

SESSION 2

THE INTELLIGENT EYE: LIGHT OF THE MIND, PATHWAY TO THE BRAIN

OBJECTIVES

At the end of this session you'll be able to:

- *Identify nine patterns of eye movement and associate each with its corresponding sensory function.*
- *Describe the relationship between distinct patterns of eye movement and memory recall.*
- *Consciously activate each of the nine eye movement patterns.*

BACKGROUND

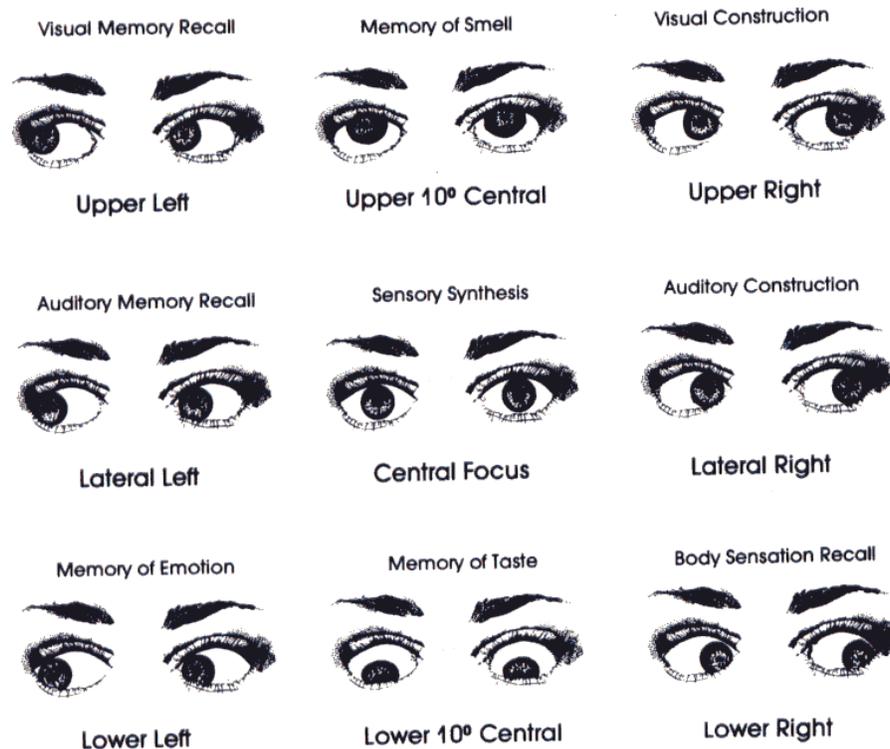
Besides being the organ for vision, research tells us that the eye acts as a mechanism to open up channels into and out of the brain for the input and recall of sensory information. Certain patterns of eye movement have been found to send electrical impulses to the brain. These impulses act as reference beams that stimulate and unfold our holographically-stored memory.

Scientists have discovered a basic and ancient mechanism in the depths of the brain that may physiologically relate eye movement to sensory memory recall. Called the "reticular formation," this dense bundle of nerves serves as a sensory filter for the brain, deciding which messages are significant enough to be sent to the conscious mind for attention.

The nerves that control eye movement, a set of three nerves (the oculomotor, the trochlear and the abducens, which we'll refer to simply as the oculomotor nerves), originate and derive from the area of the reticular formation. It's thought that whenever the eye is moved to a particular position, either instinctively or intentionally, the reticular formation is activated to send an impulse to the brain to stimulate a particular sensory memory recall.

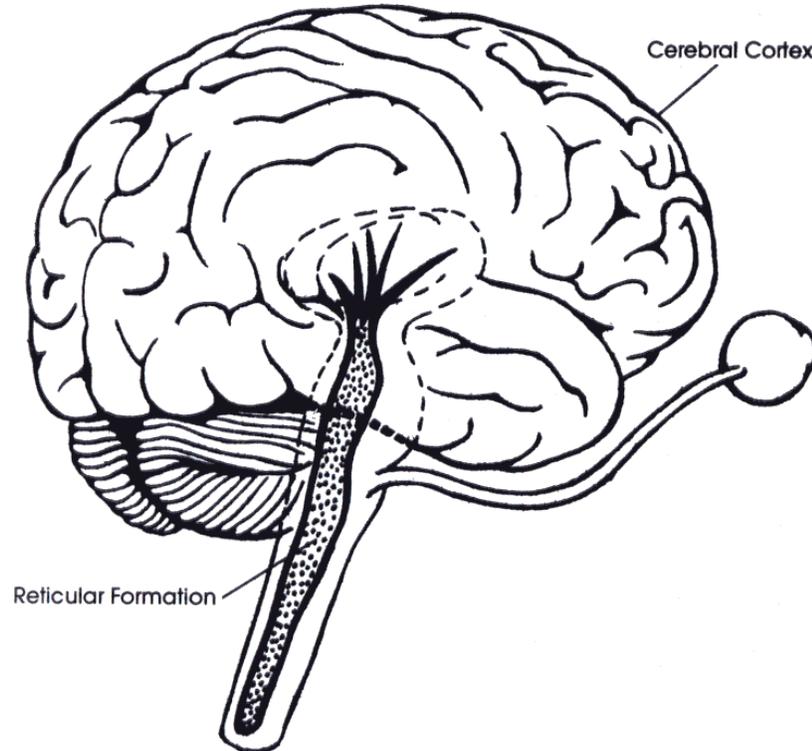
PRACTICE

1. Before beginning this section of your study guide, listen to Audio Session 2 "The Intelligent Eye: Light of the Mind, Pathway to the Brain."
2. Look at the following chart that shows the positions of the eyes when recalling and constructing certain sensory information. Keep the chart in front of you while listening to the explanation of the eye movement positions and their sensory correlates. The chart illustrates how eye movement positions would appear if you were looking in a mirror.



THE RETICULAR FORMATION

The reticular formation is a bundle of densely packed nerve cells located in the central core of the brainstem. Roughly the size of a little finger, the reticular formation runs from the top of the spinal cord into the middle of the brain. This area of tightly packed nerve cells contains nearly 70% of the brain's estimated 200 billion nerve cells. (See illustration on next page).



POINTS TO REMEMBER

- For some left-handed persons, the Visual and Auditory Recall and Construction eye positions will be the reverse of right-handers. Instead of an upper left eye movement for visual recall, some left-handers will find it necessary to shift to the upper right. For the recall of remembered sounds, instead of shifting lateral right, some left-handers will shift lateral left. All of the other eye shift positions remain the same for both right and left-handed people.
- The more difficult it is to retrieve stored memory, the more extreme the eye movement that triggers the memory will be.
- The easier the memory recall, the less distinct the eye movement will be.

PROGRESS CHECK

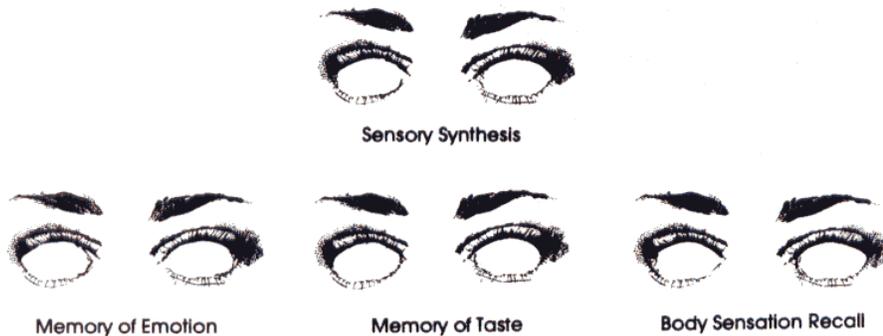
Answer each question by filling in the blank space below with the correct answer.

SYBERVISION

1. Following is an unmarked chart illustrating five of the nine eye movement positions. Under each position, write in the function for that position.



2. Following is a chart with blank pairs of eyes labeled with a sensory function. Print this page and draw the eye position to match the appropriate sensory function.



3. The _____ acts as the sensory filter to the brain.
4. The _____ nerves, the nerves that control eye movement, originate and derive from the area of the _____.
5. In the space below, write a brief description of the relationship between the reticular formation, the oculomotor nerves, and sensory memory recall and construction.