

VISUAL-SPATIAL INTERVENTIONS

Suggestions for Helping a Person by Addressing their Visuospatial Abilities

Shelly Weaverdyck

TO KEEP IN MIND

1. Changes in the brain can make visuospatial aspects of a person's cognitive abilities easier or more difficult. Here we will focus on how they make them **more difficult**.
2. A person with changes in visuospatial abilities may have difficulty accurately knowing **how far away** an object or person is from their own body, knowing **where objects** and people are relative to other objects and people, knowing **where all** of their **own body parts** are, or **noticing objects** or people in all parts of their visual field. (Their visual field is the area in the environment in front of this person's eyes when this person stares straight ahead without moving their head.)
3. These visuospatial difficulties may be subtle, so that even when this person does know, for example, the location of an object, they may be **working very hard** to do so.
4. This person often does not know they are having such difficulties. If they do notice problems seeing, they may say they need their eyes checked. Asking this person questions about how well they see may not be helpful. Try to make a task or seeing as **easy** as possible for them.
5. This person's visuospatial abilities, for example, knowing where objects and people are may **fluctuate** or be **unpredictable** at any given moment. If you return another time, they may be able to know the location of objects or people more easily.
6. **Watch** and **listen** to this person closely to discern how well they recognize where objects, you, or other people are at this moment. If you are not used to noticing visuospatial difficulties, it is easy to miss them.
7. This difficulty with visuospatial abilities are most likely due to changes in this person's **eyes** or their **brain's ability to recognize and understand** the information from their eyes. It is rarely due to this person's desire or intention. The comment "She sees what she wants to see." or "He sees when he wants to see." is usually false and a misinterpretation of this person's abilities or desires. Be **compassionate, patient, and tolerant**.
8. Adjust your **communication**, the **environment**, and the **task** to **help** this person more easily see where objects and people are or to **compensate** for their reduced abilities. Continue to make **adjustments** as this **person changes** over time or day to day.
9. More detail and visual-spatial interventions (including support strategies) are in the *Cognitive Abilities and Intervention Strategies (CAIS) Intervention Strategies* by S Weaverdyck, particularly in the **Cognitive** Intervention Strategies part (sections **I-Sensory** and **II-Perception**) and the **Environmental** Intervention Strategies part. These provide **detailed intervention** strategies that address specific cognitive abilities, the environment, tasks and daily routines, and communication with this person. These interventions can be **individualized** to a particular person and situation. See all the CAIS resources, including these **CAIS Handouts** at <https://www.improvingmipractices.org>

SUMMARY OF VISUOSPATIAL INTERVENTIONS

10. Remember this person may not see people and objects in the same place you see them. Try to **see from this person's perspective**. Watch and listen to this person to understand their visuospatial abilities and how to help.

11. Note ways in which this person (consciously or unconsciously) compensates for their visuospatial difficulties. Try to build on **their compensation strategies**.
12. **Structure** this person's **environment, task, and your interactions** with this person to **accommodate** their **visuospatial difficulties**, and then keep their environment, task, and interactions **consistent**. Avoid making changes unless necessary when this person's specific needs and preferences change, and then make as few changes as possible.
13. **Economy of movement**: Move minimally, gesture minimally, and organize a task so most of your movements are out of this person's sight, so this person does not have to work hard to follow your movements.
14. **Watch** for this person's **reaction** to see if they are accurately seeing where objects and all parts of **your** body are. Watch for confusion or anxiety due to misinterpretation of objects or your movement.
15. **Modify your movements** in response to their reactions.
16. Approach this person from the **front** and at **eye level**. If one side of their body is weaker than the other side due to brain changes (not a broken arm for example), then approach on their **stronger side**. Position their **chair** or **bed** so their stronger side is facing the objects, people, or parts of the room that are important to them.
17. Slow down. **Move slowly** when approaching and when reaching out to this person.
18. **Reduce clutter** and unnecessary objects and people in the space around this person.
19. **Reduce the movement** of objects and people.
20. **Reduce changes** in the objects and people.
21. Have only **one person** in this person's sight when helping with a task. Try to have only one person assisting them at a time.
22. Use **contrast** to make objects and people stand out in the environment and from each other.
23. Address this person's **fatigue**. They may get tired just sitting in their environment.

COMMUNICATION

24. Try to **see from this person's perspective**. Imagine how they might be seeing a space or object. **Watch** and **listen** to this person.
25. Have the same person(s) interact with this person every time, especially during a task.
26. Communicate with this person the same way each time, once you identify the best way to interact with this person. For example, use the same words, position your body at the same place, and move the same way, every time you do the task, so they become familiar and comfortable with your patterns of movement. Adapt as this person changes, but change only as much as necessary.
27. Discern where to hold an object for this person to see it most easily, quickly, and accurately. Often this is directly **in front** of their eyes.
28. Present all objects to this person in the **spot where they see best**. Avoid holding the object too far away, too close, too high, too low, too far to the left or right. For example, avoid holding a glass of water too close to their chest, because when they look down they may not notice it. Rotate this person's plate periodically while they are eating so that all the food on the plate will eventually appear in the best part of their visual field.
29. **Approach** this person in the spot where they **see best**. Avoid positioning your body, particularly your face, hands, and arms too far away, too close, too high, too low, too far to the left or right. Imagine this person is looking through a set of binoculars so you can stay in the middle of their visual field, if that is the spot where they see best. If this person is sitting, then sit to talk to them so they do not have to look up to see you easily, or kneel if they are looking down. If they are lying down, stand or sit in a spot they can easily see you when they are looking straight ahead.

30. Allow enough **time** for this person to **shift attention** and to focus on you or an object.
31. When you or an object moves, **watch this person's eyes** and **move slowly** enough to ensure their eyes are following you or the object and that this person is comfortable.
32. When **moving a part of your body**, such as your arm to reach out to this person, move it **slowly** to reduce the chances the movement will be misinterpreted. For example, an arm movement toward them may be seen as aggressive if it looks like it is moving toward them more quickly than it really is. It might be misinterpreted as an intention to hit them. Or they might think your hand is coming towards their face, rather than their shoulder. When handing them an object, they might assume you are handing it to someone else nearby if they don't locate it in space accurately. When helping them eat, move the spoon slowly to their mouth to avoid their head backing up. **Make it easier** for this person to recognize the speed with which an object is approaching and to know where an object is.
33. Avoid moving yourself and parts of your body or an object any more often than is necessary.
34. Move yourself, parts of your body, or an object as **short a distance** as possible. Avoid making this person move their head to follow you or the object.
35. When gesturing, use **small gestures** and use gestures only when necessary. For example, in order to reduce this person's fatigue, avoid requiring them to follow the movement of your arm or hand. Try to make any gesture just large enough to capture this person's attention and to be easily seen.
36. Move this person's **hand to the object** to help them locate it, if this person is comfortable with being touched. For example, move their hand to their dinner plate to more easily locate it.
37. **Hand** the object to this person directly, rather than expecting them to locate it on their own.
38. **Point to or touch** an object intended for this person.
39. Remember this person may fall, bump into something, or not respond to a request if they don't recognize where their body is in space. For example, if they don't respond when asked to lift their arm while dressing, try to discern if they know where their arm is.
40. When this person misinterprets an object or the environment, **explain** and **reassure** them. For example, if a shiny floor looks wet, tell them it isn't wet even though it looks wet. If they begin to try to step up or over a line on the carpet, tell them it is just the carpet and not a step. If an object like a laundry cart looks frightening, explain what it is.
41. Have only **one person** helping this person at a time. If more than one person is necessary, then have only one person in this person's sight and who this person is paying attention to. The other person(s) should quietly stay in the background.

ENVIRONMENT

42. **Watch** and **listen** to this person as they interact with their environment to better understand their visuospatial abilities and difficulties and how to help.
43. Once you identify the best way to adapt this person's environment to support their visuospatial abilities, then keep the environment **consistent**. Avoid changes unless the changes are necessary, as this person's needs and strengths change.
44. Make sure there is enough **light** to easily see you and any object.
45. **Reduce** excess **clutter** in the environment.
46. Make sure the area surrounding you and any object **contrasts** with you and the object so you and the object are more **easily seen**. For example, make sure the pill is lighter or darker than the spoon that holds it, or the washcloth is lighter or darker than the shower or sink behind it. Make sure your clothing stands out from the visual area behind it. For example avoid wearing a long white sleeve when gesturing where to put their hand on a white sheet.
47. Make sure the area surrounding you or the object is not confusing or patterned, causing you or the

object to be camouflaged or lost in the background. For example, avoid wearing a highly patterned shirt that might be hard to distinguish from the busy environment behind you.

48. Make an object that is important to this person **stand out** from other objects. Make the **important** object colorful, or increase the light-dark contrast between the important object and other objects. For example, place a colorful place mat under a plain beige plate to draw this person's attention to the plate and to help them see exactly where it is. Make the food colorful to contrast with the plate so that it draws this person's eye and is recognizable.
49. **Group similar objects together** so they are easier to find and identify.
50. Avoid changing the **familiar location** of objects, so this person can rely on habit to find objects.
51. Reduce the amount of furniture in the environment to reduce chances of this person bumping into things while walking.
52. **Modify furniture** in the environment to reduce risk of injury if they bump into it when walking. For example round the corners of tables.
53. **Contrast** areas and features for **safety** purposes. For example, contrast grab bars, the edge of stair steps, and of thresholds to the shower, with the wall or surrounding area to ensure they accurately see the location of the grab bars or edges and how high or deep they are. Make sure the chair, table, floor, and wall, all contrast light versus dark with each other so this person can more easily see exactly where to sit when it is time for lunch.
54. **Eliminate glare** on surfaces, for example, the wall, floor, and table tops.
55. Position **multiple three-dimensional landmarks** down a hallway so this person has a better sense of how long the hallway is, or how far it is to a particular door or room.
56. **Reduce unnecessary distinctions** in the environment. For example, paint the wall all one color, instead of painting part of the wall and wall papering the other part. Reduce the need for this person to figure out that the wall is one wall and not two different surfaces.
57. **Reduce patterns**, repetitive geometric designs, or figures on surfaces (including, for example, walls, tables, counters, curtains, chairs, floors, or clothing) that could look like they are moving, induce dizziness or nausea, be confusing, obscure the location of an object, or be misinterpreted by this person as something to pick up or as a raised surface to step over.

TASK

58. **Watch** and **listen** to this person as they perform a task or as you assist them, so you can better understand their visuospatial abilities and difficulties and how to **make a task easier** for them.
59. Once you identify the best way to structure a task to support this person's visuospatial abilities, then keep the task, the task steps, objects, time, and location of the task **consistent**. Avoid changes unless the changes are necessary, as this person's needs and strengths change.
60. When helping this person with a task, **organize** the task so that most of your movements are out of this person's sight.
61. Organize a task so that objects that are not necessary for this person to use are **out of their sight**.
62. During tasks that require much visual processing, allow time to **rest** before, during, and after the task. Respond gently to the irritability that might accompany the fatigue such tasks often cause.
63. Place objects **close** enough to this person to reduce the need to calculate long distances. For example, place the glass of water to the side of the plate, rather than beyond it, to reduce the chances they will put their glass down on the edge of the plate, rather than just beyond it.
64. Reduce the number of objects near this person to reduce the need to calculate distances. For example, reduce the number of people talking to them, the number of items to pick up and use at the bathroom sink, and the number of glasses and cups to drink from during a meal.