variations of the Technique

- 👉 **Water mist.** Consider gradually fading the size of the spray bottle to one that is less visible in an effort to prevent situation-specific reductions of the targeted behavior.

## Potential Problems and Solutions

### Undesirable Side Effects

Undesirable side effects, such as toxic reactions, respiratory difficulties, burns, erosion of enamel on teeth, aggression, or dry skin, may appear. Therefore, all staff members—and medical consultants, when necessary—must closely monitor the situation. If physical symptoms or ailments appear, it may be necessary to temporarily or permanently discontinue the intervention.

### Staff May Implement Procedures Incorrectly or Inconsistently

Make certain that all staff who implement aversive interventions are thoroughly trained in the proper procedures.

## Getting Ready

- 👉 Using contingent intrusive substances and stimuli may cause withdrawal, aggression, crying, whining, or pouting if staff members previously fail to establish positive relationships with students. There are many ways to do this. Try spending time with the student. Avoid ridicule and put-downs. Seek opportunities to interact with and show interest in the student. Express trust and be trustworthy in your interactions. Use appropriate humor. Express confidence in the student. Finally, use praise, compliments, and other positive interactions at a high rate. Experts recommend a minimum ratio of eight positive interactions for each negative interaction.
- 👉 When using this procedure, make certain that it is just one part of a preplanned hierarchy of behavior-reduction techniques.
- 👉 Be aware that this procedure may be interpreted as abusive or cruel treatment by an uninformed observer.

### Materials and Supplies

- 👉 **Taste aversion materials.** Maintain a supply of substances to be used. The most common substances include diluted solutions of lemon juice or breath freshener/mouthwash. Do not use noxious substances, such as pepper sauce, horseradish, or Tabasco sauce.

- ☞ **Aromatic supplies.** Maintain a supply of ammonia capsules. A less-expensive option is to soak some cotton with ammonia and place it in a small, covered medicine vial.
- ☞ **Water mist materials.** Use a standard plastic plant sprayer or similar atomizer. The water in the sprayer should be room temperature. Adjust the dispenser to ensure a maximum misting effect as opposed to a direct stream.



## References

- Dorsey, M., Iwata, B., Ong, P., & McSween, T. (1980). Treatment of self-injurious behavior using a water mist: Initial response suppression and generalization. *Journal of Applied Behavior Analysis, 13*, 343-353.
- Mayhew, G., & Harris, F. (1979). Decreasing self-injurious behavior: Punishment with citric acid and reinforcement of alternative behavior. *Behavior Modification, 3*, 322-336.