

#### "ADVENTUROUS DARING HILARIOUS DUDE!"

**ADHD**:

(OLLIE, 11 YEARS)



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## WHAT IS ADHD?



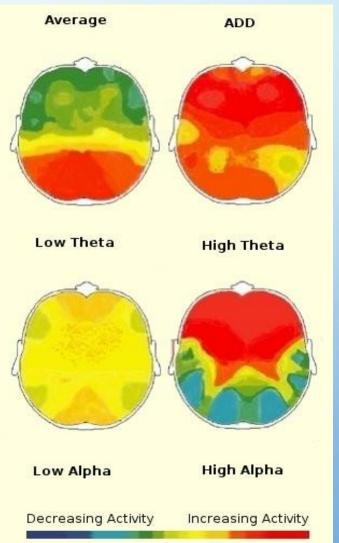
#### BRAIN WAVE DIFFERENCES IN ADHD IN FRONTAL LOBES



DISCOVERED ALPHA (ALERT TO VISUAL 'NOISE'), BETA (MOTOR ALERTNESS) AND THETA WAVES HEIGHTENED IN ADHD

RESEARCH HAS FOUND DIFFERENT BRAIN WAVE PATTERNS REPRESENT DIFFERENT ADHD PRESENTATIONS

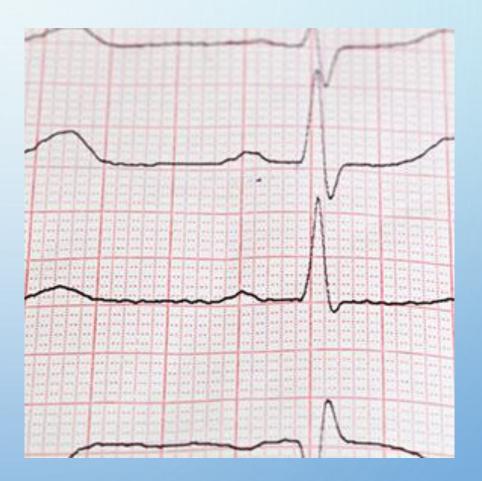
LOWER LEVELS REFLECT WELL FUNCTIONING 'FILTERS'





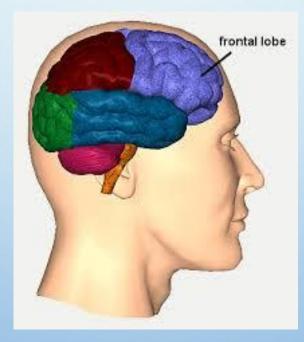
#### **BRAIN WAVE TESTS**

#### IN JULY 2013, THE AMERICAN FDA APPROVED THE FIRST IMAGING TEST TO DIAGNOSE CHILDREN AND TEENS WITH ADHD





#### A SPECIFIC NEURO-DEVELOPMENTAL DELAY PRIMARILY AFFECTING THE FRONTAL LOBE

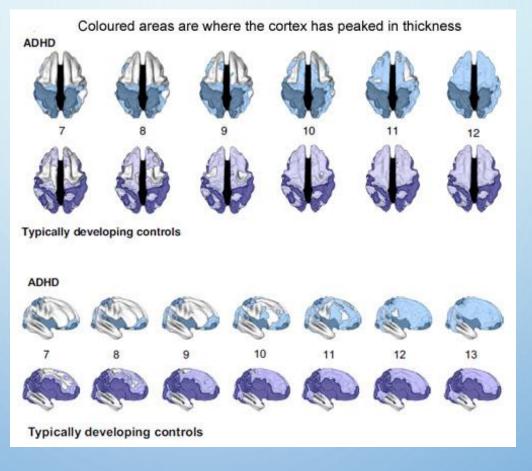


#### How do we know??

## **DELAY NOT DEVIANCE**



RESEARCHERS HAVE CONSISTENTLY FOUND DELAYED DEVELOPMENT OF THICKNESS OF THE FRONT OUTER LAYER OF THE BRAIN (FRONTO-CEREBRAL CORTICES) IN THOSE AFFECTED BY ADHD



**Ref:** Shaw, P., Eckstrand, K., Sharp, W., Blumenthal, J., Lerch, J., Greenstein, D., Clasen, L., Evans, A., Giedd, J., & Rapoport, J. (2007). From the Cover: Attention-deficit/hyperactivity disorder is characterized by a delay in cortical maturation Proceedings of the National Academy of Sciences, 104 (49), 19649-19654



#### DELAY NOT DEVIANCE

#### ON AVERAGE, BRAINS OF ADHD CHILDREN MATURE APPROX **THREE YEARS LATER** THAN THOSE OF THEIR PEERS

#### RESEARCH SHOWS APPROX **HALF** OF THEIR CORTEX HAS REACHED THEIR MAXIMUM THICKNESS AT **AGE 10 AND A HALF**, WHILE THOSE OF CHILDREN WITHOUT ADHD DID SO AT **AGE 7 AND A HALF**

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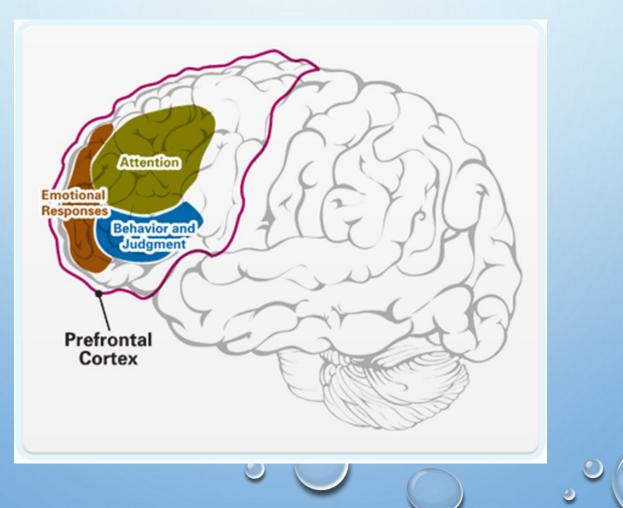


## WHY DO THEY GET SO ANGRY AND EMOTIONAL?



### PREFRONTAL CORTEX

#### THE 'CONTROL CENTRE' OR 'FILTER' OF THE BRAIN





### PREFRONTAL CORTEX

- DELAYS MOST PRONOUNCED IN PREFRONTAL CORTEX (CONTROL CENTRE OF THE BRAIN), WHERE THE LAG TIME WAS AS HIGH AS 5 YEARS
- PREFRONTAL CORTEX RESPONSIBLE FOR SUPPRESSING/CONTROLLING THOUGHTS, EMOTIONS AND ACTIONS, DIRECTING ATTENTION, SHORT-TERM MEMORY AND CONTROLLING MOVEMENT. ALL OF THESE ARE TASKS THAT CHILDREN WITH ADHD CAN FIND DIFFICULT
- AS ADHD-ERS TRY, THEIR PREFRONTAL CORTEX SHOWS LESS ACTIVITY THAN EXPECTED FOR A CHILD OF THE SAME AGE

**Ref:** Shaw, P., Eckstrand, K., Sharp, W., Blumenthal, J., Lerch, J., Greenstein, D., Clasen, L., Evans, A., Giedd, J., & Rapoport, J. (2007). From the Cover: Attention-deficit/hyperactivity disorder is characterized by a delay in cortical maturation Proceedings of the National Academy of Sciences, 104 (49), 19649-19654



## FASTER PRIMARY MOTOR CORTEX

THE ONLY PART OF THE BRAIN THAT MATURED FASTER IN CHILDREN WITH ADHD WAS THE PRIMARY MOTOR CORTEX

THIS PART HELPS TO PLAN AND CONTROL MOVEMENTS

IT ALSO TAKES ORDERS FORM THE PREFRONTAL CORTEX AND IF ONE MATURES EARLY AND THE OTHER MATURES LATE – PRESTO! HALLMARKS OF ADHD ABOUND INCLUDING RESTLESSNESS, FIDGETING AND UNCONTROLLED HYPERACTIVITY

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### TAKE HOME MESSAGE ONE:

## THEIR ABILITY TO CONTROL THEIR FEELINGS AND ACTIONS IS DELAYED & IMMATURE

#### THEY ARE NOT DOING THIS ON PURPOSE

#### THEY NEED SUPPORT NOT TELLING OFF



## WHY DON'T MY USUAL TECHNIQUES WORK?

10



### THE BRAIN IS AT A DIFFERENT STAGE TO SAME AGED KIDS SO THE TECHNIQUES NEED TO MATCH





## WHAT CAN WE DO TO REDUCE ANGRY OUTBURSTS AND FRUSTRATION?

10







### THE BASICS FIRST





#### A HEALTHY BALANCED DIET

#### **NUTRIENTS**

VITAMINS PROTEINS MINERALS GOOD FATS AND OILS WATER



#### A HEALTHY BALANCED DIET

#### 'SUPERFOODS' HAVE MULTIPLE NUTRIENTS

OCEAN

(PROTEIN, MINERALS, HEALTHY FATS)

SALMON, SARDINES, TUNA, COD, MACKEREL...

**GRAINS & NUTS** 

WALNUTS, PISTACHIOS, CASHEWS, PUMPKIN SEEDS, OATS, WHEAT, SESAME...

WHOLE MILK

COW, GOATS, SOY, ALMOND OR RICE...



### WHAT TO WATCH OUT FOR

- FOODS AND DRINKS THEY MAY BE INTOLERANT OR ALLERGIC TO
  - POSSIBLE SIGNS:
    - SKIN RASH
    - SWELLING
    - SORE OR BLOATED TUMMY
    - HEADACHE
    - ROSY RED CHEEKS OR EARS SOON AFTER EATING/DRINKING
  - COMMON FOOD ALLERGIES:
    - WHEAT, MILK, ORANGES, CORN, YEAST, NUTS, PORK, CHOCOLATE, EGGS, PEANUTS, AND SOY



### WHAT TO WATCH OUT FOR

- PROCESSED FOODS
- FRIED FOODS (UNLESS COOKED IN OLIVE OIL)
- EAT FOODS HIGH IN CARBOHYDRATES IN MODERATION (E.G., ROLLS, BREAD, PANCAKES, WAFFLES, RICE, MACARONI, SPAGHETTI)
- FOODS AND DRINKS WITH HARSH CHEMICALS: BRIGHT FOOD DYES AND PRESERVATIVES (E.G., SOFT-DRINKS, SPORTS DRINKS, LOLLIES)



#### GET A GOOD NIGHT'S SLEEP

- SOME KIDS WITH ADHD HAVE TROUBLE GETTING TO SLEEP
- TOP TIPS TO AID SLEEP AT NIGHT:
  - AVOID INTENSE ACTIVITY, SUGARS AND 'SCREENS' AT LEAST 1-2 HOURS BEFORE BEDTIME (NEED TIME FOR BODY AND BRAIN TO SETTLE)
  - EXERTIVE PHYSICAL EXERCISE IN THE AFTERNOON
  - LONG, CALMING BEDTIME ROUTINE (QUIET PLAY (E.G. LEGO), BATH, READ BOOK/AUDIOBOOK IN BED)
  - SOOTHING MUSIC/SOUNDS
  - WEIGHTED/HEAVY BLANKET



#### REDUCE UNNECESSARY DEMANDS ON EXECUTIVE FUNCTIONS TO:

#### DECREASE FATIGUE DECREASE FRUSTRATION

#### INCREASE LIKELIHOOD OF SUCCESS INCREASE PERIODS OF CALM



### REPLACE THE IMMATURE INTERNAL STRUCTURE WITH MATURE ADULT-LED EXTERNAL STRUCTURE





ORGANISE YOUR HOUSE AND THEIR ROOM AND HAVE THEM ROUTINELY MAINTAIN IT TO TEACH EXTERNAL ORGANISATION:

- COMPARTMENTS
- SECTIONS
- BOXES
- HOOKS
- PILES, BASKETS...
- FOLDERS
- BINS...







VISUAL ROUTINES/SCHEDULES FOR MORNING AND AFTER SCHOOL TO TEACH BENEFIT OF WORKING MEMORY SUPPORT AND HAVE STRUCTURE TO DO THE WORK RATHER THAN YOU!:



- LAMINATE SO CAN MARK WITH WHITEBOARD PEN AND REUSE
- INCLUDE TICK BOXES
  - HAVE TO RETURN AFTER EACH TASK
  - (ON-TASK MAINTENANCE SUPPORT)
    - CAN KEEP TRACK AS THEY GO AND BE

REMINDED (WORKING MEMORY SUPPORT)

GIVES SENSE OF SATISFACTION DURING

MULTIPLE TASK ROUTINE

My Daily	List Date
Before School Make My Bed Say My Prayers Get Dressed Do My Hair	<ul> <li>Eat Breakfast</li> <li>Brush My Teeth</li> <li>Pack My Lunch</li> <li>Backpack Ready</li> </ul>
After School Homework Read 20 minutes Exercise	Job #1 Job #2 Job #3
Before Bed	
<ul> <li>Brush My Teeth</li> <li>Shower or Bath</li> <li>Set Out Clothes</li> <li>Give Hugs</li> </ul>	<ul> <li>Read Scriptures</li> <li>Say My Prayers</li> <li>Sit Reverently</li> <li>Go to Bed on Time</li> </ul>
Name	





#### VISUAL HOMEWORK DIARY - WITH FREQUENT CHECKS/REMINDERS IMPERATIVE

VISUAL FAMILY DIARY

LIST APPS E.G., WUNDERLIST

TEACH USE OF REMINDERS AND ALERTS

**REMINDERS! (NOT TELLING OFF)** 



### TAKE HOME MESSAGE TWO:

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DON'T FORGET THE BASICS

FOOD

SLEEP

ENVIRONMENT





#### **ANGER & FRUSTRATION MANAGEMENT**

MODEL AND TEACH



# LITERALLY DEMONSTRATE HOW & WHAT TO DO

LABEL YOUR FEELINGS:

CONCENTRATING ON THE ONE(S) YOU WANT THEM TO BETTER CONTROL

**EXPLAIN WHAT YOU'RE FEELING AS IT INCREASES:** 

E.G., I'M GETTING REALLY FRUSTRATED/ANNOYED/ANGRY/FURIOUS... NOW"

SAY WHAT YOU ARE DOING TO MANAGE YOUR FEELINGS WHEN YOU ARE DOING IT:

E.G., "I NEED TO STEP AWAY, BREATHE DEEP AND CALM DOWN BEFORE WE SAY OR DO ANYTHING ELSE OR I WILL COMPLETELY LOSE CONTROL"





### THEN...





## THINK OF ESCALATING EMOTION LIKE A **TRAFFIC LIGHT**



Green	Calm and happy
Amber	Irritated/frustrated/annoyed/agitated = partial loss of control
Red	Angry/aggressive/rage = complete loss of control



### AMBER: QUICKLY CATCH IT WHEN ITS RISING



MAKE A LIST OF WHAT THEIR EARLY WARNING SIGNS ARE, THEN TALK IT OVER WITH THEM SO THEY CAN UNDERSTAND THEM TOO. COMMON TRIGGERS:

- 1. TIREDNESS
  - DECREASE DEMANDS
  - DECREASE STIMULATION
  - DECREASE OPPORTUNITIES FOR FRICTION (E.G., NOT THE TIME TO TRY AND MAKE THEM EAT BROAD BEANS)
- 2. SIBLING DEMANDS THAT NECESSITATE THE NEED FOR FRUSTRATION TOLERANCE / SELF-CONTROL (E.G., WAITING FOR A TURN, SHARING, BEING TOLD WHAT TO DO...)
  - SEPARATE THEM IF POSSIBLE
  - TEACH BOTH TO SPEAK NICELY AND BE CALM
- 3. GETTING SOMETHING WRONG/LOSING
  - SEE 'CHILL SKILLS'
- 4. BEING INTERRUPTED FROM A DESIRABLE ACTIVITY
  - DISTRACT WITH ANOTHER ACTIVITY (AND IMMEDIATELY REWARD THIS IF NOT AS DESIRABLE)
  - SEE 'CHILL SKILLS'



#### **RED:** GET A GRIP ('GRRP') ON THE ANGER





Go Chill breathe deep and slow (see next slides) get the physical energy out (see next slides)

**R**eturn to situation

**Repair** any impulsive or destructive words or actions by acknowledging what could have handled better and honestly apologising

**P**roblem-solve

-solve Teach problem solving. When completely calm 'rewind' the situation and ask them what else they could have done at the pivotal moment when it was Amber. How would that have turned out? How could everyone help make that happen next time?



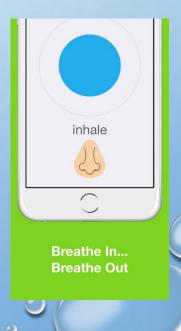
### CHILL SKILLS

PRACTICE THIS WHEN THEY ARE CALM SO THEY KNOW WHAT TO DO WHEN THEY'RE ABLE TO LISTEN AND HAVE MORE CHANCE OF BEING ABLE TO DO WHEN EMOTIONAL

- THE 'DAN CARTER METHOD' ("4-2-4")
  - SLOWLY BREATHE IN TO COUNT OF 4
  - HOLD BREATH FOR COUNT OF 2
  - SLOWLY BREATHE OUT FOR COUNT OF 4
- 'SETTLE YOUR GLITTER' APP
- 'BREATHE DEEP' APP
- FITBIT
- BUBBLE PLAY



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#### IF NEEDED, GET PHYSICAL ANGER/AGGRESSION OUT IN APPROPRIATE WAY

- RUN AROUND THE OUTSIDE OF THE HOUSE 3 TIMES
- DO TEN FLIPS (OR SIMILAR) ON THE TRAMP
- CHIN UPS, PUSH UPS, 'RUNNING MAN' (INTENSE RUN ON SPOT)...
- STOMP ON BUBBLES
- 'DANCE IT OUT'
- SING LOUDLY



### TAKE HOME MESSAGE THREE:

#### ITS NOT COMING NATURALLY YET SO TEACH THEM THE SKILLS TO MANAGE THEIR EMOTIONS

**PRACTICE SKILLS** 

TEACH WHEN THEY'RE CALM SO THEY CAN EASILY REMEMBER IT WHEN ANGRY





### WHAT IF THEY WON'T DO IT?





#### MAKE SURE YOU HAVE THEIR ATTENTION

#### PRACTICE THIS WHEN THEY ARE CALM SO THEY KNOW WHAT TO DO WHEN THEY'RE ABLE TO LISTEN AND HAVE MORE CHANCE OF BEING ABLE TO DO WHEN EMOTIONAL

- HOLD THEIR HANDS IN YOURS
- GO DOWN TO THEIR EYE LEVEL (EYE TO EYE)
- SPEAK CALMLY BUT CLEARLY
- TELL WHAT TO (DO NOT ASK)
- ESCORT THEM AWAY IF NECESSARY





#### **REWARD CHILLING OUT**

#### REWARD SYSTEM IN BRAIN OF ADHD-ERS IS ALSO IMMATURE SO REWARDS MUST BE:

#### IMMEDIATE

#### AWESOME

(THEY CHOOSE THE REWARD OPTIONS, YOU ALLOW)



#### POSSIBLE REWARDS...(NO MONEY)

- VOUCHERS/TOKENS/TICKETS (VERY POPULAR)
  - 5 MINS SCREEN TIME (MAX 1-2 HOURS PER DAY AVAILABLE)
  - 15 MINS DOING WHAT THEY WANT (WITHIN REASON) WITH MUM/DAD
  - GO TO THE PLAYGROUND
  - GO TO THE BEACH
  - BUY LUNCH FROM THE TUCK SHOP TOMORROW
- FOOD TREATS
- SMALL PRIZES (E.G., \$2 SHOP)
- CHOICES AND CONTROL (ESP. FOR THOSE WHO SEEK INAPPROPRIATE METHODS OF CONTROL)
  - WHAT FAMILY (ALL) EATS ON SUNDAY NIGHT
  - WHICH DESERT
  - MOVIE FAMILY WATCHES ON A 'FAMILY NIGHT'
  - GAME THE FAMILY PLAYS TOGETHER



#### TAKE HOME MESSAGES:

#### THEIR ABILITY TO CONTROL THEIR EMOTIONS IS IMMATURE

DON'T FORGET THE BASICS

**TEACH & PRACTICE ANGER MANAGEMENT SKILLS** 





### QUESTIONS?

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