Autism and ADHD…
What Every Orthodontist Should Know!

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Objectives
• Review the core features of autism and ADHD
• Understand how autism/ADHD can affect a child’s participation and cooperation during the orthodontist visit
• Understand how autism/ADHD can affect a child’s adherence to self-care regimens at home

Age of Onset

Autism
• Symptoms evident prior to age 3

ADHD
• Symptoms evident prior to age 7

Autism Spectrum Disorders (ASD)
• Autism
• Asperger’s Disorder
• Rett’s Disorder
• Childhood Disintegrative Disorder
• Pervasive Developmental Disorder, NOS

ASD: Social Interaction

• Impaired use of nonverbal behaviors
• Failure to develop age-appropriate peer relationships
• Lack of spontaneous seeking to share enjoyment & interests
• Lack of social or emotional reciprocity

ASD: Communication

• Delay/absence of development of spoken language
• Impaired ability to initiate/sustain conversation
• Stereotyped, repetitive, or idiosyncratic use of language
• Lack of spontaneous pretend play or social imitative play
ASD: Restricted & Repetitive Behavior


• Abnormal preoccupation with stereotyped or restricted interest
• Inflexible adherence to nonfunctional routines or rituals
• Stereotyped, repetitive motor mannerisms
• Persistent preoccupation with parts of objects

ASD Prevalence

2007 National Survey of Children’s Health
Kogan et al. (2009). Pediatrics – published online 10/5/09

• 110 per 10,000 US children ages 3-17 had both a past and current ASD diagnosis
  ~673,000
• Nearly 40% of children diagnosed in the past did not currently have ASD
• 4 times more common in boys than girls

ASD Impact on Visit Cooperation

Adapted from My Healthy Smile (2007). Fraser and Delta Dental

• Difficulty tolerating novel clinic environment
• Extreme sensitivity to noise, smell, taste, tactile sensation
• Difficulty communicating needs to provider
• Poor impulse control

Improving Visit Cooperation

Adapted from My Healthy Smile (2007). Fraser and Delta Dental

• Allow child to be an active participant
• Use a picture schedule to give an overview of the visit
• Build trust by telling & showing child what you’re going to do before you do it
• Go at child’s pace
• Provide nonverbal way to say STOP

Breaking visits into small steps and set goals for each step
Provide distraction
Use motivating games and/or tangible reinforcement for completion of each step
Use established calming strategies

Social Stories to Improve Visit Cooperation

Adapted from My Healthy Smile (2007). Fraser and Delta Dental

I am getting braces.
First I need to open my mouth wide.
Next the orthodontist will put my braces on using different tools.
I might feel nervous.
I can ask for a break by holding up my hand.
When my braces are on, the orthodontist will say it's OK to close my mouth.
I can feel proud of doing a good job.
ASD Impact on Oral Self-Care

- Aversion to oral stimulation
- Restless, hard to calm enough to engage in brushing teeth
- Fine motor delays may interfere with adequate brushing

Improving ASD Oral Self-Care

- Graduated desensitization to stimulation of head, face, and mouth
- Use a timer to ensure adequate brushing time
- Electric toothbrush may reduce fine motor demands
- Take advantage of child’s preference for routine

Improving ASD Oral Self-Care

- Try different locations & positions for brushing teeth
- Pair oral health regimen with reinforcing activities

Autism Resources

- My Healthy Smile: Social scripts and tips for encouraging oral health (2007) – A Fraser Learning Product (www.fraser.org)

Attention-Deficit Hyperactivity Disorder (ADHD)

- Inattentive Type
- Hyperactive-Impulsive Type
- Combined Type
- ADHD, NOS

ADHD: Inattentive


- Inattention to detail
- Poor sustained attention
- Doesn’t seem to listen
- Poor follow-through on instructions, chores, schoolwork
- Disorganized
- Avoids tasks requiring sustained mental effort
- Loses possessions
- Easily distracted
- Forgetful
ADHD: Hyperactive/Impulsive  

- Fidgets with hand & feet; squirms in seat
- Often leaves seat in class
- Runs or climbs excessively
- Has trouble playing quietly
- Acts as if “driven by a motor”
- Talks excessively
- Blurs out answers
- Has difficulty awaiting his/her turn
- Interrupts or intrudes on others

ADHD Prevalence:  
2003 National Survey of Children’s Health

- ~ 7.8% of U.S. children ages 4-17 have been diagnosed
  - 4.4 million
- Of these, 56% were taking medication for the disorder
- 2.5 times more common in boys than girls

ADHD Impact on Visit Cooperation

- Difficulties with both behavioral and emotional control...
- Physical restlessness, inability to hold still
- Increased anxiety, negative reaction to physical discomfort

Improving Visit Cooperation

- Request child take usual medication on the day of appointment
- Prepare child in advance for what to expect
- Plan for frequent breaks to maintain cooperation; consider shorter more frequent visits

ADHD Impact on Oral Self-Care

- Forgetful, easily distracted, poor follow-through, poor attention to detail...
- Forget to perform self-care routines
- Or remember, but do a crummy job

ADHD & Oral Hygiene


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<tr>
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<th>Control Group (N=79)</th>
<th>ADHD Group (N=21)</th>
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<tr>
<td>% brush teeth every am</td>
<td>75%</td>
<td>48%</td>
</tr>
<tr>
<td>% brush teeth every pm</td>
<td>82%</td>
<td>48%</td>
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Improving Adherence in ADHD

• Greater stress on oral hygiene during appointments
• Provide written instructions as well as verbal
• Increased involvement, supervision from caregiver
  – Verbal reminders, direct supervision
  – Visual reminders
  – Positive reinforcement for adherence

ADHD Resources


Thank you!