

# BluesNews

Volume 11, Issue 8

December 2017

MERRY CHRISTMAS  
HAPPY HOLIDAYS  
SEASON'S GREETINGS  
HAPPY HANUKKAH  
JOYOUS KWANZAA

What is Christmas?  
A time for celebration.  
A time for remembrance.  
A time for giving.  
A time for faith.  
A time for family.  
A time for friends.  
A time for peace.  
A time for wishing you  
a Merry Christmas  
and a Happy New Year!

Wilf, Lisa, Darlene, Melissa, Sue, and Steve

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# NEUROSCIENTISTS FIND CHRONIC STRESS SKEWS DECISIONS TOWARD HIGHER-RISK OPTIONS

Making decisions is not always easy, especially when choosing between two options that have both positive and negative elements, such as deciding between a job with a high salary but long hours, and a lower-paying job that allows for more leisure time.

MIT neuroscientists have now discovered that making decisions in this type of situation, known as a cost-benefit conflict, is dramatically affected by chronic stress. In a study of mice, they found that stressed animals were far likelier to choose high-risk, high-payoff options.

The researchers also found that impairments of a specific brain circuit underlie this abnormal decision making, and they showed that they could restore normal behavior by manipulating this circuit. If a method for tuning this circuit in humans were developed, it could help patients with disorders such as depression, addiction, and anxiety, which often feature poor decision-making.

"One exciting thing is that by doing this very basic science, we found a microcircuit of neurons in the striatum that we could manipulate to reverse the effects of stress on this type of decision making. This to us is extremely promising, but we are aware that so far these experiments are in rats and mice," says Ann Graybiel, an Institute Professor at MIT and member of the McGovern Institute for Brain Research.

Graybiel is the senior author of the paper, which appears in *Cell* on Nov. 16. The paper's lead author is Alexander Friedman, a McGovern Institute research scientist.

## Hard decisions

In 2015, Graybiel, Friedman, and their colleagues first identified the brain circuit involved in decision making that involves cost-benefit conflict. The circuit begins in the medial prefrontal cortex, which is responsible for mood control, and extends into clusters of neurons called striosomes, which are located in the striatum, a region associated with habit formation, motivation, and reward reinforcement.

In that study, the researchers trained rodents to run a maze in which they had to choose between one option that included highly concentrated chocolate milk, which they like, along with bright light, which they don't, and an option with dimmer light but weaker chocolate milk. By inhibiting the connection between cortical neurons and striosomes, using a technique known as optogenetics, they found that they could transform the rodents' preference for lower-risk, lower-payoff choices to a preference for bigger payoffs despite their bigger costs.

In the new study, the researchers performed a similar experiment without optogenetic manipulations. Instead, they exposed the rodents to a short period of stress every day for two weeks.

Before experiencing stress, normal rats and mice would choose to run toward the maze arm with dimmer light and weaker chocolate milk about half the time. The researchers gradually increased the concentration of chocolate milk found in the dimmer side, and as they did so, the animals began choosing that side more frequently.

However, when chronically stressed rats and mice were put in the same situation, they continued to choose the bright light/better chocolate milk side even as the chocolate milk concentration greatly increased on the dimmer side. This was the same behavior the researchers saw in rodents that had the prefrontal cortex-striosome circuit disrupted optogenetically.

"The result is that the animal ignores the high cost and chooses the high reward," Friedman says.

## Circuit dynamics

The researchers believe that this circuit integrates information about the good and bad aspects of possible choices, helping the brain to produce a decision. Normally, when the circuit is turned on, neurons of the prefrontal cortex activate certain neurons called high-firing interneurons, which then suppress striosome activity.

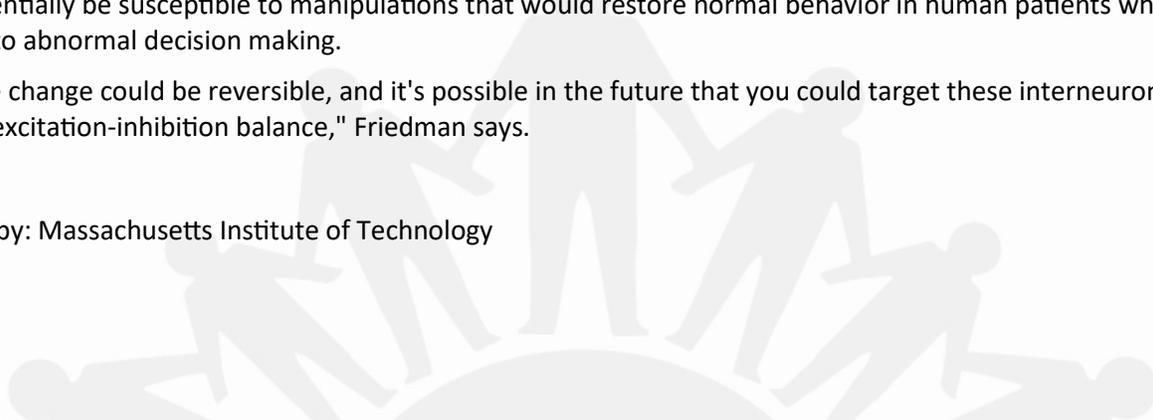
When the animals are stressed, these circuit dynamics shift and the cortical neurons fire too late to inhibit the striosomes, which then become overexcited. This results in abnormal decision making.

"Somehow this prior exposure to chronic stress controls the integration of good and bad," Graybiel says. "It's as though the animals had lost their ability to balance excitation and inhibition in order to settle on reasonable behavior."

Once this shift occurs, it remains in effect for months, the researchers found. However, they were able to restore normal decision making in the stressed mice by using optogenetics to stimulate the high-firing interneurons, thereby suppressing the striosomes. This suggests that the prefronto-striosome circuit remains intact following chronic stress and could potentially be susceptible to manipulations that would restore normal behavior in human patients whose disorders lead to abnormal decision making.

"This state change could be reversible, and it's possible in the future that you could target these interneurons and restore the excitation-inhibition balance," Friedman says.

Provided by: Massachusetts Institute of Technology



# Holiday Tunes

- Away in a Manger
- Choir of the Bells
- Dominick the Donkey
- Frosty the Snowman
- Holly Jolly Christmas
- Jingle Bell Rock
- Jingle Bells
- Let it Snow
- Little Drummer Boy
- Little St Nick
- O Holy Night
- Rudolph
- Santa Baby
- Silent Nigh
- Silver Bells
- The Christmas Song
- The First Noel
- Winter Wonderland



S	G	R	D	A	M	A	F	C	I	F	Z	Z	X	F	K	U	H	J	X
W	A	W	A	Y	O	B	R	E	M	M	U	R	D	E	L	T	T	I	L
C	K	M	B	H	P	L	O	D	U	R	J	T	G	J	I	H	Z	N	O
Z	D	W	T	Z	E	D	S	Y	E	L	C	B	Y	R	T	G	C	G	K
G	N	O	S	S	A	M	T	S	I	R	H	C	E	H	T	I	J	L	L
Q	A	N	K	O	I	D	Y	A	L	F	D	G	I	R	L	N	B	E	D
X	L	S	O	X	Q	R	T	B	T	I	N	W	X	N	E	T	O	B	J
D	R	T	J	T	I	R	H	V	A	A	H	X	I	P	S	N	A	E	W
F	E	I	F	W	V	T	E	C	M	B	E	U	U	B	T	E	S	L	S
N	D	T	U	C	C	H	S	A	Y	A	A	I	N	S	N	L	C	L	Q
B	N	E	V	X	E	G	N	X	I	L	M	T	R	I	I	I	Y	R	W
F	O	L	N	I	A	I	O	Z	T	K	L	I	N	X	C	S	J	O	U
B	W	V	E	S	Y	N	W	K	M	G	F	O	O	A	K	T	E	C	N
G	R	O	K	A	C	Y	M	V	Z	E	U	A	J	Y	S	L	D	K	U
M	E	Q	W	Q	O	L	A	O	H	K	P	I	T	Y	K	B	N	M	Q
G	T	A	P	U	I	O	N	T	S	L	L	E	B	E	L	G	N	I	J
L	N	F	G	C	Z	H	N	S	L	L	E	B	R	E	V	L	I	S	E
I	I	Y	E	K	N	O	D	E	H	T	K	C	I	N	I	M	O	D	S
L	W	B	T	K	S	L	L	E	B	E	H	T	F	O	R	I	O	H	C
U	I	M	U	Y	F	C	J	H	B	X	B	V	R	U	M	Q	C	Y	B

Chicken Scratch MN

## 50 QUESTIONS TO ASK INSTEAD OF “HOW WAS YOUR DAY”

- What made you smile today?
- Can you tell me an example of kindness you saw/showed?
- Was there an example of unkindness? How did you respond?
- Does everyone have a friend at recess?
- What was the book about that your teacher read?
- What's the word of the week?
- Did anyone do anything silly to make you laugh?
- Did anyone cry?
- What did you do that was creative?
- What is the most popular game at recess?
- What was the best thing that happened today?
- Did you help anyone today?
- Did you tell anyone “thank you?”
- Who did you sit with at lunch?
- What made you laugh?
- Did you learn something you didn't understand?
- Who inspired you today?
- What was the peak and the pit?
- What was your least favorite part of the day?
- Was anyone in your class gone today?
- Did you ever feel unsafe?
- What is something you heard that surprised you?
- What is something you saw that made you think?
- Who did you play with today?
- Tell me something you know today that you didn't know yesterday.
- What is something that challenged you?
- How did someone fill your bucket today? Whose bucket did you fill?
- Did you like your lunch?
- Rate your day on a scale from 1-10.
- Did anyone get in trouble today?
- How were you brave today?
- What questions did you ask at school today?
- Tell us your top two things from the day (before you can be excused from the dinner table!).
- What are you looking forward to tomorrow?
- What are you reading?
- What was the hardest rule to follow today?
- Teach me something I don't know.
- If you could change one thing about your day, what would it be?
- (For older kids): Do you feel prepared for your history test?” or, “Is there anything on your mind that you'd like to talk about?” (In my opinion, the key is not only the way a question is phrased, but responding in a supportive way.)
- Who did you share your snacks with at lunch?
- What made your teacher smile? What made her frown?
- What kind of person were you today?
- What made you feel happy?
- What made you feel proud?
- What made you feel loved?
- Did you learn any new words today?
- What do you hope to do before school is out for the year?
- If you could switch seats with anyone in class, who would it be? And why?
- What is your least favorite part of the school building? And favorite?
- If you switched places with your teacher tomorrow, what would you teach the class?

by Leslie Means

# "3 INSTANTLY CALMING CBT TECHNIQUES FOR ANXIETY"

BY MARK TYRRELL

"Very little is needed to make a happy life; it is all within yourself, in your way of thinking."

—Marcus Aurelius, Roman Emperor and ancient inspiration for Cognitive Behavioural Therapy (CBT)

I'm a huge admirer of Aurelius and love his 'Reflections', but in the interests of thinking for myself, I open with the above quote from the famous stoic because in my humble opinion it is just plain wrong. Or at the very least, vastly incomplete.

Let me explain.

"The mind is its own place, and in itself can make a heaven of hell, a hell of heaven." — John Milton, Paradise Lost

People thrive in environments that help them meet their innate needs. The wonderful video below clearly shows how a need-meeting environment protects against chemical addiction and aids happiness and fulfilment. As human beings, we have innate needs, and we have an instinctual desire to fulfil them. And when we don't, we unavoidably suffer.

[Addiction Video](#)

I think it's reassuring to let clients know that their happiness isn't just about what they do inside their minds. It's also about taking action to identify and meet their needs. People who meet their needs in a balanced way are less likely to suffer anxiety.

Just as thirst is a signal that you're not meeting your need for hydration, anxiety is a signal that you're not meeting your needs. Now, this isn't to say that what we do with our minds has no relevance to our happiness or lack thereof. Of course it does. The way we feel is not just a response to the way things really are out there in the world, it's also about how we make sense of that.

In case you thought I was done ranting, I have one other issue with CBT that I need to air before I give you three easy-to-apply CBT techniques for treating anxiety that I have found useful.

## **THE SHAKY THEORY OF CHANGING THOUGHTS TO CHANGE FEELINGS**

Strong emotion arises not after thoughts but before them (1). So it is often easier and more powerful to change feelings than it is to change thoughts. Again, this basic neuroscience contradicts classical CBT. Emotions are a fundamental human characteristic, essential for immediate physical survival. They are more powerful than thoughts, occurring more quickly than cognition and sometimes with no associated thoughts.

Clinical hypnosis is the best way to change feelings (2), and a change in our thoughts is a natural consequence of a change in our emotional responses. For Post-Traumatic Stress Disorder and phobias it's not faulty thinking that is the problem, and the chances of making significant progress through CBT are remote.

But I'm not completely condemning CBT here! I do believe it can be useful for less severe anxiety conditions – but only when used with skilled approaches that work directly to calm feelings.

Here are three simple techniques that focus on the thinking and behaving part of a person to help them take back control.

### **1. Focus on how the feelings will change**

I often remind clients that feelings are fluid and inevitably change. So even if, after all the relaxed mental rehearsal work we've done, they find themselves starting to feel a little anxious, I want them to be thinking about what their feelings will be once they've started to feel better again.

It might help to write down those expected changes in a few words. So if they are nervous about a presentation, they might write down something like:

"I am feeling somewhat nervous, which is natural. When those feelings change I expect to feel calm and clear headed

again."

On top of this I will ask them to imagine what the very first little sign might be that those alterations in feelings are starting to happen. They might tell me that they will find themselves speaking more spontaneously to their audience. It might be helpful to write this down too.

Feelings always shift, and even just remembering that is useful. Having your client write or think about how they expect their feelings to improve and the first little indications that anxiety is morphing into calm take that concept to the next level.

All good psychological interventions help change expectations, and this technique is no exception. The next technique can be applied in lots of ways and is more behavioural than cognitive.

## **2. Chew it over and act normal**

Anxiety is a survival response, not an illness. But it's a response that can go wrong, sometimes to the point that it hinders rather than helps. Like a guard dog that feels like it's helping even as it bites the leg of the friendly mailman, your anxiety response kicks in because it senses a threat, even though that perceived threat may not actually be real. One way to train anxiety to be selective and 'behave' is to give it feedback to let it know: "Thanks, but you're not needed right now."

Because anxiety takes its lead from what clients do, as well as simple emotional pattern matching, then if the client acts in ways they wouldn't in a real emergency, the anxiety will fade away. For example, during an emergency we wouldn't:

Talk softly and calmly

Smile

Salivate

Breathe deeply

Have an open body posture.

If we adopt some of these behaviours, even just one of these behaviours, when we begin to feel stressed, then we alter the feedback to our fear response system (our sympathetic nervous system). We send it a message: "See, if there was a real threat I wouldn't be salivating, talking normally, breathing out for longer than I breathe in."

Something even the most anxious client can easily do is chew gum (or even just imagine they are). This is something you would never be doing during a genuine threat, producing saliva in anticipation of eating.

We don't tend to have the luxury of eating in life-threatening circumstances. So we can encourage our clients to 'act normal' during stressful times to quickly change the feedback loop and switch off anxiety fast. And just knowing they can do this can give them a huge boost in confidence.

Anxiety is all about expectation – which tends to be catastrophic! So let's bring some thought to it next.

## **3. Catch the underlying assumption and chase down logical conclusions**

If someone feels anxious about something, it's because they have a fear of some consequence. But what is that consequence?

If I fear attending a party I might ask myself, "What consequence do I fear?"

I might decide, "I fear meeting new people."

But what is the consequence of that? "They might not like me!"

But what is the consequence of that? "I will feel upset."

But what is the consequence of that? "I will feel that I am unlikable!"

And so on. Then we can go on to, "But how will I deal with that?"

"I will remember people who do like me."

"I will soon forget about the party."

"I will remember that I can be wrong when assuming people don't like me."

I have done this with people who are insecure in relationships by having them describe what it is they fear and begin to see that the relationship breakdown wouldn't be some kind of catastrophic end but a step along the path to something else that wouldn't necessarily be bad.

When someone comes to feel that even if the relationship did end they would and could survive, even thrive, then the fuel for the insecurity dries up.

***So the takeaways here are:***

Strong feelings shape thoughts, not the other way around (although Marcus Aurelius did have some great insights). We can directly help lift and calm feelings so thoughts fall into line with calmer emotionality.

Working to reframe thoughts can be really useful.

We can help people remember that feelings always change and focus on how they expect any current unpleasant feelings to change. This alone can begin to bring about the very expectation they have imagined.

We can teach clients to alter their behavioural feedback so as to send the message to their sympathetic nervous system: "Nothing to report here, no emergency, stand down!" And just knowing this is possible can help clients feel more secure and confident.

Finally, we can enable clients to catch underlying assumptions and follow logical conclusions to think about how they would actually survive – even thrive – if the 'worst' did happen.

Marcus Aurelius also said:

"We ought to do good to others as simply as a horse runs, or a bee makes honey, or a vine bears grapes season after season without thinking of the grapes it has borne".

And we can't say fairer than that.

## Christmas Word Scramble

lelbs

isentpiota

cleand

gigabrndeer

tewhar

scralo

edinerer

gostinck

esokoci

gngego

gliseh

leves

tenessrp

dranlag

sottlemie

sfitg

yalohid

legans

leno

stranemon

credembe

womanns

dancy enca

sliten

eylu

# WHAT IF CONSCIOUSNESS IS NOT WHAT DRIVES THE HUMAN MIND?

BY DAVID A OAKLEY AND PETER HALLIGAN

Everyone knows what it feels like to have consciousness: it's that self-evident sense of personal awareness, which gives us a feeling of ownership and control over the thoughts, emotions and experiences that we have every day.

Most experts think that consciousness can be divided into two parts: the experience of consciousness (or personal awareness), and the contents of consciousness, which include things such as thoughts, beliefs, sensations, perceptions, intentions, memories and emotions.

It's easy to assume that these contents of consciousness are somehow chosen, caused or controlled by our personal awareness – after all, thoughts don't exist until we think them. But in a new research paper in *Frontiers of Psychology*, we argue that this is a mistake.

We suggest that our personal awareness does not create, cause or choose our beliefs, feelings or perceptions. Instead, the contents of consciousness are generated “behind the scenes” by fast, efficient, non-conscious systems in our brains. All this happens without any interference from our personal awareness, which sits passively in the passenger seat while these processes occur.

Put simply, we don't consciously choose our thoughts or our feelings – we become aware of them.

## **Not just a suggestion**

If this sounds strange, consider how effortlessly we regain consciousness each morning after losing it the night before; how thoughts and emotions – welcome or otherwise – arrive already formed in our minds; how the colours and shapes we see are constructed into meaningful objects or memorable faces without any effort or input from our conscious mind.

Consider that all the neuropsychological processes responsible for moving your body or using words to form sentences take place without involving your personal awareness. We believe that the processes responsible for generating the contents of consciousness do the same.

Our thinking has been influenced by research into neuropsychological and neuropsychiatric disorders, as well as more recent cognitive neuroscience studies using hypnosis. The studies using hypnosis show that a person's mood, thoughts and perceptions can be profoundly altered by suggestion.

In such studies, participants go through a hypnosis induction procedure, to help them to enter a mentally focused and absorbed state. Then, suggestions are made to change their perceptions and experiences.

## **Open to suggestion.**

For example, in one study, researchers recorded the brain activity of participants when they raised their arm intentionally, when it was lifted by a pulley, and when it moved in response to a hypnotic suggestion that it was being lifted by a pulley.

Similar areas of the brain were active during the involuntary and the suggested “alien” movement, while brain activity for the intentional action was different. So, hypnotic suggestion can be seen as a means of communicating an idea or belief that, when accepted, has the power to alter a person's perceptions or behaviour.

## **The personal narrative**

All this may leave one wondering where our thoughts, emotions and perceptions actually come from. We argue that the contents of consciousness are a subset of the experiences, emotions, thoughts and beliefs that are generated by non-conscious processes within our brains.

This subset takes the form of a personal narrative, which is constantly being updated. The personal narrative exists in parallel with our personal awareness, but the latter has no influence over the former.

The personal narrative is important because it provides information to be stored in your autobiographical memory (the

story you tell yourself, about yourself), and gives human beings a way of communicating the things we have perceived and experienced to others.

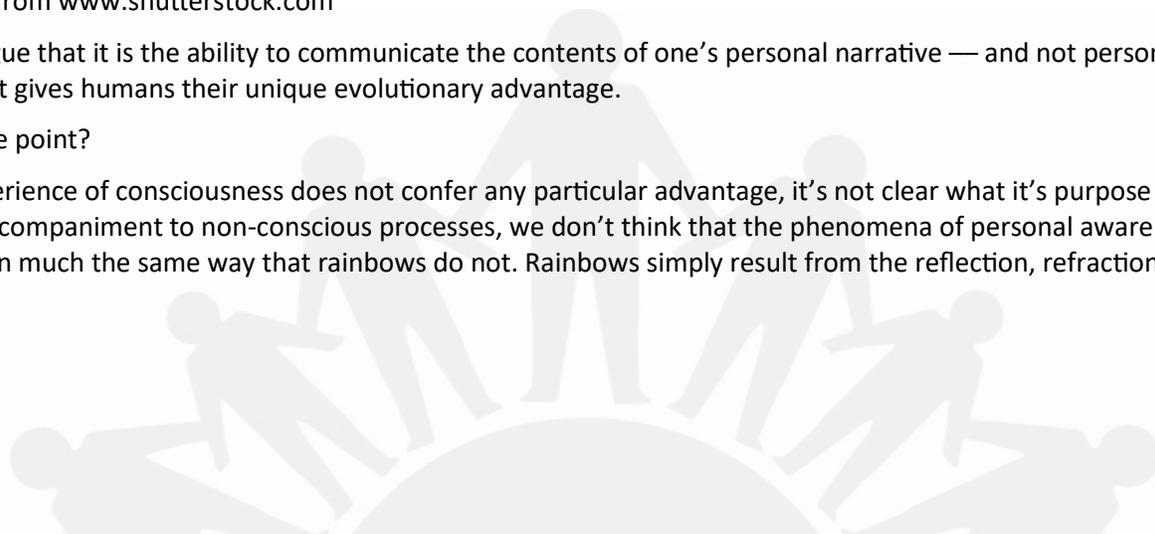
This, in turn, allows us to generate survival strategies; for example, by learning to predict other people's behaviour. Interpersonal skills like this underpin the development of social and cultural structures, which have promoted the survival of human kind for millennia.

Real talk. from [www.shutterstock.com](http://www.shutterstock.com)

So, we argue that it is the ability to communicate the contents of one's personal narrative — and not personal awareness — that gives humans their unique evolutionary advantage.

What's the point?

If the experience of consciousness does not confer any particular advantage, it's not clear what its purpose is. But as a passive accompaniment to non-conscious processes, we don't think that the phenomena of personal awareness has a purpose, in much the same way that rainbows do not. Rainbows simply result from the reflection, refraction and dis-



## Helping School-Aged Children Overcome their Worries and Fears

Wednesday, January 17<sup>th</sup>, 2018

6:30pm – 8:30pm

**What:** A workshop for caregivers to provide strategies and guidance in helping school-aged children manage their worries and fears.

**Where:** 1163 Richmond St., Child and Youth Development Clinic (CYDC)

**Details:** \$10 for participants. Max. 30 participants. Presentation with breakout groups to focus on specific worry/skill areas. Discussions provided by CYDC Psychology Graduate Students and Dr. Colin King, Psychologist.

**Please RSVP:** Leesa Couper – [lmcouper@uwo.ca](mailto:lmcouper@uwo.ca)

Children First for a Stronger Community

Western



Child and Youth  
Development Clinic

# Helping Children and Youth Sleep Better at Night

**Tuesday, January 23, 2018**

**6:30pm – 8:30pm**

**What:** A workshop for caregivers to provide information about child and youth sleep problems and basic strategies to help children, youth, and families manage sleep difficulties.

**Where:** 1163 Richmond St., Child and Youth Development Clinic (CYDC)

**Details:** \$10 for participants. Max. 30 participants. Presentation focusing on common developmental sleep issues & strategies for improved sleep. Followed by breakout groups for specific age groups. Discussions provided by Adam Newton (Graduate Student Clinician & Pediatric Sleep Researcher) and Dr. Colin King (Psychologist).

**Please RSVP:** Leesa Couper – [lmcouper@uwo.ca](mailto:lmcouper@uwo.ca)

Children First for a Stronger Community



## WISE WORDS - A Program for Struggling Spellers

**February 6 - April 10, 2018**

**5:00-6:00 pm or 6:00-7:00 pm**

**What:** A program for children in grades 4 to 8 aimed at understanding why words are spelled the way they are. Come to Wise Words to learn more about the wisdom of the English spelling system.

**Where:** 1163 Richmond St., Child and Youth Development Clinic (CYDC)

**Details:** \$180.00 per child. Max. 20 participants - please indicate your time slot preference. Instruction will be provided by Graduate Student Clinicians in the Speech and Language Pathology program under the supervision of Lisa Archibald, Associate Professor, School of Communication Sciences & Disorders, and Department of Psychology.

**Please RSVP:** Leesa Couper – [lmcouper@uwo.ca](mailto:lmcouper@uwo.ca)

Children First for a Stronger Community



**Professional Development / InService**

Leamington  
1st and 3rd Wednesday

Parkhill  
2nd and 4th Wednesday

Sept 20	Sept 27
Oct 4	Oct 11
Oct 18	Oct 25
Nov 1	Nov 8
Nov 15	Nov 22
Dec 8 (Christmas Luncheon)	Dec 13 (Christmas Luncheon)

**2018**

Jan 17	Jan 10
Feb 7	Jan 24
Feb 21	Feb 14
March 7	Feb 28
March 21	March 14 (March Break)
April 4	March 28
April 18	April 11
May 2	April 25
May 16	May 9
June 6	May 23
June 20	June 13

**MERRY CHRISTMAS**

**HAPPY HOLIDAYS**

**SEASON'S GREETINGS**

**HAPPY HANUKKAH**

**JOYOUS KWANZAA**