Autism and RDI

Goals for today

- Add to your understanding of autism
- Share with you some tools that may be helpful to you in your work with individuals on the autism spectrum

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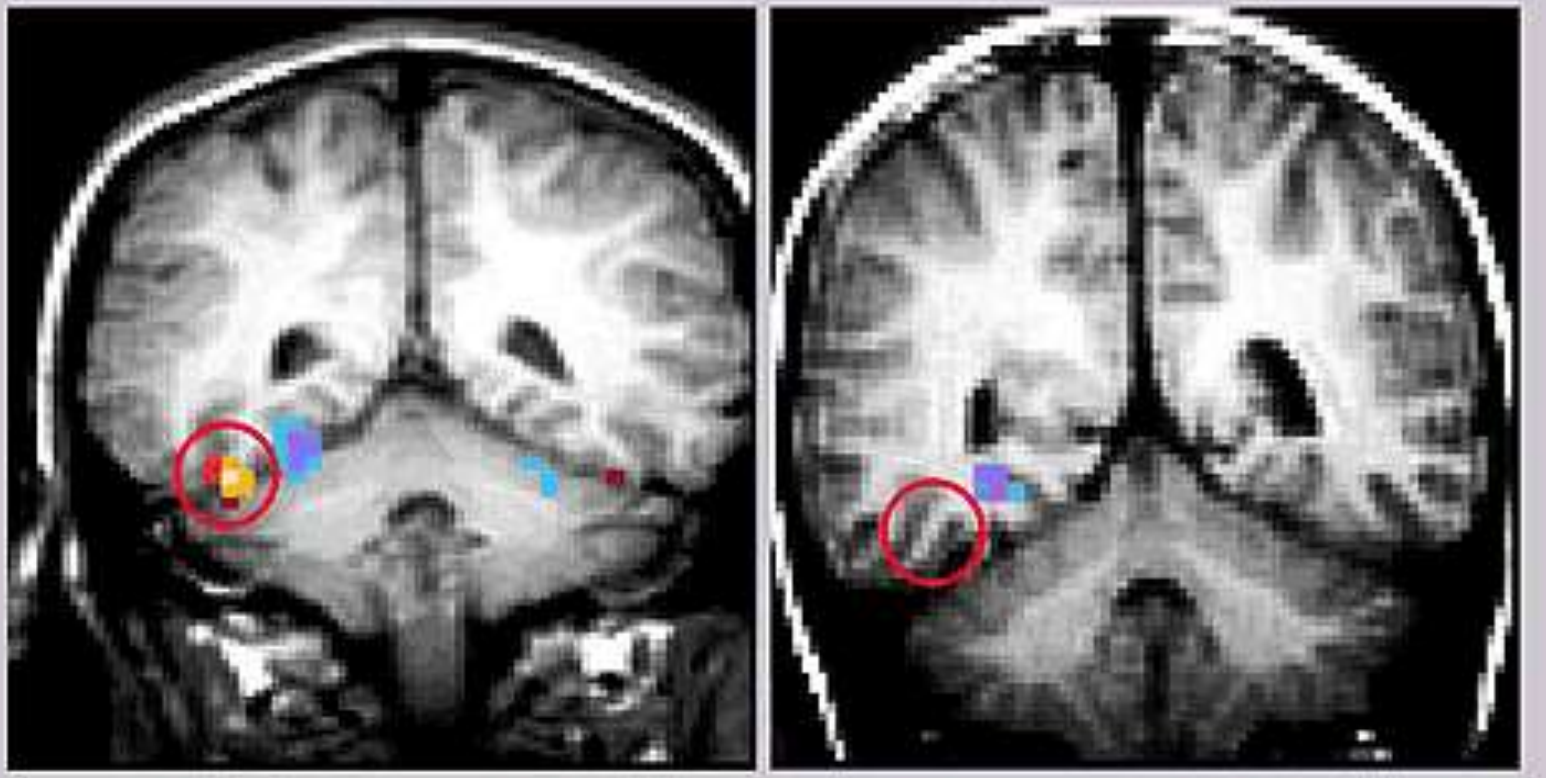
What is Autism?

What We Know About The Brain

Our brains process information by drawing on input from all the brain centers through a process of dynamic collaboration.

The brains of those with autism process information in discreet centers as there are many fewer neural connections available for associative responses.

Healthy Control vs Autism FFA activation



Healthy Control

Person with Autism

Notes.

1. Areas in red show where brain areas that are significantly more active during perception of faces; areas in blue show where brain was more active during perception of nonface objects.
2. The right side of the brain is shown on the left side of the image, as if you were looking at the person face on.

Rose Facts

It takes a ton of rose petals to make sixteen ounces of rose oil.
Centifolia means 100 petals.
The most popular day to give roses is Valentine's day.
Blue roses don't exist.
Roses don't have the gene for the color blue.
Black roses don't exist.
The Greeks called the rose "The King of Flowers".
The largest rose bush is a Lady Banks in Arizona. It's the size of a football field.
Roses are related to apples, cherries, pears, plums, berries, and almonds.
The first drawing of a rose was found in Crete.
There are no native species south of the equator.
The buds of the smallest rose, "Si", are the size of a grain of rice.
The first Bourbon rose was found on the "Isle of Bourbon".

The Good News
or, what we know about the brain, part II

- The brain is an experience-dependant organ
- Neurons are produced continually and assigned according to how we are using our brain
- There is no time in a person's life when they stop learning and growing

Q: What unites all individuals with ASD?

A: Strong procedural –based (static) thinking skills

A: The inability to think dynamically.

Quality of Life requires a blend of static and dynamic intelligence.

Q: What are some examples of activities that require dynamic thinking?

- Referencing
- Social Coordination
- Communication
- Flexible Thinking
- Relational Information Processing
- Foresight and Hindsight

Referencing

- The ability to look at others for information about what they are thinking or feeling
- Typical children learn about the face and emotions (sharing and responding to them) before the age of one, long before they can say words or understand labels.
- By the age of three, typical children have logged over 4,000 hours of referencing

Social Coordination

- The ability to do things jointly with another individual or group.
- Co-regulation: "continuous unfolding of individual action that is susceptible to being continuously modified by the continuously changing actions of the partner.“ Alan Fogel (Developing Through Relationships, 1993)
- Coordination: requires a degree of complexity beyond co-regulation.
- Collaboration: even more sophisticated form of relating to other socially in which two or more people create an experience or meaning together.

Communication

- The ability to use and interpret many forms of communication.
- 70% of our communication is non-verbal: gestures, facial expressions, prosody, etc.
- Human communication is imperfect.

Flexible Thinking

- The ability to rapidly adapt, change strategies and alter plans based upon changing circumstances (i.e. if you don't have a fork to eat with, you can use a spoon)
  - Unexpected change to familiar routines
  - Unexpected omission of a routine activity
  - Changes to activities without preparation
  - Anticipating an event and encountering another
  - Unexpected actions by familiar people
  - Interruption during a highly favored activity
  - Stopping a task before it is finished
  - Planning for things that might go wrong
  - Using familiar objects in a novel way

Relational Information Processing

- The ability to understand the larger context, and to be able to solve problems that have multiple solutions or that can only be solved by understanding specific attributes or relations of two elements.
  - Most real-world problems do not have perfect solutions
  - Success depends on learning to operate on a "good enough" basis - alloca1ng resources to meet specific standards, depending on the nature of the problem
    - How careful should I be about grammar and spelling?
    - What degree of mutual comprehension is sufficient in a conversaton?
    - How many mistakes do you make each day? How many mistakes are too many?

Foresight and Hindsight

- The ability to reflect on past experiences and to anticipate potential future scenarios (i.e. using past mistakes to develop new strategies).

What happens to a person constantly overwhelmed by the environment?

- "Static" behaviors such as "stimming" or scripting
- Preference for isolation, self-play
- Need for control
- Rigidity
- Preference for play involving predictable, cause/effect features
- Difficulty handling change
- Deficiencies in joint attention
- Difficulty empathizing, perspective taking
- Difficulty with problem-solving

Remediation or Compensation?

- How does this understanding of the core-deficit of autism: the inability to process information in a dynamic way – impact how we think about treating autism?
- We can offer supports (schedules, social stories, etc.) that help a child get through the day but they do not strengthen the weak areas of learning.
- When supports are not available the child is still not able to function effectively

Finally, RDI

- RDI is a remediation program that is based on current research in developmental psychology and neurology.
- The Goal of RDI is to increase the individual's ability to navigate dynamic environments by remediating the core deficit that is universal among all individuals with autism which is the inability to process information in a dynamic way.
- RDI actually changes an individual's brain by increasing neural connectivity as one becomes more capable of processing information in a more dynamic fashion.

How do we teach Dynamic processing

- We repair and leverage the **Guided Participation Relationship** between parents and child as they learn how to **co-regulate** with each other.
- We use the theory of the **zone of proximal development**

The Guided Participation Relationship

- Neuro-typical children learn how to interact in a dynamic world through the guided participation relationship with their parents/guardians.
- This is a naturally occurring phenomenon that happens cross culturally.
- It is dynamic in nature as the guide constantly provides cognitive challenges without even knowing it

- “I know its not by fault. I know I didn’t cause my child’s autism. But to tell you the truth, it doesn’t really make much difference. It doesn’t reduce the pain I feel every time I try so hard to make some basic contact, to do what everyone else can do so easily, and fail for the millionth time.”

- “Often, for what seems like no reason whatsoever, he will get upset and cry. When that happens it makes me feel so helpless and incompetent. So when I see that he wants things a certain way I think to myself, ‘ at least that is something I can do something about’, so I try to do whatever I can to keep things predictable. My whole life seems to revolve around keeping him happy by not ‘rocking the boat’”

The GPR and Autism

- ASD impairs the Guided Participation Relationship as the child tends to reject the parent's natural attempts to interact with him in this dynamic fashion.

- As a result the child becomes more static in his way of thinking and less able to deal with dynamic situations and the parent feels confused and frustrated by what feels like rejection from the child.

RDI Hypothesis

- Most people with ASD are born with some capacity to participate in Guided Participation.
- While this capacity is overwhelmed at some point in early development, it can become available again under the right circumstances
- If we restore the Guided Participation Relationship, we can help children and families embark on a more normal path of cognitive, emotional, and social development.

A second chance

- With RDI the parent learns how to "go back" and allow the opportunity for the child to take part in a guided participation relationship that on the first attempt was too overwhelming.
- The parent works at creating a "guide/apprentice" relationship with their child where the child learns how to trust and accept his parent's guidance.

Co-regulation

- Co-regulation is a naturally occurring process where two individuals respond to one another's actions in a "back and forth" manner
- Begins very early in life
- It is the foundation for all other communicative interactions
- It is very difficult and often not possible for individuals with autism because of its dynamic nature

What co-regulation looks like

What happens with autism

Once the guided participant relationship is in place the parent follows a developmental model containing specific objectives to help their child learn how to think and interact in dynamic situations.

What happens once the GPR is restored?

The Zone of Proximal Development

- "The zone of proximal development is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers." -Vygotsky
- The dynamic region in which new capacities are formed.
- Produced by maintaining states of "productive uncertainty".

Zone of Proximal Development and RDI

- It's all about COMPETENCE
- The parents learn how to frame or create learning situations where the child feels safe
- The parents insert challenges that are just on the child's edge of competency
- The child discovers a new way of relating to his partner or thinking about his environment that can be applied to new and different situations
- These many discoveries about their world and others around them bring about competency which is very motivating for the child to learn more.

Example of Zone of Proximal Development

How does the program work?

- First and foremost RDI is a family oriented program.
- Parents work with a consultant
- Consultant conducts a Relationship Development Assessment (RDA)to assess the current state of the guided participation relationship and designs a customized program based on the findings.
- Program first focuses on specific parent objectives that guide the parents in restoring the GPR
- Parents then follow a succession of developmental child objectives that focus on remediating their child's inability to process information dynamically

- Consultant teaches parents how to work objectives into their everyday lifestyle
- Consultant consistently evaluates progress through analysis of video footage, direct observation, and regularly scheduled RDAs.
- Consultant provides regular coaching and feedback.
- Consultant adjusts objectives to reflect ongoing progress.

How does a family “do” RDI?

- Parents address specific objectives through framed activities
- Parents incorporate RDI concepts into every day life (Lifestyle RDI)

Benefits of the RDI Program

- Empowers parents to personally make a difference with their child
- Clear, developmental model
- Strong support and training for parents
- Strong online support system
- Many parents see improvement within a short time
- Life-style changes improve overall family dynamic

Specific RDI Techniques

1. **Change Your Communication Style**

Use "broadband" communication

- Gestures
- Facial Expressions
- Voice Inflection

Children with autism often do not understand communication as a package, and often miss the subtleties of nonverbal communication. In order to help them with this we must focus on one form of communication in isolation before putting it all together.

2. **Use Experience Sharing Communication Most of the Time**

Utilize imperative communication (questions and commands) 20% of the time

Utilize declarative communication 80% of the time (making statements about your observations)

Comparisons between two types of communication

- Imperative:

"What color is that car?"

"Put on your coat."

"Tell mom what you did today."

"Point to happy, point to sad."

"Where is the circle?"

- Declarative

"I see another yellow car!"

"You're going to get cold without a coat."

"I bet you had fun on your field trip to the zoo."

"She looks happy and he looks sad."

"I wonder where that circle could be?"

3. Slow down

- Give your child time to process what you are communicating. This involves slowing down your actions and words, using less words to communicate than you would with a neuro-typical child

- Communicate without expecting a response. This takes the pressure off the child but still models communication for him.

4. **Think Out Loud**

- Let the child in on your thinking process.
- “Hmm, my favorite toy is not here, maybe I should look in another place”

5. **Provide Opportunities for the Child to Think**

- Be aware of over compensation. Let the child try before stepping in to help. If the child looks to you for help take advantage of the opportunity to guide him through the process.

6. Stress the need to attend to you to communicate without physically prompting the child to do so.

Change something about your verbal communication that stands out to the child. (change your tone, pause mid sentence, make sounds)

Get physically close to the child and wait for him to orient to you before communicating.

Bring the child's hands to your face which will cause him to turn his face to you and is NOT the same as physically turning the child's face.

Questions?

For More Information visit:
RDIConnect.com
asdconnect.com
autismjourneys.com