

## **Orientation and mobility**

### **Introduction:**

The first and major difficulty any blind faces is orientation and mobility and exploring his environment. This is due to the loss of the sense of vision which is the mediator necessary for dealing with visual stimuli. In order for the blind to mobilize, he uses all his senses:

- The sense of hearing is always positive and active in noticing all types of sounds including audio feedback.
- The sense of smell explains odors and their relations to different sources.
- Notices the changes of temperature and air stream and their significance in guiding the movement.
- Notices the changes that occur on the surface, he also notices distances as noted in the spaces rather than through the number of steps, but with considerations of time, movement and sound.

So the key to good movement is the understanding of spatial relationships.

### **Orientation and Mobility:**

- **Orientation:** is the process of using the remaining senses to enable a blind person to determine his focal point, and the spatial relationship between his own location and the location of important things in his environment.
- **Mobility:** means a person's readiness and ability to move from his fixed location to any location he desires.

Thus, orientation represents the mental intellectual aspect (paying attention, remembering, analysis and awareness of relations) while mobility represents the physical and muscular effort done to move from one place to another.

### **Orientation and mobility Techniques:**

The orientation and mobility techniques are five:

1. The sighted guide (Person or Dog)
2. White Cane.
3. Guidance
4. Use of other senses
5. Auditory Devices

## 1. The sighted guide:

### Introduction:

If you spot a blind person needing help, introduce yourself, offer your help but don't force it, in case he agrees ask him how he wants your help.

- **To walk together:**

If he wants to accompany you, then step and let him hold your arm with his hand (he's minimum half a step behind you). This way he can sense your body movement in case you turned sides.



- **A narrow path:**

- i. Passage room for one person:

Keep heading forward (Do not turn) Move your arm obliquely behind your back. This way he becomes behind you and not by your side. When the passage expands to fit both of you, replace your hand to its normal position.



- ii. Passage room not enough for two persons:

push your hand back, attracting him back and inside.

- **Doors:**

To cross doors there is more than one way:

- i. Try to cross with the blind companion at the side of the door knuckle (change the direction if necessary) . Open the door with your accompanying hand (this way he can sense if the door is opening inwards or outwards). By opening the door this way, he can hold the door knob and close the door as you cross it.



- ii. Or you can tell your blind companion the direction of the door opening and ask him to hold the door as you cross it.

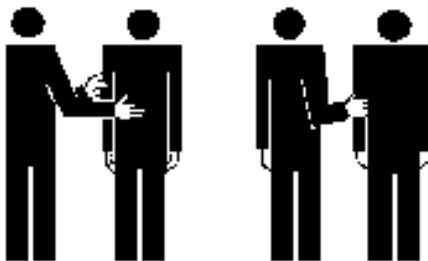
- **Up and down the stairs:**

Just as you reach the stairs, pause. Guide his hand to the handrail. Change you guiding hand if his free hand is not at the direction of the railway.

When you start going up or down the stairs, can sense the movement of your hand when you settle on the first step. This would be his queue to start, this way you'll always be one step ahead. When you reach the last step, pause again so that he can reach. He will sense the end of the stairs when your hand goes back to its normal position and you are both at the same level.



- **To change sides: (incase of stairs or obstacles)**  
 Tell your blind partner to change direction, pull your hand back so that he can convey his hand from your first arm to the other.



- **In case you are the obstacle in a blind person's way:**  
 All you have to do is alert him about your presence, you can make a sound or extend your hand and touch his hand or shoulder.
- **To sit on a chair:**  
 Just grad his hand and lead it to the back of the chair. If the chair is placed under a table, just tell him about his.



- **To sit on a couch:**  
 Walk with the blind person so that his legs are by the side of where he is to sit. Turn his back to the couch as he will sit and tell him you are there.

- **To sit on rows of seats:**  
Walk sideways with him and when you reach his seat stop. To leave, go the other way and walk sideways again.



- **Stepping into a Car:**  
Guide the hand of your blind companion to the car door handle. Tell him if it is the front or the back seat.



- **Stepping into a bus:**  
Step before your blind companion into the bus. He then can conclude the height of the bus steps from your hand.



- **When a blind person comes into a gathering you are in:**
  - If the place is already familiar to the blind person guide him verbally to the empty seat.
  - If he is not familiar with the place, get up and accompany him to his seat or to wherever he wants to go.

## **2. The White Cane:**

The white cane enables the blind to be independent and self-reliant in lots of things. It has multiple usages, enabling the blind to:

- Know the type and characteristics of the land on which they are walking.
- identify the type and size of constraints or obstacles in the way and thus avoid them. It also enables them not to crash or fall into the pits.
- specify the path to walk on, and determine the width of the road.
- be able to track the sidewalks and walls during the walk.
- Bring the attention of others that this person is blind and thus provide assistance, or reduce the speed of driving the vehicle to enable him to cross the road ...

## **3. Guidance:**

- To ensure the ease of movement within the office attention should be given to some details:
  - i. Is the passage between the door and the desk of the blind person free of obstacles?
  - ii. Is the passage between the desk of the blind person and the rest of the work area within the room easy to access? (Cabinets, the printer ....)
  - iii. Can a blind person reach the stationery needed for the work easily? What about the sources of information?
  - iv. Is the location of his desk is the most accessible place in the room?

- v. Is his back to the window to reduce glare? Are there sources of appropriate and adequate lighting?
  - vi. Is there an electrical outlet nearby, in case of need?
  - vii. Is there enough desk space sufficient for special adaptive equipment? (Braille sense) ....
- Because the blind person will have to use other rooms in the workplace, he must be directed to some points to ensure ease of movement:
    - i. How to get to the bathroom and kitchen or the restaurant through the description of the path clearly. It is useful to provide him with some checkpoints along the way.
    - ii. How to leave the workplace (in the case of a complex or campus)

#### **4. Dependence on the remaining senses:**

It is very important for a blind person to use his senses fully, yet what is essential is him analyzing these info and linking them together to get an indication of his special location.

the sense of touch alone is not sufficient to determine an object unless touching it entirely at the same time. A blind person must be aware that smell and sound as well as to the structure can be used as signposts to indicate the road.

#### **5. Audio devices:**

There are a number of audio devices that help the blind move around. Some of which can be added to the white cane and it then gives audio signals that change frequency according to the proximity of obstacle in the road. There is also Laser Canes that can even show drills.