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Adolescent Risk Taking and Decision Making

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Section A

The Biologic Basis of Risk Taking
Novelty Seeking and Risk Taking Not Unique to Humans

- Rats and mice approach novelty situations more quickly

- Juvenile primates (especially males) migrate further than those younger or older

- Higher mortality with risk taking seen in other species (e.g., Japanese macaques)
Risk Taking Is Environmentally Influenced

- Domesticated vs. wild fish
Risk Taking May Continue to Confer Benefits

- Increase probability of reproductive success

- Opportunities to explore adult behavior “to face and conquer challenges”
  - To master developmental challenges of adolescence
  - To increase status
Knowledge learned through cold, or rational, cognition may have little applicability to conditions of emotional arousal.
Risk Taking as Sensation Seeking

- Sensation seeking is a complex trait associated with a desire for diverse, novel, complex, and intense experiences and the willingness to engage in risks to attain those experiences (Zuckerman, 1990)
Components of Sensation Seeking

- Thrill/adventure seeking
- Disinhibition
- Experience seeking
- Boredom susceptibility
Ennui

- Adolescents report that pleasurable situations are less pleasurable than what is experienced by younger children and adults
  - There is a 50% decline in feeling very happy between 5th and 7th grades
Inhibition

- Inhibitory control develops through adolescence
  - Critical for resisting interference
Somatic Response to Risk

- Adolescents may exhibit less somatic response to risky situations (e.g., autonomic nervous system responses)
  - Without such feedback youth may be more willing to engage in risky behaviors
Amygdala

- Linked to processing emotional stimuli (e.g., fear, social signals)

- Lesions of amygdala associated with lack of somatic response to rewards and punishments
  - Risky responses on gambling tasks

- Adolescents activate the amygdala less than adults when hoped for reward was not received