### TABLE 16.2

**SUBTYPES OF SCHIZOPHRENIA**

- **Paranoid:** Preoccupation with delusions or hallucinations, often with themes of persecution or grandiosity
- **Disorganized:** Disorganized speech or behavior, or flat or inappropriate emotion
- **Catatonic:** Immobility (or excessive, purposeless movement), extreme negativism, and/or parrotlike repeating of another’s speech or movements
- **Undifferentiated:** Many and varied symptoms
- **Residual:** Withdrawal, after hallucinations and delusions have disappeared

---

**Types of memories**

- **Explicit (declarative):** With conscious recall
  - Facts—general knowledge (“semantic memory”)
  - Personally experienced events (“episodic memory”)
- **Implicit (nondeclarative):** Without conscious recall
  - Skills—motor and cognitive
  - Classical and operant conditioning effects

---

**Three theories of emotion:**

- James-Lange Theory
  - Pounding heart (arousal) → Fear (emotion)
- Cannon-Bard Theory
  - Pounding heart (arousal) → Fear (emotion)
- Schachter’s Two-Factor Theory
  - Pounding heart (arousal) → Cognitive label (“I’m afraid”) → Fear (emotion)
Stages of sleep (EEG view)

Awake, relaxed

Stage 1 sleep

Stage 2 sleep

Stage 3 sleep

Stage 4 sleep

REM sleep

Alpha waves

Spindle (burst of activity)

Delta waves

Eye movement phase
**TABLE 12.2**

**BIOLOGICAL CORRELATES OF SEXUAL ORIENTATION**

On average (the evidence is strongest for males), various biological and behavioral traits of gays and lesbians fall between those of straight men and straight women. Tentative findings—some in need of replication—include these:

**Brain differences**
- Hypothalamic cell cluster is larger in straight men than in women and gay men; same difference is found in male sheep displaying other-sex versus same-sex attraction.
- Corpus callosum is larger in gay men than in women or straight men.

**Genetic influences**
- Shared sexual orientation is higher among identical twins than among fraternals twins.
- Sexual attraction in male fruit flies can be genetically manipulated.

**Prenatal hormonal influences**
- Altered prenatal hormone exposure may lead to homosexuality in humans and other animals.
- Men with several older brothers are more likely to be gay.

*These brain differences and genetic and prenatal influences may contribute to observed gay-straight differences in*
- spatial abilities.
- fingerprint ridge counts.
- auditory system.
- handedness.
- occupational preferences.
- relative finger lengths.
- gender nonconformity.
- age of male puberty.
- male body size.

---

**Selye’s general adaptation syndrome (stress)**

*The body’s resistance to stress can only last so long before exhaustion sets in.*

**Phase 1**
Alarm reaction (mobilize resources)

**Phase 2**
Resistance (cope with stressor)

**Phase 3**
Exhaustion (reserves depleted)
Biology of retina – be sure to note the connections and prevalence of cones

1. Light entering eye triggers photochemical reaction in rods and cones at back of retina.

2. Chemical reaction in turn activates bipolar cells.

3. Bipolar cells then activate the ganglion cells, the axons of which converge to form the optic nerve. This nerve transmits information to the visual cortex in the brain’s occipital lobe.
Biology of ear — must know that transduction of impulse occurs in the cochlea.

**TABLE 15.1**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral (0–18 months)</td>
<td>Pleasure centers on the mouth—sucking, biting, chewing</td>
</tr>
<tr>
<td>Anal (18–36 months)</td>
<td>Pleasure focuses on bowel and bladder elimination; coping with demands for control</td>
</tr>
<tr>
<td>Phallic (3–6 years)</td>
<td>Pleasure zone is the genitals; coping with incestuous sexual feelings</td>
</tr>
<tr>
<td>Latency (6 to puberty)</td>
<td>Dormant sexual feelings</td>
</tr>
<tr>
<td>Genital (puberty on)</td>
<td>Maturation of sexual interests</td>
</tr>
</tbody>
</table>
### Table 4.1  
**Piaget’s Stages of Cognitive Development**

<table>
<thead>
<tr>
<th>Typical Age Range</th>
<th>Developmental Stage</th>
<th>Description of Stage</th>
<th>Phenomena</th>
</tr>
</thead>
</table>
| Birth to nearly 2 years | **Sensorimotor** | Experiencing the world through senses and actions (looking, touching, mouthing, and grasping) | • Object permanence  
• Stranger anxiety |
| About 2 to 6 years | **Preoperational** | Representing things with words and images but lacking logical reasoning | • Pretend play  
• Egocentrism  
• Language development |
| About 7 to 11 years | **Concrete operational** | Thinking logically about concrete events; grasping concrete analogies and performing arithmetical operations | • Conservation  
• Mathematical transformations |
| About 12 through adulthood | **Formal operational** | Abstract reasoning | • Abstract logic  
• Potential for mature moral reasoning |

### Table 4.2  
**Erikson’s Stages of Psychosocial Development**

<table>
<thead>
<tr>
<th>Identity Stage (approximate age)</th>
<th>Issues</th>
<th>Description of Task</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infancy</strong> (to 1 year)</td>
<td>Trust vs. mistrust</td>
<td>If needs are dependably met, infants develop a sense of basic trust.</td>
</tr>
<tr>
<td><strong>Toddlerhood</strong> (1 to 2 years)</td>
<td>Autonomy vs. shame and doubt</td>
<td>Toddlers learn to exercise will and do things for themselves, or they doubt their abilities.</td>
</tr>
<tr>
<td><strong>Preschooler</strong> (3 to 5 years)</td>
<td>Initiative vs. guilt</td>
<td>Preschoolers learn to initiate tasks and carry out plans, or they feel guilty about efforts to be independent.</td>
</tr>
<tr>
<td><strong>Elementary school</strong> (6 years to puberty)</td>
<td>Competence vs. inferiority</td>
<td>Children learn the pleasure of applying themselves to tasks, or they feel inferior.</td>
</tr>
<tr>
<td><strong>Adolescence</strong> (teen years into 20s)</td>
<td>Identity vs. role confusion</td>
<td>Teenagers work at refining a sense of self by testing roles and then integrating them to form a single identity, or they become confused about who they are.</td>
</tr>
<tr>
<td><strong>Young adulthood</strong> (20s to early 40s)</td>
<td>Intimacy vs. isolation</td>
<td>Young adults struggle to form close relationships and to gain the capacity for intimate love, or they feel socially isolated.</td>
</tr>
<tr>
<td><strong>Middle adulthood</strong> (40s to 60s)</td>
<td>Generativity vs. stagnation</td>
<td>The middle-aged discover a sense of contributing to the world, usually through family and work, or they may feel a lack of purpose.</td>
</tr>
<tr>
<td><strong>Late adulthood</strong> (late 60s and up)</td>
<td>Integrity vs. despair</td>
<td>When reflecting on his or her life, the older adult may feel a sense of satisfaction or failure.</td>
</tr>
</tbody>
</table>
### Table 2.1

**SOME NEUROTRANSMITTERS AND THEIR FUNCTIONS**

<table>
<thead>
<tr>
<th>Neurotransmitter</th>
<th>Function</th>
<th>Examples of Malfunctions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetylcholine (ACh)</td>
<td>Enables muscle action, learning, and memory</td>
<td>Undersupply, as ACh-producing neurons deteriorate, marks Alzheimer’s disease</td>
</tr>
<tr>
<td>Dopamine</td>
<td>Influences movement, learning, attention, and emotion</td>
<td>Excess dopamine receptor activity linked to schizophrenia; starved of dopamine, the brain produces the tremors and decreased mobility of Parkinson’s disease</td>
</tr>
<tr>
<td>Serotonin</td>
<td>Affects mood, hunger, sleep, and arousal</td>
<td>Undersupply linked to depression; Prozac and some other antidepressant drugs raise serotonin levels</td>
</tr>
<tr>
<td>Norepinephrine</td>
<td>Helps control alertness and arousal</td>
<td>Undersupply can depress mood</td>
</tr>
<tr>
<td>GABA (gamma-aminobutyric acid)</td>
<td>A major inhibitory neurotransmitter</td>
<td>Undersupply linked to seizures, tremors, and insomnia</td>
</tr>
<tr>
<td>Glutamate</td>
<td>A major excitatory neurotransmitter; involved in memory</td>
<td>Oversupply can overstimulate brain, producing migraines or seizures (which is why some people avoid MSG, monosodium glutamate, in food)</td>
</tr>
</tbody>
</table>

### Table 7.2

**A GUIDE TO SELECTED PSYCHOACTIVE DRUGS**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Type</th>
<th>Pleasurable Effects</th>
<th>Adverse Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>Depressant</td>
<td>Initial high followed by relaxation and disinhibition</td>
<td>Depression, memory loss, organ damage, impaired reactions</td>
</tr>
<tr>
<td>Heroin</td>
<td>Depressant</td>
<td>Rush of euphoria, relief from pain</td>
<td>Depressed physiology, agonizing withdrawal</td>
</tr>
<tr>
<td>Caffeine</td>
<td>Stimulant</td>
<td>Increased alertness and wakefulness</td>
<td>Anxiety, restlessness, and insomnia in high doses; uncomfortable withdrawal</td>
</tr>
<tr>
<td>Methamphetamine (&quot;speed,&quot; &quot;ice&quot;)</td>
<td>Stimulant</td>
<td>Euphoria, alertness, energy</td>
<td>Irritability, insomnia, hypertension, seizures</td>
</tr>
<tr>
<td>Cocaine</td>
<td>Stimulant</td>
<td>Rush of euphoria, confidence, energy</td>
<td>Cardiovascular stress, suspiciousness, depressive crash</td>
</tr>
<tr>
<td>Nicotine</td>
<td>Stimulant</td>
<td>Arousal and relaxation, sense of well-being</td>
<td>Heart disease, cancer (from tar)</td>
</tr>
<tr>
<td>Ecstasy (MDMA)</td>
<td>Stimulant; mild hallucinogen</td>
<td>Emotional elevation, disinhibition</td>
<td>Dehydration and overheating, depressed mood and cognitive functioning</td>
</tr>
<tr>
<td>Marijuana</td>
<td>Mild hallucinogen</td>
<td>Enhanced sensation, relief of pain, distortion of time, relaxation</td>
<td>Disrupted memory, lung damage from smoke</td>
</tr>
</tbody>
</table>

### Table 12.1

**THE APPETITE HORMONES**

- **Insulin**: Hormone secreted by pancreas; controls blood glucose.
- **Leptin**: Protein secreted by fat cells; when abundant, causes brain to increase metabolism and decrease hunger.
- **Orexin**: Hunger-triggering hormone secreted by hypothalamus.
- **Ghrelin**: Hormone secreted by empty stomach; sends “I’m hungry” signals to the brain.
- **PYY**: Digestive tract hormone; sends “I’m not hungry” signals to the brain.
Structures of the brain and their functions

- **Corpus callosum**: axon fibers connecting two cerebral hemispheres
- **Thalamus**: relays messages between lower brain centers and cerebral cortex
- **Hypothalamus**: controls maintenance functions such as eating; helps govern endocrine system; linked to emotion and reward
- **Pituitary**: master endocrine gland
- **Reticular formation**: helps control arousal
- **Medulla**: controls heartbeat and breathing
- **Spinal cord**: pathway for neural fibers traveling to and from brain; controls simple reflexes
- **Amygdala**: neural centers in the limbic system linked to emotion
- **Hippocampus**: a structure in the limbic system linked to memory
- **Cerebellum**: coordinates voluntary movement and balance

**Input: Sensory cortex** (Left hemisphere section receives input from the body's right side)
- Face
- Lips
- Jaw
- Tongue
- Swallowing
- Teeth
- Gums
- Jaw
- Tongue
- Nose
- Eye
- Hand
- Thumb
- Fingers
- Leg
- Foot
- Toes
- Genitals

**Output: Motor cortex** (Left hemisphere section controls the body's right side)
- Trunk
- Hip
- Knee
- Ankle
- Toes
- Face
- Lips
- Jaw
- Tongue
- Swallowing

**Note the functions of sensory & motor cortex**
Note two theories of personality – both are TRAIT theories (determined through factor analysis). Top is Big Five, bottom is Eysenck’s delineation of traits (only two axes).

### Table 15.2

**THE “BIG FIVE” PERSONALITY FACTORS**

<table>
<thead>
<tr>
<th>Trait Dimension</th>
<th>Endpoints of the Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional stability</td>
<td>Calm——anxious, Secure——insecure, Self-satisfied——self-pitying</td>
</tr>
<tr>
<td>Extraversion</td>
<td>Sociable——retiring, Fun-loving——sober, Affectionate——reserved</td>
</tr>
<tr>
<td>Openness</td>
<td>Imaginative——practical, Preference for variety——preference for routine, Independent——conforming</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>Soft-hearted——ruthless, Trusting——suspicious, Helpful——uncooperative</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Organized——disorganized, Careful——careless, Disciplined——impulsive</td>
</tr>
</tbody>
</table>

*Source: Adapted from McCrae & Costa (1986, p. 1002).*