Adolescents and Treatment of Tobacco Dependence

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Nicotine Dependence Center
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Objectives

• At the end of this presentation the participants will be able to
  • Discuss the prevalence of smoking and other tobacco use by adolescents and young adults
  • Discuss factors that predispose adolescents to tobacco dependence
  • Discuss treatment options for adolescents
Tobacco Use is a Pediatric Illness

• Onset occurs during childhood and adolescence
  • 88% of daily smokers initiate at 18 or before (99% before age 26)
  • 2/3 of adult daily smokers smoked daily by age 18

• More than 6.3 million children alive today under 18 will eventually die from smoking
DANDY 2
Development and Assessment of Nicotine Dependence in Youth

• 1,246 enrolled in 6th grade and followed over 4 years with meetings 3 x per year
  • Baseline
    • 15.4% had a puff, 1.3% used weekly
    • 2.3% tried a cigar, 0.6% tried spit tobacco
  • At end of study (cumulative)
    • 29.7% had a puff and 10.4% used weekly
    • 10.5% tried a cigar, 3.3% tried spit tobacco
• At end of study 38% of those who had a puff were dependent
• Relaxation at first puff, exposure to Joe Camel, and depressed mood were chief risk factors

Defranza et. Al. Susceptibility to Nicotine Dependence: Pediatrics; 120 974-83 2007
Average age of initiation (completed a whole cigarette)
Tenth grade smoking prevalence compared with adult smoking prevalence

- **Adult smoking**
- **10th grade 30 day**

% Smoking Prevalence

If progress had continued – 3 million fewer smokers

- Adult smoking
- 10th grade 30 day
Favorite brands

A. Adolescents (12- to 17-year-olds)

- Camel Lights
- Camel full flavor
- Marlboro Mediums
- Newport full flavor
- Marlboro Lights
- Marlboro full flavor

Legend:
- Red: Females
- Blue: Males
Multiple product use

Source: 2009 YRBS: Centers for Disease Control and Prevention, Division of Adolescent and School Health (unpublished data).
COPENHAGEN

SKOAL WINTERGREEN

FIBER BOARD PLASTIC

SKOAL LONG CUT WINTERGREEN

SKOAL LONG CUT MINT

SKOAL LONG CUT SWEET

SKOAL LONG CUT NATURAL

HAPPY DAYS MINT LONG CUT

SKOAL BANDITS WINTERGREEN

SKOAL BANDITS MINT

HAPPY DAYS SWEET LONG CUT

SKOAL BANDITS SWEET

HAPPY DAYS NATURAL LONG CUT

SKOAL/KEY NATURAL

GRADUATION PROCESS

GRADUATION PROCESS

Adolescents (12-17)
Prevalence and Characteristics of Tobacco Use

Gateway?
Trends in smokeless tobacco use
Characteristics of adolescent smokers

- White
- Older adolescent
- Sexually risky behaviors
- Family history
- Peer use
Risk Factors for Initiating Tobacco Use

• Friends who smoke
• Parents behaviors and attitudes
• Comorbid psychiatric disorders
• Exposure to advertising
Teenagers with who think the tobacco industry is credible and legitimate have higher intentions to smoke, and more likely to smoke.
Teen & Young Adult Smoking Compared with Adult Smoking

- 10th grade 30 day
- 18-24 yr old
- Adult smoking

Years:
- 1990
- 1992
- 1994
- 1996
- 1998
- 2000
- 2002
- 2004
- 2006
- 2008

%:
- 0
- 5
- 10
- 15
- 20
- 25
- 30
- 35
Move to Young Adult Marketing

www.trinketsandtrash.org sponsored by grant from RWJ Foundation
Tip Pit: I have been working for seven weeks and this morning, I received my first commission of $2655. I was really thrilled as, like many other entrepreneurs, I have been involved with other, so-called ethical networking businesses that promise everything but deliver little or nothing.

My goal is to bring in over $10,000 per month

www.specialmedia7.com

I have only one thing to say: They’ve made me more money using its program than I have made working for someone else. The program works, if you know how. I look forward to a very secure future. If I’m making money with this program, then you surely can.

13 hours ago · Share · Flag
Ongoing Seduction

- [http://www.youtube.com/watch?v=qVgVDQCsoqM&feature=related](http://www.youtube.com/watch?v=qVgVDQCsoqM&feature=related)
- [http://www.youtube.com/watch?v=Vlhb8PXDi0t0&feature=related](http://www.youtube.com/watch?v=Vlhb8PXDi0t0&feature=related)
- [http://www.youtube.com/watch?v=H5TBrKEIkAk&feature=watch_response](http://www.youtube.com/watch?v=H5TBrKEIkAk&feature=watch_response)

Sargent, DiFranza, Tobacco contrl for clinicians who treat adolescents CA Cancer J Clin 2003; 53:102-23
Pierce, et. Al. Does Tobacco marketing undermine the influence of parenting in discouraging adolescents from smoking Am J. Prev Med 2002;23
How long does it take for a child to become addicted?
Gray Matter Maturation

Copyright @2004 by the National Academy of Sciences
Maturation starts at the back of the brain ... and moves to the front

Physical coordination, sensory processing

Cerebellum

Nucleus Accumbens

Motivation

Emotion

Amygdala

Judgment

Prefrontal Cortex

Notice: Judgment is last to develop!
Cumulative Age of Initiation of Cigarette Smoking*
United States, 1994/1995

*Among persons 30-39 years old who have ever smoked daily.
Hooked on Nicotine Checklist

DANDY 1

<table>
<thead>
<tr>
<th></th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you ever tried to quit, but couldn't?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Do you smoke now because it is really hard to quit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Have you ever felt like you were addicted to tobacco?</td>
<td></td>
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<tr>
<td>4. Do you ever have strong cravings to smoke?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Have you ever felt like you really needed a cigarette?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Is it hard to keep from smoking in places where you are not supposed to?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When you haven’t used tobacco for a while ... OR When you tried to stop smoking ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. did you find it hard to concentrate because you couldn't smoke?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. did you feel more irritable because you couldn't smoke?</td>
<td></td>
<td></td>
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<tr>
<td>9. did you feel a strong need or urge to smoke?</td>
<td></td>
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<tr>
<td>10. did you feel nervous, restless or anxious because you couldn't smoke?</td>
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</tr>
</tbody>
</table>
Do young people want to quit?
Tried to Quit Smoking During Past Year
Nationwide – 2000

BRFSS, 2002
### Adolescents

#### Treatment Guidelines

1. Provide a strong message regarding the importance of abstaining from tobacco use

2. Counseling interventions are shown to be effective with adolescents. More effect with greater intensity

3. Pharmacotherapy, while NRT is safe, efficacy is not established for NRT or bupropion

4. Offer smoking cessation advice and interventions to parents to limit ETS exposure

Fiore et al: DHHS, 2008
Integrating Treatment in Pediatric Practice

- Pediatric provider and peer health educator
  - Provider Asks, advises, assesses all
  - Both smoking and non-smoking referred to peer led group (ex-smoker young adult)
  - Peer counselors trained in MI
  - Met with adolescents individually and followed by phone for 4 (10 minute) phone calls

- Significantly prevented smoking uptake and improved success in stopping smoking
Adolescents
Cognitive-Behavioral Components of Treatment

• Motivational interviewing
• Address misperceptions
• Set goals that fit the person
• Practice/role play problem solving
• Engage social support
Address Misperceptions

• Disengagement beliefs – a way to cope with not quitting
  • Adolescents’ most significant beliefs
    • If it were that bad it would be forbidden
    • You have to die of something
    • Everything is unhealthy
  • All significantly predictive of motivation to quit
  • Severity of dependence overrides these as predictor of actual quitting at one year
Goals that fit the person

- Treatment goals should fit the individual and be
- Appropriate for developmental stage
  - Independence
  - Peer influenced
  - Risk taking
Practice role play for problem solving

• Have adolescents develop refusal words for self-selected situations

• Practice and act out scenarios
References


• Grimshaw G, Stanton ATobacco cessation interventions for young people. Cochrane Database of Systematic Reviews. Issue 1, 2009

• Kleinjan M, Van den Eijnden RJ, Enhels R. Adolescents rationalizations to continue smoking: the role of disengagement beliefs and nicotine dependence in smoking cessation. Addictive Behaviors; 2009; 34 440-45


Discussion