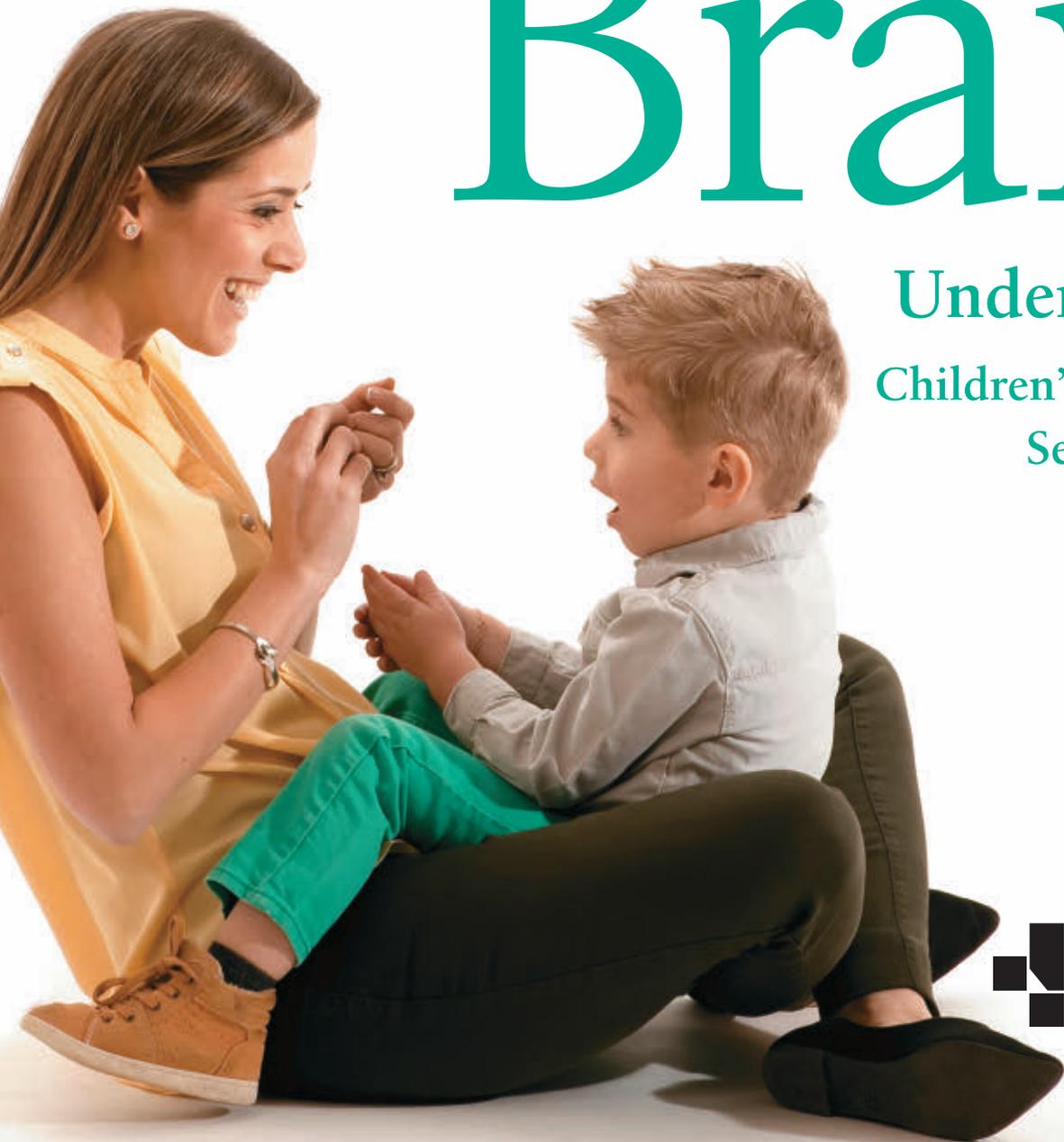


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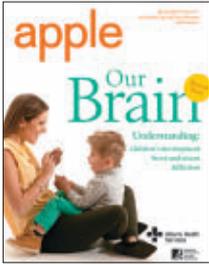
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COVER STORY:

Mom Dina Ottoni Battistessa and son Stefano Battistessa were photographed for *Apple* by George Webber at the Akidemy Preschool in Calgary



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Finding relief from back pain

Chiropractors offer non-surgical options

Every 60 seconds, an Albertan seeks treatment for a musculoskeletal problem such as back pain. Many people dismiss back pain as being something that needs to be endured, but a chiropractor can often help effectively treat it.

Back pain can affect anyone at any age. And while it may resolve on its own over time, it can also become chronic and lead to serious problems. If pain stemming from an injury or daily activity persists or worsens, it's a good idea to see a health-care provider.

"When back pain is the result of an injury, it's very important that patients seek proper treatment as soon as possible," says Dr. Brian

Gushaty, an Edmonton chiropractor and registrar of the Alberta College and Association of Chiropractors. "Outcomes are far better with early intervention."

Surgery is usually only recommended to treat back pain if the condition is serious or after all other non-surgical options have been exhausted. Chiropractors use non-surgical techniques such as manual adjustments of the spine and other joints, hot or cold therapies, and methods involving laser, ultrasound, radio shockwave, acupuncture and soft tissue manipulation.

Chiropractors also work with other health-care providers, referring patients to specialists when needed.

"You don't need to live with back pain," Gushaty says. "Your chiropractor has many ways that can help you to feel better and return to a more comfortable, active life."

More than half of Albertans have seen a chiropractor. If you're looking for a chiropractor, ask friends, family, and colleagues for a recommendation. You can also visit albertachiro.com to find a chiropractor in your area.

— Elizabeth Chorney-Booth

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Revisiting brain development

Welcome to *Apple's* second issue on brain development.

Long before we're born and throughout early childhood, a combination of our genes and our experiences shapes how our brain will develop and work throughout our lives.

Healthy childhood development, says Dr. Judy Cameron of the University of Pittsburgh, is the foundation for educational achievement, economic productivity, responsible citizenship and lifelong health, leading ultimately to successful parenting of the next generation, strong communities and a healthy economy.

Given the incredible and far-reaching potential of brain development, we want to give our readers more insight into it. We've put together more than a dozen original stories, drawing from a growing body of knowledge from world-class scientists and researchers.

This same body of knowledge has been the focus of a series of symposia by the Alberta Family Wellness Initiative (our partner in this special issue) to take the science of brain development into the community. Inspired by what they've learned at



Photo: George Webber

the symposia, people in Alberta's health care, child care, education, social services and legal systems are helping improve the lives of children and families across the province. For example, *Passing a New Judgment* (page 73) looks at how Judge Ted Carruthers considered brain development in his decision about whether a baby girl would be reunited with her mother or adopted by another family.

Other stories give practical and everyday ways to build brains, such as *Serve and Return: The Building Block of Brain Architecture* (page 37) and *Air Traffic Control Helps Kids Soar* (see page 52).

A central message in many of our stories is that every child's brain

development depends on caring and stable relationships with adults: parents, aunts, uncles, grandparents, childcare professionals, teachers and neighbours.

It takes everyone in the community to give children the nurturing experiences they need for healthy and sturdy brain development. When we build better brains, we build a better Alberta. [a](#)

— Terry Bullick & Michelle Gagnon

Terry Bullick is the publisher and editor of *Apple* and Michelle Gagnon is the vice president and chief operating officer of the Alberta Family Wellness Initiative.

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For more information on where to find *Apple* magazine, or to have it delivered to your door, visit applemag.ca.

A website with brain insight

The Alberta Family Wellness Initiative website (albertafamilywellness.org) offers all sorts of brain-building resources about our fascinating brains.

Moms and dads, families and friends, health-care and childcare professionals and researchers and policy makers can find in-depth information about many of the topics in this issue of *Apple*—and more. Topics include the core story of brain development, the effects of stress on brain development, and the links between early brain development and mental health and addictions later in life. And for those who want to take a deeper dive, see the presentations from world-class experts.

Don't miss the new series of commercials this spring aimed at seniors about serve and return. And a new video will talk to youth about addiction.

The content-rich website also includes games, videos, podcasts and research papers and reports.

New information is posted all the time; to stay in touch, sign up for the AFWI's newsletter at bit.ly/1AfxwUQ.

— Scott Ranson



Illustrations: Kyle Metcalf

How to read a book to your child

Grab a book, find some light and spend some time together. Reading to your child is that simple and has big payoffs. She'll become more curious. She'll learn. And she'll be inspired to keep learning over a lifetime.

With help from the Calgary Public Library, we offer these tips for reading to your child:

Start early. Begin when she's a baby. She'll like it and it helps build her brain architecture.

Take it slow. Let her look at the whole page, words and pictures alike. Watch as she ponders. Let her touch and turn the pages.

Ask questions. Who's this? What's she thinking? What's going on? What will happen next? Help your child analyze and imagine.

Choose books you enjoy. If you like a story, chances are your child will too. Get ready to wear out your favourites. Find new stories at your local library.

Read any time. You can make reading a fun habit you do together; bedtime is a natural time to read. You can also read on impulse, to switch up a mood, or to pass time during family holidays, rainy mornings or snuggly afternoons.

Read anywhere. Inside on a snowy night. Outside on a sunny day. In a tent, out of the rain. You get the idea. And your child will, too.



Log in and feel better

You can pay your bills online, you can buy your shoes online and now you can learn to better manage your health online. Alberta Health Services has launched the Better Choices, Better Health® online program, making it easier for Albertans to take this free workshop—and feel better.

Designed for Albertans living with chronic illnesses, Better Choices, Better Health® helps people learn skills such as communicating with health-care providers, managing stress and pain, and improving nutrition and activity. Once program users sign up, they can log in at their convenience two or three times a week, for a total of about two hours a week. Interactive sessions are posted weekly for six weeks and are available through any computer with an Internet connection.

—Tara Grindle

For information about Better Choices, Better Health®, visit: albertahealthservices.ca/bcbh.asp.

Busting through an asthma barrier

Every year, some 146,000 Canadians with asthma end up in emergency departments when their medication doesn't seem to work. About 500 of them die.

Part of the problem is that asthma drugs work too slowly in emergencies. The drugs are blocked by thick, concrete-like mucous plugs in the lungs of those with asthma. Alberta Innovates – Health Solutions researchers Drs. Francis Green and Richard Leigh, professors at the University of Calgary, are working on a new medication they hope will:

- Break through mucous plugs
- Open airways quickly
- Allow existing drugs to reach the lungs.

“We developed this to save lives,” Green says. He adds that their research could also reduce emergency visits and cut health spending by millions of dollars.

— Janet Harvey

Clinical trials for the drug, known as S-1226, are planned. For more information, visit solaeromed.com.



FACE
A RMS
SPEECH
TIME

FAST action around strokes

Every second is important when someone is having a stroke. The Canadian Heart and Stroke Foundation says FAST action is needed when someone is having a stroke.

Face—is it drooping?

Arms—can you raise them?

Speech—is it slurred or jumbled?

Time—to call 9-1-1 right away.

Remembering FAST can make a difference. A stroke requires immediate professional help. Some effects of stroke can be reversed, but only if the stroke is treated right away.

These simplified stroke signs and symptoms will help people better recognize when someone is having a stroke,” says Shy Amlani, program manager with Alberta Health Services’ Edmonton Zone Stroke Program.

Ironing out a dementia diagnosis

Our brains develop over time. They also age and degenerate. They can do this in normal ways or in ways that may mean the onset of a disease, such as dementia. Alberta Innovates – Health Solutions researcher Dr. Richard Frayne is working on a new way to diagnose Alzheimer’s disease and other forms of dementia.

“Iron collects in the brain as it ages normally,” Frayne says. But abnormal iron buildup can also mean something else is going

on. Working with Dr. Eric E. Smith, Frayne uses magnetic resonance imaging (MRI) to measure iron in people’s brains. It is a non-invasive way to look for disease and measure its progress. It may also help predict dementia before patients show symptoms. Frayne and Smith are professors at the Hotchkiss Brain Institute, University of Calgary, and members of the Seaman Family MR Research Centre.

— Janet Harvey

Correction

Due to an editing error, the photo credit on page 41 of the Winter 2015 issue was incorrect; the correct credit is Sarah Vaughan.



Eating on the job

If you work, you likely spend about 60 per cent of your waking hours and eat at least one meal on the job.

As part of Nutrition Month in March, Alberta Health Services’ dietitians offer these tips to help you shift to healthy eating at work.

Fuel your workday

- Energize with a healthy mid-shift meal such as a wrap or sandwich paired with vegetables.
- If eating out, save half of your order to take home for a meal later.

Rethink your drink

- Keeping hydrated helps you stay alert. Add zing to water with lemon slices or mint leaves.
- Limit drinks such as regular pop, sports drinks, hot chocolate or slushy drinks.

Survive the mid-shift slump

- Choose healthy foods that have protein at meals and breaks.
- Take a 10-minute or longer walk during breaks.

—Kristin Bernard

For more healthy eating tips, visit HealthyEatingStartsHere.ca.

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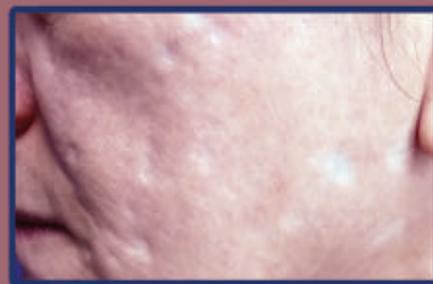


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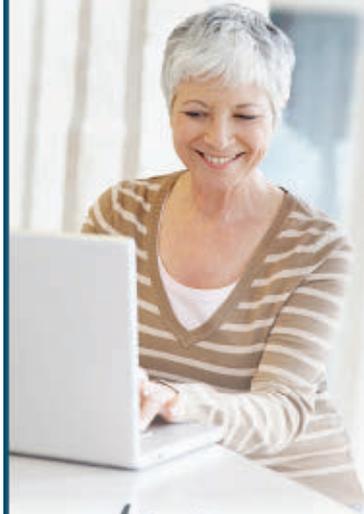
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Seeing your vision clearly

Eye care important through all ages and stages

Our eyes take us through all ages and stages of our life. Any number of factors can affect our eye health and ability to see, especially as we grow older. When detected early, many vision problems can be successfully treated.

The Canadian Pediatric Society recommends babies be screened for congenital cataracts as early as six months of age and preschoolers be tested for “lazy” or misaligned eyes before the age of five. Once in school, have your children checked every 18 to 24 months for problems such as myopia (near-sightedness), which often begins to appear around the age of nine.

Vision can change throughout adulthood, at times the result of

failing to regularly rest your eyes when reading or using a computer or tablet, ultraviolet (UV) ray damage, or poor general health. As we get older, a number of problems become more common, such as presbyopia (the condition that makes reading glasses necessary), cataracts and macular degeneration. Healthy eating and UV protection can help reduce the risk of some of these problems.

“So many things that affect the eyes are lifestyle related,” says Dr. Howard Gimbel of the Gimbel Eye Centre, which is celebrating its 50th anniversary this year.

If focusing problems exist or develop, the solutions go beyond prescription glasses to include surgical treatments such as LASIK,

PRK (photorefractive keratectomy), and implantable corrective lens to treat myopia and astigmatism. As well, refractive lens exchange for patients who need thick glasses, KAMRA autofocus to treat presbyopia and cataract removal. Consult an ophthalmologist to explore your options.

Whatever your age, family history or current eyesight, your eyes deserve to be taken seriously. As well as being connected to your overall health, seeing clearly plays a huge part in your quality of life.

— Elizabeth Chorney-Booth

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Helping with life after vision loss

CNIB works with 10,000 Albertans every year

We see the world through our eyes. But what happens to our world when we can't see?

CNIB, formerly known as the Canadian National Institute for the Blind, helps about 10,000 Albertans every year with partial or total vision loss. Its programs and services help people of all ages who are blind or have vision loss regain their independence by learning how to do everyday activities, from walking with a white cane and using technology to ironing a shirt to riding the bus.

Other services include braille lessons, how-to videos and career planning. CNIB also offers peer support groups and information for friends and family of those with vision loss. It works with each person to make sure anyone experiencing vision loss can continue to do what is important

and enjoyable to them.

“Depending on the degree of a client’s vision loss, the program offerings and the path to rehabilitation are different,” says John McDonald, executive director of CNIB Alberta and Northwest Territories.

“Developing the ability to live with vision loss is very different for kids who have vision loss versus senior citizens who develop vision loss at a later stage in life,” McDonald says. “So we develop personalized rehabilitation solutions based on the individual.”

The CNIB has six offices in Alberta; for locations and more information, visit cnib.ca/alberta or call 1-800-563-2642.

— Yasmin Jaswal

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Preventing vision loss

Your eyes are like the rest of your body: they benefit from a healthy lifestyle. CNIB says healthy eating and active living are good first steps to maintaining your overall well-being and your eyesight.

Other steps to protect your eyesight include wearing UV-blocking sunglasses and having good lighting when you’re reading, studying or working, advises MyHealth.Alberta.ca.

Almost 75 per cent of vision loss is preventable or treatable, making regular visits to an optometrist or ophthalmologist another important step in protecting your eyesight.

For more about preventing vision loss, visit MyHealth.Alberta.ca.

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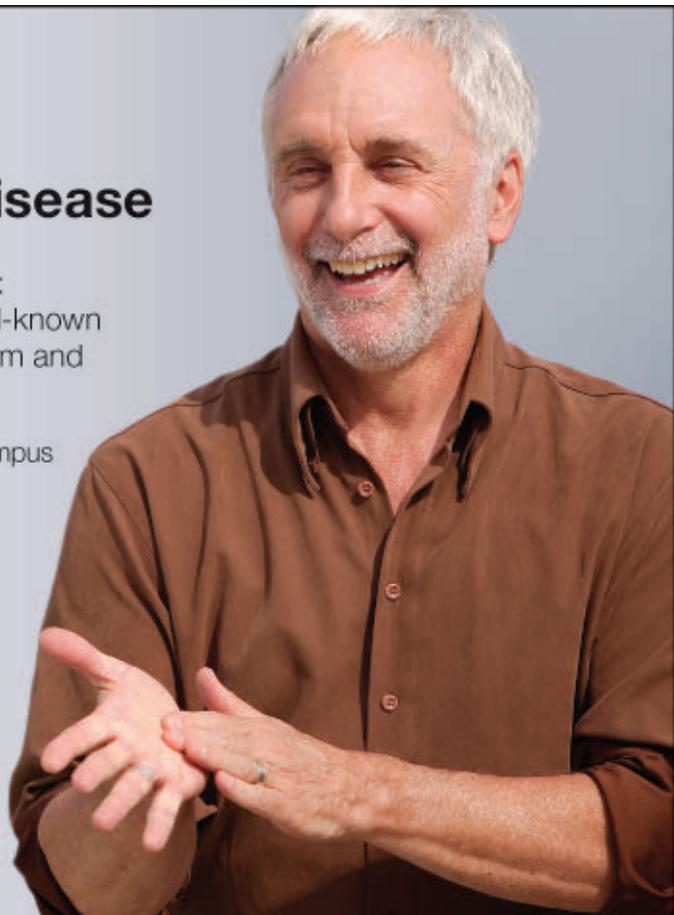
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Taking the bite out of oral cancer

Looking for a new treatment with fewer side effects

After being diagnosed with oral cancer, Sheryl Miller underwent surgery in November 2013 to replace one-third of her tongue with tissue from her wrist. Today Miller is cancer-free.

The Canadian Cancer Society estimates that 4,100 new cases of oral cancer were diagnosed in Canada in 2013. An estimated 1,150 of those Canadians diagnosed in 2010 will die from the disease. Survival rates for the disease haven't changed in the past four decades, and only half of patients live five years or longer after treatment.

Oral cancer treatment can have several side effects, such as swelling and pain in the tongue (making speech difficult or impossible) as well as the neck and arms, caused by salivary and lymph glands being removed.

Alberta Innovates – Health Solutions researchers Drs. Karl Riabowol, Joseph Dort and Don Morris are working on a way to treat oral cancer that has fewer side effects.

Dort, Morris and Riabowol, who is a research scientist, are University of



Illustration: Jori Bolton

Calgary professors. Dort, a surgeon, and Morris, a cancer physician, are members of the Cancer Strategic Clinical Network. Their work is focused on a tumour-suppressing gene that Riabowol discovered in the 1990s. They want to use a virus to deliver this gene—which acts like a brake on cell growth—to oral cancer cells. The possibility of using a virus as a delivery system was first uncovered in Alberta. This method preserves healthy cells, unlike chemotherapy and radiation therapy, which kill them.

“If you infect cancer cells with a

high concentration of viruses, the tumours can't handle it as well as normal cells,” Riabowol explains. This approach is already in clinical trials for a number of cancers, but it works even better when combined with the tumour suppressor. “The idea is to hit cancer cells with a double whammy.”

The team's approach has already shown promising results. If the treatment is successful, it could also work on skin cancers, which are common in Alberta.

— Janet Harvey



FOCUSING ON ABILITIES

Focusing on abilities

Research project looks at the strengths of preschoolers with autism spectrum disorder



Image by iStock and Keili Pollock

When Tamara Germani was an occupational therapist helping children with autism spectrum disorder (ASD) relate to other kids, she noticed parents and teachers tended to focus on what kids couldn't do—rather than what they could.

She vividly remembers the day a boy asked her, "Am I fixed yet?" "It was heartbreaking," Germani says. In that moment, she realized children with ASD needed to be helped in a more positive way.

Now an Alberta Innovates – Health Solutions (AIHS) clinician fellow

completing a PhD in pediatrics, Germani is the principal investigator of a research project looking at how preschoolers with autism get along with others.

In the first part of the project, Germani is surveying families, educators and clinicians (including occupational therapists, physicians and psychologists) from across Canada. "This will help us get a national perspective on what is social participation for preschool children with autism," she says.

Next, she will help develop a new classification system to identify

children's skills (such as playing with or beside another child, sharing toys and talking with others), then ask caregivers dealing with autism to comment on the system.

"It will give us a snapshot, in a formal way, of a child's abilities—of their own toolbox—that caregivers can tap into," Germani says. The system could also help kids realize they're OK just as they are. "I think it's going to promote more positive awareness and . . . that will be picked up and understood by children." 

— Caitlin Crawshaw

Unravelling obesity

Two Alberta research projects have taken on one of the greatest health challenges of our time: obesity. **Scott Rollans** shares the details 



Obesity is one of the greatest health challenges of our time. It's a preventable disease increasing at a dizzying speed: Canada's obesity rates tripled between 1985 and 2011. By 2019, more than one in five Canadian adults are expected to be obese, meaning they'll have so much body fat that their health is in danger.

The disease has long been thought to put people at a higher risk of several serious diseases and conditions, ranging from high blood pressure, heart disease and type 2 diabetes to gallbladder disease, osteoarthritis, sleep apnea and some cancers (breast, colon and uterus).

Researchers funded by Alberta Innovates – Health Solutions (AIHS)

are discovering how obesity affects us in other ways. What they learn will help offer the care, information and support needed to deal with the disease and help all Albertans be healthier.

Bigger bodies, but smaller muscles

Recent studies suggest obesity can actually cause our skeletal muscles—the muscles that attach to our bones, support our weight and help us move—to shrink. This means that even though people who are obese need to carry more weight, they must do so with less muscle.

At the same time, chemicals in and around muscles in people who are obese seem to age muscle fibres.

“These changes in the skeletal muscle can make everyday tasks

significantly more strenuous for someone who is obese, making it harder to live a healthy lifestyle,” says AIHS-funded researcher Graham MacDonald.

MacDonald is working with Dr. Walter Herzog at the University of Calgary to better understand obesity's effect on the muscles of children and teens who are overweight. The first part of their study looks at young, obese rats and the changes in their skeletal muscles. The researchers will then analyze the rats in young adulthood, middle age and beyond.

Later, they will try different methods, such as strength training or physical activity, to see if they offset muscle changes caused by childhood obesity.

MacDonald and Herzog hope their research can be applied to people so that childhood obesity does not lead to lifelong physical problems. “How



do we help people once they become obese?" MacDonald wonders. "What interventions will help them get back into a healthy state?"

Making a good tool better

The Canadian Obesity Network created a step-by-step framework called the 5As of Obesity Management (obesitynetwork.ca/5As) to help health professionals treat patients with obesity. AIHS is funding a project to strengthen the 5As framework and find out how well it works.

Obesity is a complex condition that has many possible causes, explains AIHS-funded researcher and Diabetes, Obesity and Nutrition Strategic Clinical Network member Dr. Arya Sharma, a professor of medicine and chair in Obesity Research and Management at the University of Alberta. "The factors could be anything—from psychology,

to medication, to genetics, to other diseases a patient has."

Sharma sees Alberta's primary care networks as good places to help people deal with the complexities of obesity. They see patients over the long term, and their multidisciplinary teams can cope with a range of causes and health effects.

The 5As give health professionals in the primary care networks a solid starting point for treating obesity, says Sharma, but he would like to do more. "It's not enough to hand people a sheet of paper and tell them to follow the instructions."

As part of the study, Sharma and teammate Robin Anderson, a dietitian and obesity expert at the Edmonton Southside Primary Care Network, are working with

25 primary care networks. They'll give half of them intensive training sessions in the 5As, including talks from experts and group discussions. The other primary care networks will receive no special training. The researchers will then compare the treatment and progress of patients in both groups.

Anderson wants to show special training will help primary care networks give confident, consistent and co-ordinated support to Albertans who are overweight. "We're hoping that, through the study, we'll be able to identify some key components that really enhance primary-care weight management." 



istockphoto.com



For the kids

Alberta's researchers are working to improve the health of children. **Caitlin Crawshaw** looks at three projects underway in the province





The foundation for lifelong health is built in childhood. It's why parents feed their children broccoli and turn the lights out at 8 p.m. It's also why schools get kids moving with recess and gym class and communities offer a wide range of children's health services, from well baby clinics to vaccinations. And it's why the province is funding the following three children's health research projects.

Keeping health-care workers informed with social media

These days, everyone seems to be using social media—nurses and doctors included. For Dr. Lisa Hartling, an Alberta Innovates – Health Solutions researcher who focuses on child health, social media seemed like a good way to connect health-care providers to research.

“We know there's more and more research out there, so it's hard to stay up-to-date about what's new,” Hartling says. She began a project a couple of years ago to look at how social media is being used in health care. “Our current project evolved from that. Our thinking, and the widespread thinking on this, is that everyone's on social media these

days. It's popular, everyone's using it, so let's use it—but also evaluate it.”

Working with a team of researchers that includes co-principal investigator Dr. Amanda Newton in the University of Alberta's Department of Pediatrics, Hartling is examining how Twitter and blog posts can be used together to share new research. The team began a blog in November 2014 (cochranechild.wordpress.com), posting weekly about children's health; for example, on managing pain, anxiety or the common cold. Experts outside of the research team also contribute. Hartling says health-care providers have told them, “Tell me the bottom line. What do I use to treat a child with this condition?”

The blogs are promoted on Twitter and users can take part in a journal club—a scheduled online discussion.

The research team then collects responses to posts and tweets by tracking website clicks, retweets, followers and more.

Ultimately, the research will help health-care professionals stay informed about research trends—something that will help Alberta's kids receive the most up-to-date and effective treatments possible.

Ultimately, the research will help Alberta's kids receive the most up-to-date and effective treatments



Rating health promotion strategies

With childhood rates for obesity and inactivity on the rise, many health strategies are used to promote healthy foods and active living.

These strategies include media public awareness campaigns, taxes on sugary foods, school nutrition policies, food labelling and much more. But which make the most of taxpayer dollars?

Alberta Innovates – Health Solutions public health researchers Drs. Paul Veugelers and Arto Ohinmaa are evaluating several dozen health promotion strategies in Alberta to find out. “We want to look at outcomes in terms of health and economics,” Veugelers says.

By the third year of the five-year project, researchers will have a good idea of what the province is spending money on and how each strategy measures up to a number of criteria, including mental health, learning, obesity and heart health. They’ll share their findings with policy-makers.

“The idea with this project is to present a broad, big-picture look at the whole problem,” Veugelers says. Information collected will help politicians make “fully informed decisions” about how the province

invests in health promotion.

The work is both complex and important. “If you can get kids to eat healthy, you’ll likely put them on lifelong, healthy eating trajectories,” Veugelers says, noting the same is true for active living. Together, they can reduce the risks of many illnesses and diseases in childhood and adulthood.

Only 27 per cent of Canadian children meet Canada’s Food Guide requirements for fruit and vegetables and 14 per cent meet Canada’s physical activity guidelines.

Although the study is in its early stages, Veugelers says, “My gut tells me we need to do a wide spectrum of things—and that we need to ramp up the intensity.”

Open wide and say zzz

A project at the University of Alberta is looking at whether dentists can help identify sleep apnea and other sleep-related breathing disorders in children.

“Since dentists are seeing children more often than doctors, we have the opportunity to ask parents if children are having trouble with sleeping,” says Alberta Innovates – Health Solutions researcher Dr. Paul Major, a professor of dentistry.

Dentists generally see children

every six months, whereas children over a year old may only see doctors once a year for their annual physical (plus visits in between for any illnesses or issues). If a child is having trouble sleeping, a dentist can look for risk factors for sleep apnea or other breathing problems. This can include examining the tonsils, bad break they are developing properly. If the upper or lower jaw is smaller than normal, kids can have a hard time breathing at night.

When children see a dentist regularly, dentists can gather useful information to catch or prevent problems. “We have the opportunity to monitor children at risk of this particular problem,” Major says.

Research shows that anywhere between 1.5 to four per cent of children have sleep-disordered breathing. “It’s pretty common, actually, and it can have significant long-term health problems for children,” Major says.

When children don’t get the sleep they need, they can have behavioural or learning problems, and can be misdiagnosed with attention deficit hyperactivity disorder (ADHD). Not enough deep sleep also stops kids’ bodies from producing enough of a hormone that helps them grow, potentially stunting their growth.



Emerging evidence shows that children with sleep apnea may be at increased risk of developing other major health problems such as diabetes and heart disease.

Major and a team at the University of Alberta are assessing kids with sleep-related breathing problems at the Interdisciplinary Airway Research Clinic. Team members include orthodontists, radiologists, pediatric pulmonologists, students, pediatric ear, nose and throat specialists and other related professionals. “We’re trying to help dentists understand their role in managing these patients,” he says. “We’re not suggesting dentists would manage this concern by themselves, but they’re an important part of the team.” 

When children don't get the sleep they need, they can have behavioural or learning problems

IRON LADEN



Iron is an essential part of a healthy diet, helping get oxygen to our bones, muscles and connective tissues. Getting enough of the mineral is especially important for pregnant women and it's vital for brain development and function later in life. Too little iron can result in fatigue and difficulty concentrating. Fortunately, it's pretty simple to get enough of it into your breakfast, lunch and dinner.

Good sources of iron include beef, lentils, beans, oats and blackstrap molasses. As well, grain products in Canada are fortified with iron. Our bodies absorb iron from animal sources well; to help absorb iron from plant sources, eat with meat, chicken, fish or a source of vitamin C, such as citrus fruits, strawberries, broccoli, tomatoes and peppers. Such a wide variety of iron-rich foods makes it easy to get the iron you need throughout the day.

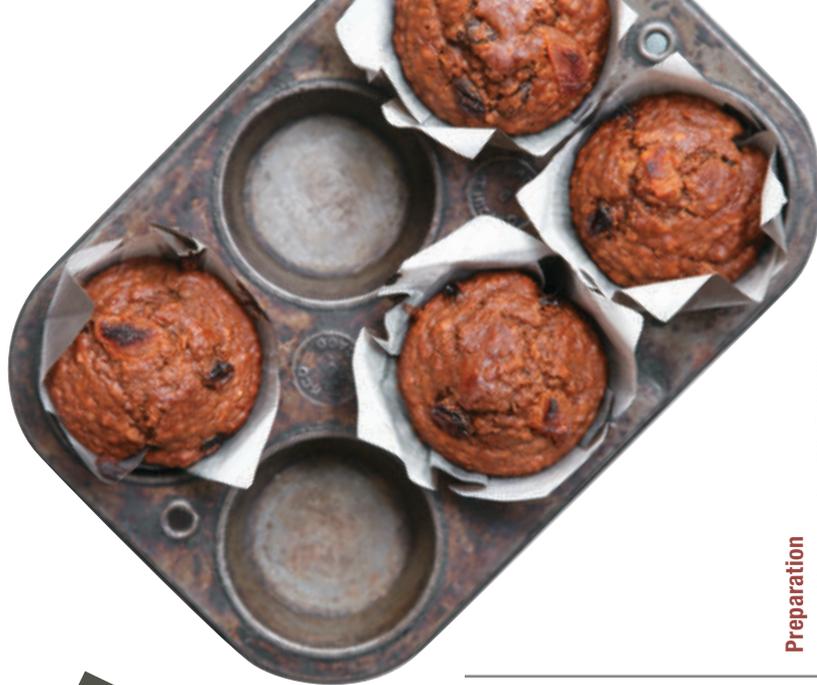
Recipes and food styling by Julie Van Rosendaal
Photos by Shallon Cunningham, Salt Food Photography

Oatmeal muffins with molasses

Sweetened with molasses, these light-textured but hearty oatmeal muffins also incorporate dried fruit. They can be frozen and individually wrapped to grab and go in the morning or stash for a healthy snack later in the day.

Ingredients

- 1 cup (250 ml) all-purpose flour
- 1 cup (250 ml) whole wheat flour
- 2 cups (500 ml) old-fashioned or quick-cooking oats
- 1 Tbsp (15 ml) baking powder
- 1 tsp (5 ml) cinnamon
- 1/4 tsp (1 ml) salt
- 1 3/4 cups (440 ml) 1% milk
- 1/2 cup (125 ml) dark molasses
- 1/3 cup (85 ml) packed brown sugar
- 1/4 cup (60 ml) canola oil
- 2 large eggs
- 1/2 cup (125 ml) dried fruit, such as raisins, chopped dates or apricots



Preparation

Preheat the oven to 400°F (200°C).

In a large bowl, stir together the flours, oats, baking powder, cinnamon and salt. In another bowl, whisk together the milk, molasses, brown sugar, oil and eggs; add the wet ingredients to the dry and stir a few strokes, then add the dried fruit and stir until just blended.

Spoon into muffin tins with paper liners or sprayed with nonstick spray. Bake for 20-25 minutes, until golden and springy to the touch.

Makes about 24 muffins; 24 servings.

Curried beef with spinach

A long, slow cooking time makes this beef melt-in-your-mouth tender. Natural peanut or almond butter adds richness while boosting iron content, as does the fresh spinach.

Ingredients

- 1 tsp canola or olive oil
- 3/4 lb (375 g) lean stewing beef or simmering steak, cubed
- 1 cup thinly sliced onion
- 2 garlic cloves, crushed
- 1 Tbsp (15 ml) fresh ginger, grated
- 2-3 tsp (10-15 ml) curry powder or paste
- 2 cups (500 ml) low-sodium beef or chicken stock
- 3-1/2 oz. (100 ml) light coconut milk
- 1/4 cup (60 ml) natural peanut or almond butter
- 1 cup (250 ml) packed baby spinach
- Juice of one lime

Preparation

Preheat the oven to 300°F (150°C).

Heat oil in a medium ovenproof pot or braising dish set over medium-high heat. Pat the beef dry with paper towel and brown in batches, setting it aside in a bowl as you go. Add the onion to the pan and cook for a few minutes, until it softens and starts to turn golden; add the garlic, ginger and curry powder and cook for another minute.

Return the beef to the pan and add the stock; reduce the heat and bring to a simmer, stirring to loosen any browned bits in the bottom of the pan. Cover and roast in oven for 2-1/2 to 3 hours, until the meat is very tender.

Remove from the oven and return to the stovetop on medium heat. Add the coconut milk and peanut butter and stir until melted and smooth. Add the spinach and lime juice and cook for another minute or two, until the spinach wilts.

Serve hot with steamed brown rice or quinoa. Serves 4.

The lowdowns

Using the Alberta Nutritional Guidelines, these recipes are: Choose most-often ■■■ Choose sometimes ■■□

Lentil salad Per serving 320 calories, 15 g total fat, (2 g saturated fat, 0 g trans fat), 65 mg sodium, 37 g carbohydrate, 11 g protein, 9 g fibre, 26% DV for iron. ■■□

Curried beef with spinach Per serving: 300 calories, 15 g total fat (4 g saturated fat, 0 g trans fat), 340 mg sodium, 11 g carbohydrate 2 g fibre, 29 g protein, 19% DV Iron. ■■□

Oatmeal muffins with molasses Per serving: 140 calories, 4 g total fat (0 g saturated fat, 0 g trans fat), 110 mg sodium, 25 g carbohydrate, 4 grams protein, 2 g fibre, 13% DV for iron. ■■■

Tangy lentil salad

A particularly good source of protein, lentils simply simmer on the stovetop—no soaking required—and can be added to soups or side dishes, like this hearty, wilt-proof salad.

Ingredients

- 1 cup (250 ml) dried small green, blue or du Puy lentils
- 1 garlic clove, peeled
- 1 bay leaf
- 2 Tbsp (30 ml) balsamic vinegar
- 1 tsp (5 ml) grainy mustard
- Freshly ground black pepper
- 1/4 cup (60 ml) extra-virgin olive oil
- 1 carrot, finely diced
- 1 celery stalk, finely diced
- 1/4 cup (60 ml) red onion, finely chopped
- 1 cup (250 ml) flat-leaf parsley, roughly chopped (discard stems)
- 1 cup (250 ml) cherry or grape tomatoes, halved

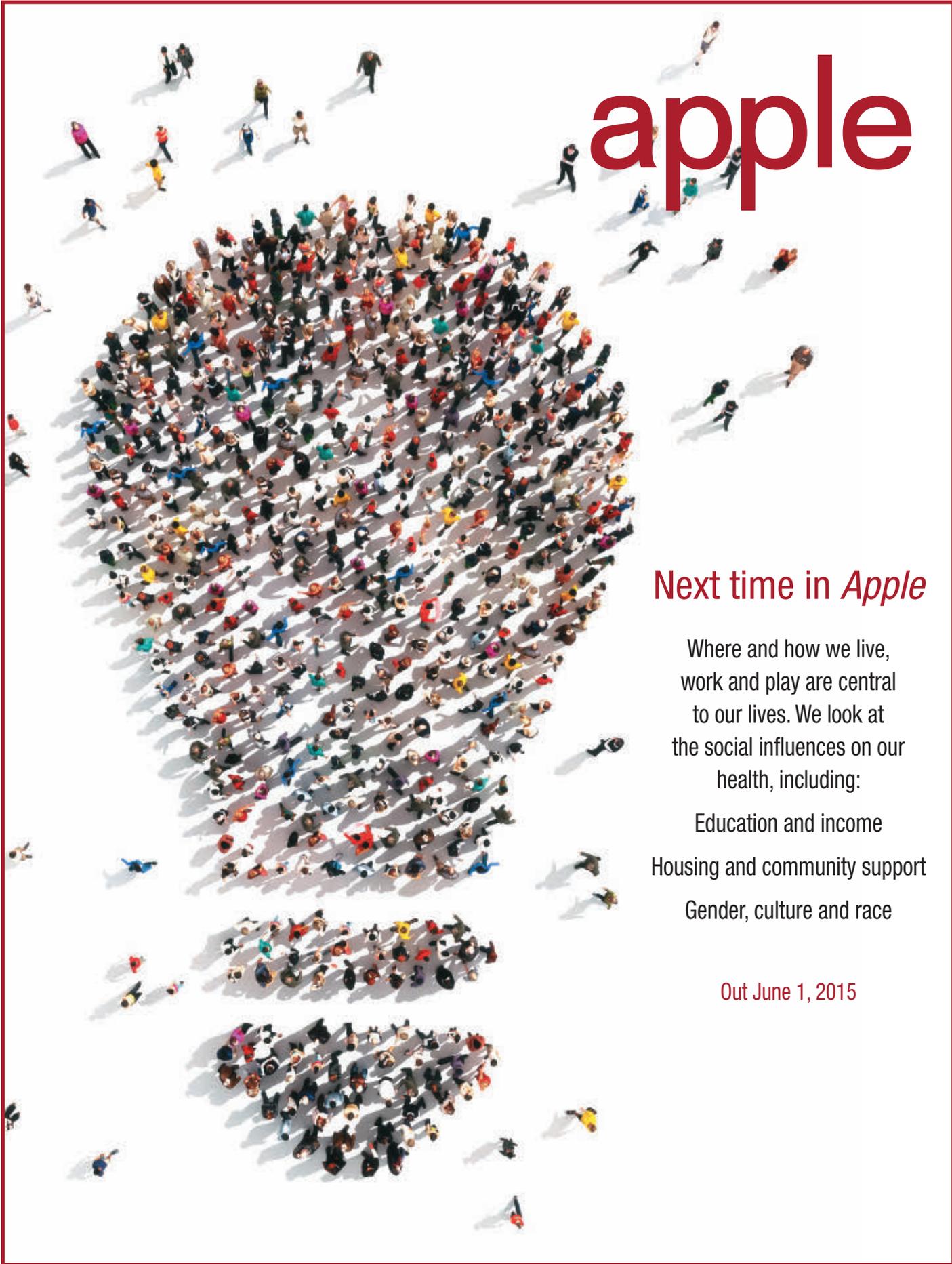
Preparation

Put the lentils, garlic and bay leaf in a medium saucepan and add enough water to cover by a couple of inches. Simmer over medium-high heat for 40 minutes, until just tender. Remove the garlic and bay leaf and drain well.

Transfer to a bowl and add the balsamic vinegar and season with pepper; toss to combine while still warm. Set aside to cool slightly.

Add the olive oil, carrots, celery, parsley and tomatoes and toss to combine. Serve immediately or refrigerate until serving. Serves 4.





apple

Next time in *Apple*

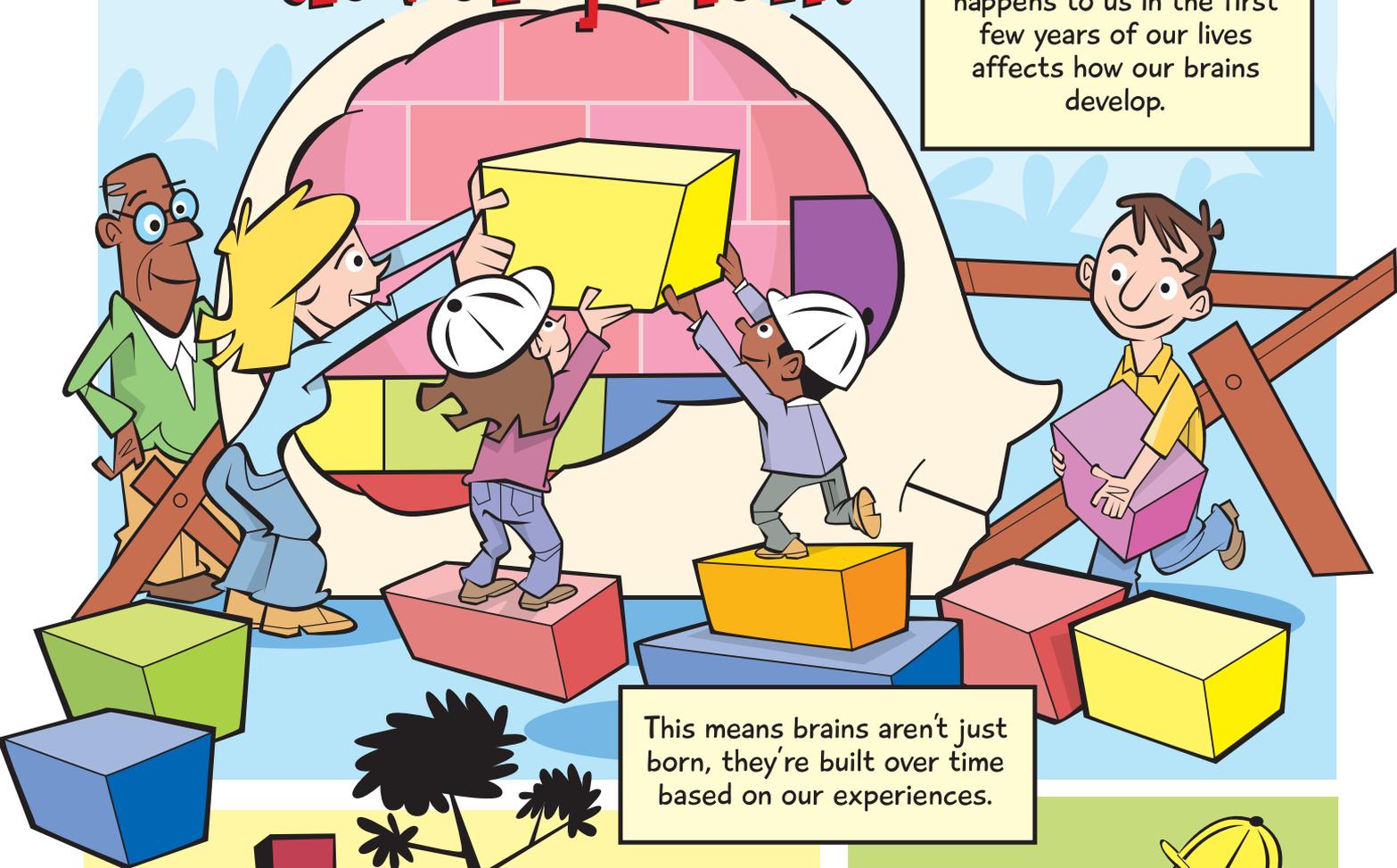
Where and how we live,
work and play are central
to our lives. We look at
the social influences on our
health, including:

Education and income
Housing and community support
Gender, culture and race

Out June 1, 2015

The story of brain development

Science tells us that what happens to us in the first few years of our lives affects how our brains develop.



This means brains aren't just born, they're built over time based on our experiences.

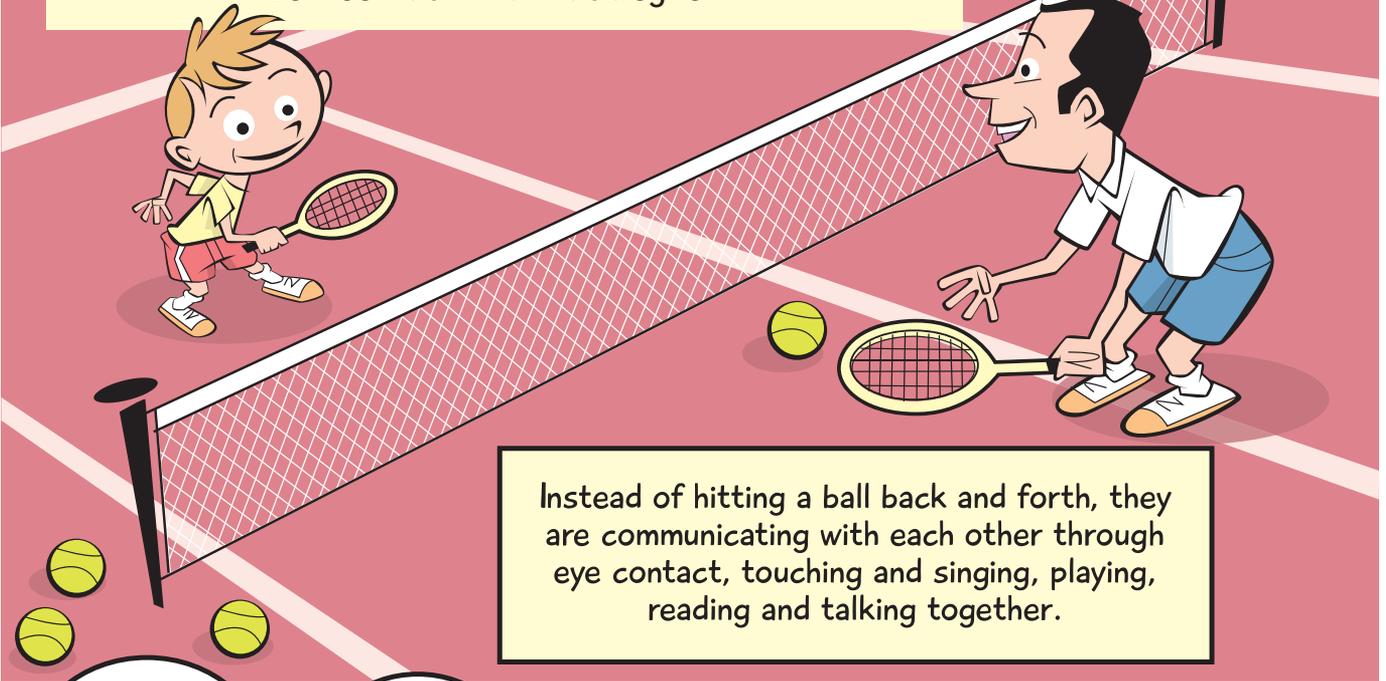


Just as a house needs a sturdy foundation to hold up the walls and roof, a brain needs a solid base to support development, good mental function and lifelong health.



The architecture of the developing brain is built by positive interactions between young children and caregivers.

One way this foundation is built is through serve and return interactions. Think of a tennis or volleyball game between a child and a caregiver.



Instead of hitting a ball back and forth, they are communicating with each other through eye contact, touching and singing, playing, reading and talking together.



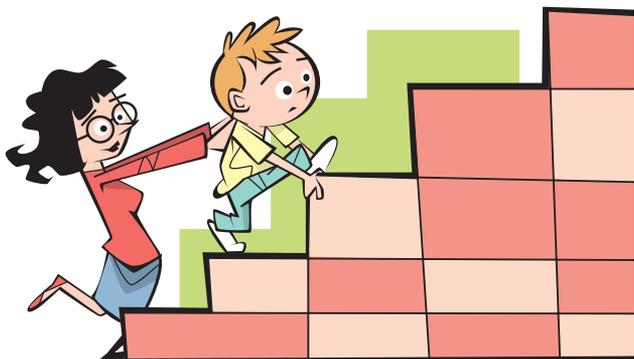
Doing these interactions over and over during the first few years of a child's life are the bricks that build the foundation for all future development.

Another kind of experience also shapes brain development.

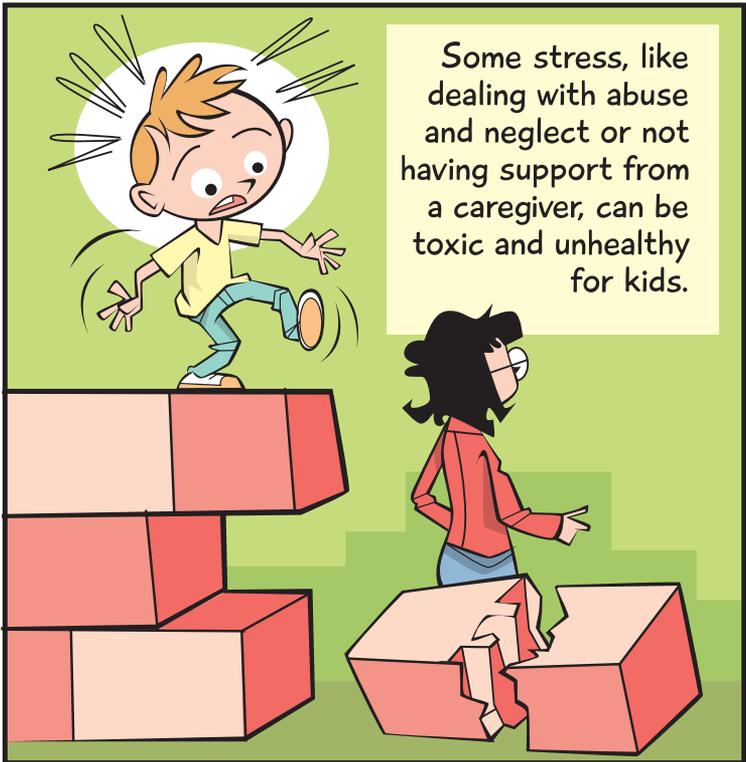
Stress.



Good kinds of stress, like meeting new people or studying for a test, are healthy for kids because they help them learn how to cope with life.



Toxic stress can weaken brain architecture and cause a lifetime of problems.

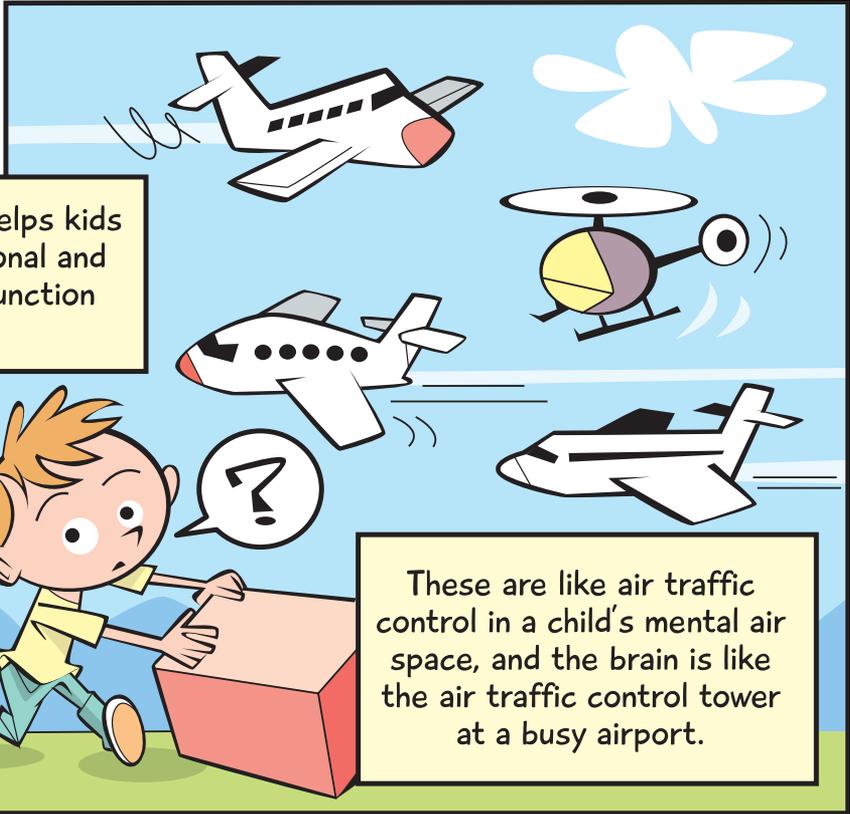


Some stress, like dealing with abuse and neglect or not having support from a caregiver, can be toxic and unhealthy for kids.



While some of the damage caused by toxic stress can be fixed later, it's easier, more effective and less expensive to build solid brain architecture in the first place.

Sturdy brain architecture also helps kids develop important basic emotional and social skills called executive function and self-regulation.



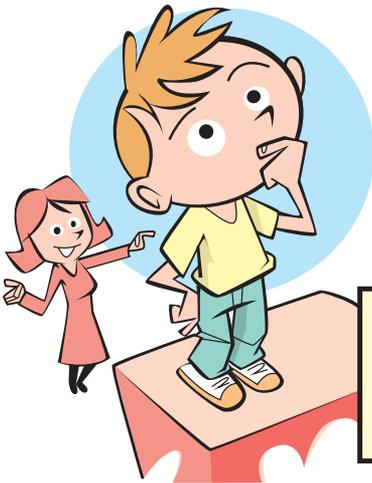
These are like air traffic control in a child's mental air space, and the brain is like the air traffic control tower at a busy airport.

All those planes landing and taking off at once need attention to avoid a crash. It's the same for a child learning to pay attention, plan ahead and follow rules.



Like all of us, kids have to react to everything around them while also dealing with their worries, temptations and obligations.

As these demands for attention pile up, air traffic control helps a child regulate the flow of information, focus on tasks and above all, manage stress and avoid collisions.



We need these abilities to have positive and level mental health.



Kids need adults in order to build brain architecture, learn air traffic control and avoid toxic stress.

It's up to all of us as a community to make sure young people have the kinds of nurturing experiences they need for positive development.



To build better futures, we need to build better brains.

Simard

Glossary

The following terms and concepts are used throughout this issue

Addiction: A chronic and complex disease that affects a person's ability to control their dependency on a substance (such as alcohol, tobacco or drugs) or a behaviour or process (such as gambling, gaming, shopping or pornography). The Canadian Mental Health Association describes addiction as the presence of the 4 Cs: craving, loss of control of the amount or frequency of use; compulsion to use; use despite consequences.

Adverse childhood experiences (ACEs): Negative experiences such as severe neglect, abuse or household dysfunction that can weaken the foundation of a child's brain.

Brain architecture/development: The foundation for learning, behaviour and health, brain architecture is like building a house—it starts with the foundation and develops in an orderly sequence. Brains are built over time, from the bottom up, with the most intense development in the early years. A strong foundation in the early years increases the chances of having a healthy life and stable relationships. A weak foundation increases the risk of problems later in life.

Brain plasticity: The brain's capacity to change and reorganize with input from the environment. Usually, the brain is most plastic during early

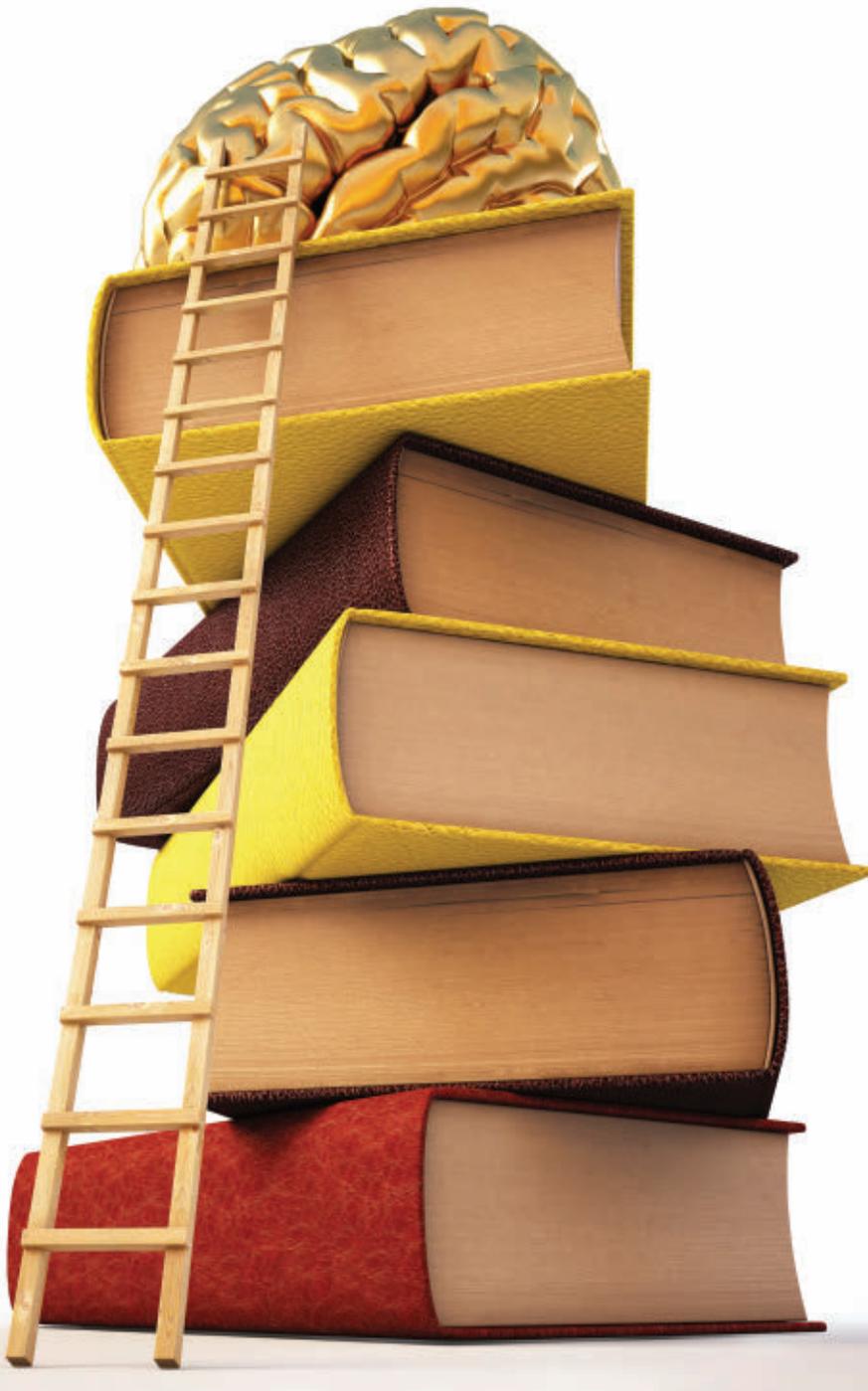


Photo: Larry MacDougall Photography

development; this is also when it's the most vulnerable to harm and the most capable of recovery. As we get older our brain circuits stabilize and they become harder to change.

Epigenetics: Our health—including our brain development—is largely based on epigenetics: the genes we get from our parents and our environment (how and where we live). Epigenetics can also be thought of as how the environment influences gene expression.

Executive function: This learned ability is like the air-traffic control tower at a busy airport where hundreds of planes take off and land safely. Executive function allows us to focus, hold and work with information, filter distraction and switch mental gears. We need it to help manage information, prioritize and complete tasks, handle stress and practise self-control.

Mental health: A person's emotional and biological well-being, which is influenced by social, environmental and biological factors.

Neural connections: Billions of connections that let the neurons communicate at lightning speed. In the first few years of life, our brain forms 700 new neural connections every minute. The Center on the Developing Child at Harvard University says "early experiences affect the nature and quality of the brain's developing architecture by determining which circuits are reinforced and which are pruned through lack of use. Some people refer to this as 'use it or lose it.'"

Parents, adults and caregivers: Throughout this issue we refer to parents, adults and caregivers

interchangeably. Children need nurturing, supportive and encouraging adults to for sturdy brain development.

Serve and return: An interactive process that builds brain architecture. Think of it as a game of tennis or volleyball. A child begins with a gesture or sound—a "serve"—and you respond with a supportive and encouraging "return." This can continue with a "volley" of exchanges. We have these sensitive, responsive exchanges throughout our lives, but they're critical in early childhood because they're the building blocks for a healthy brain.

Stress: We experience three types of stress.

- **Positive stress** can be motivational; we can feel it when we're getting ready for a big meeting at work or playing a game of hockey. This type of stress helps us deal with adverse situations and become resilient.
- **Tolerable stress** is the result of a serious event that eventually goes away, such as when a loved one dies, or a car crash. People often overcome tolerable stress with the help of supportive relationships with family, friends and others.
- **Toxic stress** is chronic, unrelenting and unpredictable. It can be harmful, especially to children, and it's often the result of neglect, abuse or extreme deprivation. 



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Serve and return: The building block of brain architecture

Plus the mortar
of relationships and the
wiring for other skills

A baby gurgles at you, and you say: “Hello there.”

He smiles and you smile. He laughs and you laugh back.

This is serve and return.

Children and adults have had these kinds of interactions for as long as there have been adults and children. More recently, research has found just how important serve and return is to children: it is the building block of brain architecture, the mortar of relationships and the wiring for language, social skills and emotional control. It’s big.

Serve and return is like a game of tennis or volleyball. A child begins with a gesture or sound—the serve—and a caring, familiar adult in his life (mother, father, aunt, uncle, grandparent, childcare professional, teacher or coach) responds sensitively with the “return.”

Photo: Ewan Nicholson



5 elements of serve and return:

1. Sharing
2. Supporting and encouraging
3. Naming
4. Back and forth
5. Endings and beginnings

“An attentive response is critical to young children,” says Melanie Berry, a researcher with the University of Oregon and Oregon Social Learning Center, “because serve and return promotes healthy development.”

Berry helps Oregon parents understand serve and return with the FIND (short for filming interaction to nurture development) program. Created by Dr. Phil Fisher at the University of Oregon, FIND breaks down serve and return into five elements:

Sharing—you notice what your child is interested in: a thing, a feeling, a person or an action. You show your interest with your eyes, body, word and actions. Berry says this is a critical first step: “Lots of things can get in the way of this in families. Parents can be tired, ill or distracted.”

She adds: “Children don’t need you to respond to every serve they make—even the best player doesn’t return every serve. But children need enough returns.”

Her advice? Find a moment, build a brain.

Supporting and encouraging—after noticing your child, you support and encourage him. For example, if he’s holding his sippy cup, you help him get a drink. Or if your toddler is trying to stack blocks, you guide her hands and say “good job” when the job is done.

Naming—giving a word to the focus of your child’s attention: doggy, Grandma, cup or apple. You can also

name actions: your sister is running. Berry says it’s also important to name feelings: “Do you like that bread?” or “Are you tired? Sleepy? Sad?” The older your child, the richer the naming can be.

This type of serve and return exchange helps with language and emotional regulation and is good for your relationship with your child because it says “I see you and I hear you.” And this helps your child feel safe, valued and cared for.

Back and forth—when serve and return turns into back and forth exchanges, “this is where the real action is,” says Berry. A volley of serve and return helps your child learn to control his impulses, pay attention and control his emotions. She says it’s important to wait for your child to respond each time. “Adults can sometimes return, return, return. Too much return and your child can lose interest.”

Endings and beginnings—these are the cues your child gives to signal his attention has shifted and the exchange is over. Understanding your child’s cues is important because when he’s interested, he will learn more. “Endings and beginnings are very subtle with babies,” Berry says. “With two-year-olds they just toddle off so you know they’re done.” Berry says when you can understand your child’s signals it can help your day go from activity to activity more smoothly. [a](#)

— Terry Bullick

For more about serve and return, see the Fall 2012 issue of *Apple* at applemag.ca and HealthyParentsHealthyChildren.ca.

What's a fun way to help kids build better brains?

The Serve and Return Origami Game

Scientists say the way to help kids build better brain architecture is through "serve and return" interactions. A child reaches out for interaction ("serves"), and the caregiver responds ("returns"). Here's a serve-and-return game to play with toddlers and up. Find a small friend and have some fun!

 Cut along edge of game and fold using instructions on back.



The game board is a large square divided into 8 triangular sections, numbered 1 through 8. Each section contains an illustration and a text instruction. The sections are arranged in a grid-like pattern with some overlapping or adjacent triangles.

- Section 1:** Illustration of a hand giving a thumbs up. Instruction: "Have a thumb wrestling match."
- Section 2:** Illustration of a red door with a starburst. Instruction: "Tell a knock-knock joke."
- Section 3:** Illustration of a pink face with a neutral expression. Instruction: "Try not to smile for 30 seconds. NO SMILING!"
- Section 4:** Illustration of musical notes. Instruction: "Make up a song about your friend and sing it to them."
- Section 5:** Illustration of two hands shaking. Instruction: "Make up a secret handshake."
- Section 6:** Illustration of a large green eye. Instruction: "Have a staring contest."
- Section 7:** Illustration of a yellow and white fish. Instruction: "Act like an animal. Ask your partner to guess what."
- Section 8:** Illustration of a tic-tac-toe board. Instruction: "Play a game of Tic-Tac-Toe."

Decorative text on the board includes: "Let's" (top left), "Brains" (top right), "Build" (bottom left), and "Better" (bottom right).

How to fold



Cut the game out and place face down.



Fold all corners to the centre.



You now have a square.



Turn the square over.



Fold corners to the centre to make a small square.



Like this.



Crease the paper lengthwise and then widthwise.



Insert your fingers.



To-dal!

How to play

1. Get a partner.
2. Ask your partner to pick a word (Let's, Build, Better, or Brains).
3. Spell the word. As you say each letter, open and close the game frontwards and sideways to show the numbers inside. (Ex. "Let's" goes frontwards, sideways, frontwards, sideways.)
4. Ask your partner to pick one of the four numbers.
5. Count up to the number out loud while opening and closing the game.
6. Ask your partner to pick a number.
7. Open that number. Read the instructions to your partner.
8. When your partner is finished, switch roles!



Illustration: Michael Griffin



Our brain thrives on connections

Billions of synapses form in the early years

Our brain is our most complex organ. It's a command centre for everything we think, do and feel. We're born with almost all the brain cells we'll have throughout our lives, so our brain doesn't grow as much as it develops.

To do this, it needs neural connections—billions of them. These connections—called synapses—are

tiny, each about 10,000 times smaller than the thickness of a piece of paper.

The basic architecture of the brain is built over time, beginning before birth and continuing until we're adults, with more connections forming in our first six years than at any other time in life. During our early years, our brain makes about 700 new neural connections every

second—billions by the time we're three years old.

It's no wonder toddlers are bursting with life, energy and curiosity.

As we grow, our brain continues to form new neural connections at a slower rate. At the same time, our brain also goes through synaptic pruning, shutting down some circuits that are not used so the remaining

Our brain makes 700 new neural connections every second when we're young

ones can become more efficient. Harvard University's Center on the Developing Child says our early experiences "affect the nature and quality of the brain's developing architecture by determining which circuits are reinforced and which are pruned through lack of use." This is sometimes called "use it or lose it." "The more you use a brain connection, the more likely it is to

become strong and to last a lifespan," says Judy Cameron, a professor of psychiatry at the University of Pittsburgh, where she serves as director of science outreach.

Neural connections are formed and pruned in a set order, with the simplest circuits (groups of connections) coming first and the more complex circuits coming after. The process begins with sensory circuits (such as seeing and hearing) followed by language skill circuits. Next are circuits for more complex functions such as controlling emotions, social skills, abstract thinking and problem solving. Our brain development usually wraps up when we're between 25 and 30.

Our genes determine the exact timing of this development, and our experiences throughout life determine which connections are

reinforced and which ones are pruned, leading to either weak or strong circuits. The brain is never a blank slate, the Center on the Developing Child says. Every new skill is built on those that came before.

The building block of brain architecture is serve and return interactions (see page 37).

Serve and return exchanges are often "really easy things to do that will have a huge impact on the rest of a child's life," says Bryan Kolb, a University of Lethbridge professor of neuroscience and Board of Governors Research Chair in neuroscience. Reading together, he adds, is one good form of serve and return. "You are interacting one-on-one and talking to them." ■

— Jacqueline Louie and Nicole Sherren

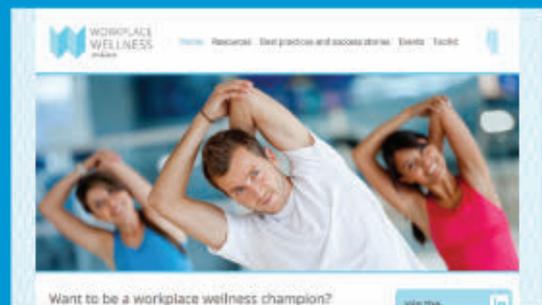
Want to be a workplace wellness champion?

Promoting wellness at work is one of the best investments an employer can make in helping employees to stay healthy. But where to start? Alberta Blue Cross has a practical web site to answer that question.

Designed as a one-stop shop for any employer who is ready to start taking steps toward promoting workplace wellness, www.workplacewellnessonline.ca is a useful online resource that includes a section highlighting best practices and success stories, a section containing a wide variety of workplace wellness resources and references, a listing of relevant upcoming events, and a downloadable "toolkit" providing an easy step-by-step approach to incorporating wellness in the workplace.

The web site also provides a link to the Alberta Workplace Wellness discussion group on LinkedIn. This group provides a forum where employers of any size—or any individuals with an interest in workplace wellness—are invited to collaborate on workplace wellness by sharing ideas and successes, making connections, asking questions or seeking advice.

The site is updated on a continual basis with additional resources and information.



www.workplacewellnessonline.ca

ABC 82786 2015/02

When ACEs are too high

Toxic stress can make it harder for children reach their potential

Experiences shape our

brains. A landmark American study in the 1990s found that the more adverse childhood experiences (ACEs) a person has, the higher the risk later in life of health and social problems. Dr. Rob Anda, a co-investigator of the study now with ACE Interface, calls ACEs “a pathway to disease.”

A recent study by the Alberta Centre for Child, Family and Community Research grouped ACEs into three categories: abuse, neglect and family dysfunction before the age of 18.

The effect of childhood adversity depends on the support and care children have from adults. When an adult helps a child in a sensitive way, adversity may have no effect at all. For example, a preschooler may get upset when his parents argue, but their occasional disagreements probably won't have any permanent effect on his brain, especially if he



Photo: Amanda Worrell

sees them make up. On the other hand, if his parents are constantly and bitterly fighting about money and ignoring him, this is an example of an ACE and can lead to brain-altering toxic stress.

Growing up, we all need to experience positive and tolerable stress. These types of stress help us

learn how to cope with life's ups and downs. But when stress becomes toxic because of abuse, neglect and family dysfunction, it becomes harmful to young brains. And when toxic stress changes brain architecture, children and young adults have a harder time reaching their potential and can face a number of problems as adults.

Understanding your adverse childhood experiences may help you understand your past—and your health

People with three ACEs or more are more likely to use drugs at an early age, have a teenage pregnancy, develop a drug or alcohol addiction, or marry someone with an alcohol addiction. They are also more likely to have a lifetime history of depression or attempt suicide. Liver disease, heart disease, stroke, diabetes, chronic lung disease, chronic pain and irritable bowel syndrome are also linked to ACEs.

While it is clearly better to prevent and avoid ACEs, Anda says when people know their ACE score—become trauma-informed—it can give them a chance to write “a different narrative” about their lives and to “create a different path for the future . . . with hope, meaning and purpose.”

“It’s not what’s wrong with you,” he says. “It’s what happened to you.”

Sheila McDonald agrees. An epidemiologist with the Department of Pediatrics at the University of Calgary and lead researcher with the Alberta Centre for Child, Family and Community Research ACEs study, she says: “Adversity is part of life and the human condition. You can’t change your past but you can understand it better.”

Understanding ACEs may help you understand your past—and your health. 

— Terry Bullick

ACEs explained

Adverse childhood experiences include, but are not limited to when:

- An adult in a child’s home makes verbal insults or threats
- An adult physically abuses (injures or bruises) a child in his home
- An adult or someone five or more years older makes inappropriate sexual advances to or contact with a child
- A child sees her mother or stepmother being treated violently (pushed, grabbed, slapped, had something thrown at her, kicked, bitten, hit)
- Someone in a child’s home abuses alcohol or drugs, is depressed or mentally ill, or has a disability that limits or interferes with daily activities
- A child is often bullied
- A child often feels unloved, afraid and isolated
- A child’s parents separate or divorce.

ACEs affect children in different ways and many children with multiple ACEs grow into adults with no ongoing health problems. ACEs are common, says psychologist Keith Dobson of the Alberta Aces Program. About 70 per cent of Albertans have had at least one ACE.

This fall, the Alberta ACEs Program will test an ACEs treatment approach with 8,000 patients and their family doctors.

To learn more about ACEs visit:

- acetoohigh.com
- acestudy.org
- cdc.gov/violenceprevention/acestudy

If you have questions about your health, call Health Link Alberta at 1-866-406-LINK (5465) or the AHS Addiction and Mental Health Line at 1-866-332-2322.

Parents are joining an evolution

Changes driven by explosion in knowledge

Parenting has always been about nurturing, protecting and supporting children as they develop and grow. Ideas about parenting are changing as we learn more about how the brain develops.

“The biggest changes in parenting and child development in the past

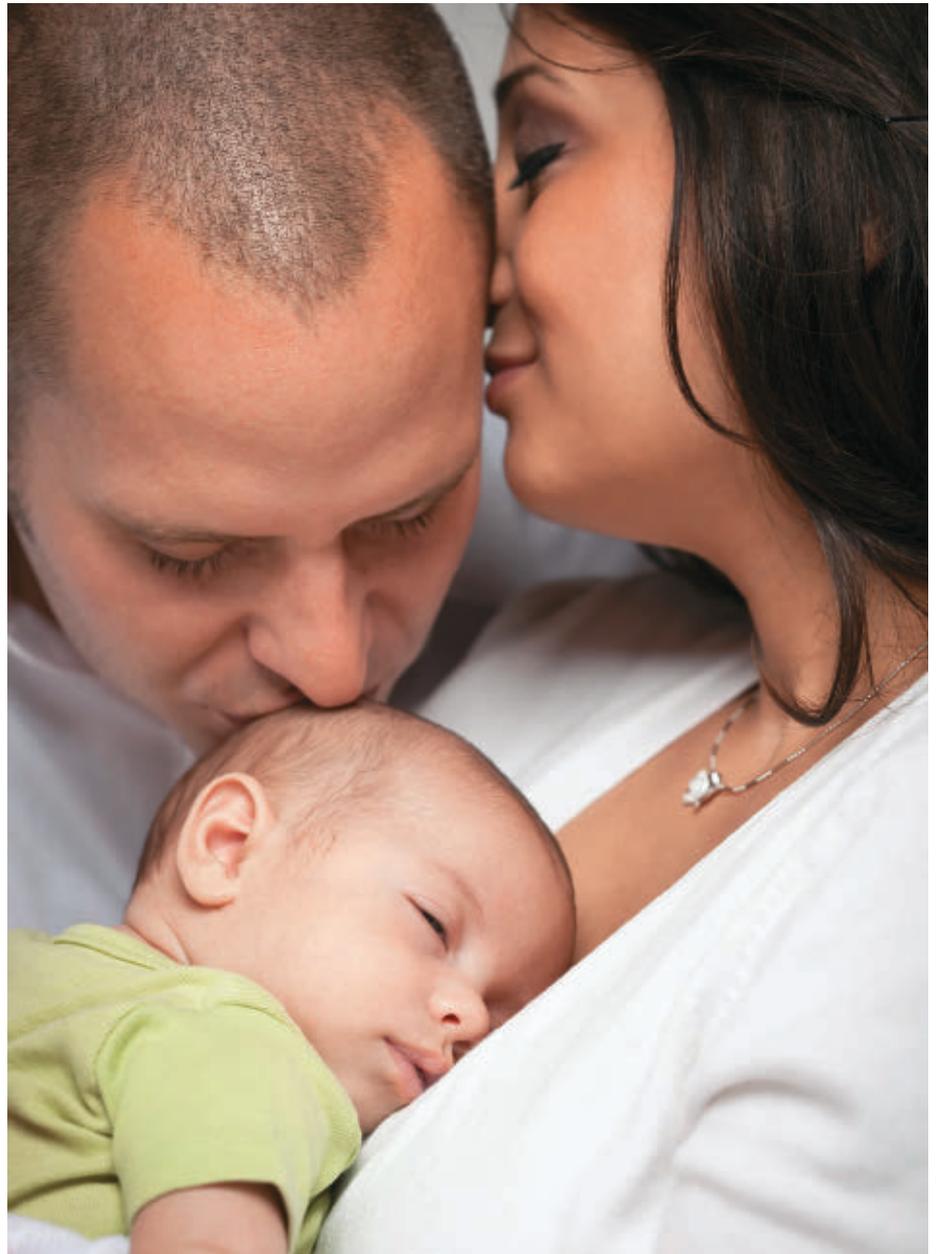


Photo: Andy Dean

10 years have been driven by the explosion in brain science,” says Leslie Barker, a nurse and parenting educator for 30 years. “We now know that a baby is born with almost all the brain cells he will have for life, but these cells are not yet connected. Those connections develop over time

and are influenced by children’s everyday experiences. This is why relationships with the adults in their lives are so critically important.” (See *Our Brains Thrive on Connections* on page 41.)

Another evolution in parenting is the growing involvement of men in

Parents can find support in their community to help them understand their kids

raising children. In 1986, fewer than 20 per cent of dads had child-rearing roles similar to moms. By 2005 it was 73 per cent.

Award-winning authors and researchers Dr. Kyle Pruett and Marsha Kline Pruett have studied how stay-at-home-dads affect their children's development. They found when dads are more involved in child-rearing, children are more sociable as infants, more accepting to a second-born sibling, more empathetic and have fewer behavioural problems. The Pruetts also found that as these children age, they tend to solve problems better, stay in school longer, cope better with stress and have more satisfying relationships when they become adults.

"We're beginning to understand that to the extent that dads are positively involved, the children's and the mothers' lives are better," Kyle Pruett says.

Parenting remains deeply rooted in protecting children, but we're realizing that over-protecting them can stifle healthy brain development, learning and independence.

"As parents, we need to understand the risks our children can face," Barker says. "And we need to let our kids explore. When we help them think through what to do with measured risks, we help them learn how to manage the risk."

The goal is to help children develop and learn so they will have the skills they need to cope with life's stresses, challenges, obstacles and rewards.

This same thinking is reshaping attitudes about how we expect our

children to behave.

"We know now that it's far better to help children learn how to get along in the world than to punish them when they do something we don't like. It's the things we do every day that make the difference. When parents and other adult caregivers treat children with kindness, respect and empathy while providing them with the information, guidance and support they need to learn life skills, we create the best environment for them to thrive," Barker explains. "We are reframing our mindset so we act not as wardens, but as teachers; and that changes the tenor of how we act with our kids."

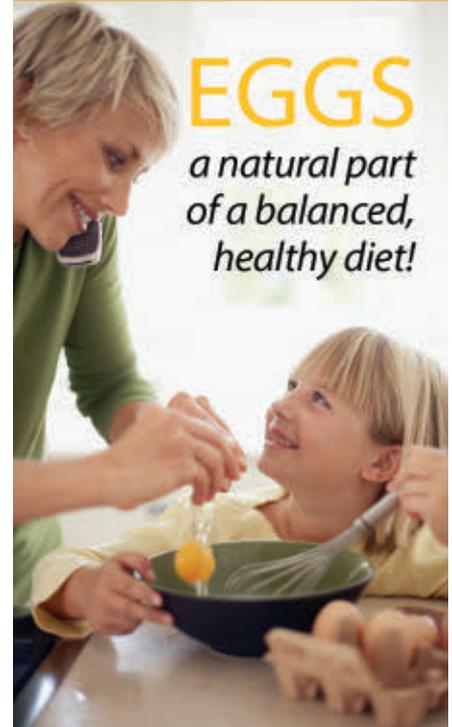
Barker says parents can find all kinds of information and support in their community to help them understand and raise their kids.

"Most of what we know about parenting comes from our own experience of being parented as children. When we become parents, we can keep what we treasure and we can also learn new ways to help our children," she says. "One of those ways is by connecting with community programs. All parents have questions—it's okay to ask for help."

Think of it as joining the parent evolution. ■

— Anne Georg

For more about parenting and child development, visit HealthyParentsHealthyChildren.ca and see the resources guide on page 77.



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Relationships build good mental health

Resiliency helps with life's bumps and potholes



Photo: Katch Studios

A child's foundation for good mental health is built early in life through his experiences, including his relationships with his parents, family, caregivers, teachers and other children.

These relationships are essential to his development and help him build resiliency—the ability to bounce back from setbacks and cope with life's ups and downs. Resiliency is built

by certain skills such as problem solving, empathy and emotional regulation, which is the ability to show emotions in ways that won't hurt oneself or others.

A child with resiliency is able to react confidently, positively and adapt well to change when he hits bumps and potholes on the road of life. Resiliency is also a buffer against the harmful effects of adverse childhood

experiences (see page 43).

"Our mental health depends on our relationships with other people from the very beginning," says Dr. Carole-Anne Hapchyn, an infant psychiatrist in Edmonton and a clinical professor of psychiatry and pediatrics at the University of Alberta.

"When you are resilient, you've got more in the bank to cope," she says. It's like a scale, with the positive

things in a child's life going to one side of the scale and the negative going to the other side. Resilience is the movable tipping point that gives a child the ability to have positive experiences outweigh the negative.

One of the best ways to build up the positive side of the scale is through serve and return interactions (see page 37). The key to this back-and-forth communication is watching for and responding to children's cues, Hapchyn says. "Be sensitive and observant to what children are trying to tell you."

Serve and return helps build a strong relationship between an adult and child, creating an emotional bond that gives that child the strength, trust and security he needs. **a**

— Jacqueline Louie & Terry Bullick

See page 77 for children's mental health resources.

How to build resiliency in children

- Give lots of encouragement and support
- Play with them
- Focus on strengths
- Be a good role model
- Apologize when you're wrong
- Give them choices and respect their wishes
- Ask questions and really listen to the answers
- Encourage sharing and helping
- Read together.

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National Child & Youth Mental Health Day

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Trust

A matter of

From birth, children begin learning whether they can trust adults to give them the care they need to feel safe and secure and to develop.

Jennifer Allford explains



Trust is earned. It's also learned.

From the moment they're born, children begin learning whether they can trust the adults in their lives (mom, dad, grandparents and other caregivers) to look after them.

Children depend on adults for food, shelter, clothing and comfort. Parents and other caregivers build trust with children when they readily and consistently meet children's needs by giving them stable, nurturing care—this makes children feel safe and secure and is fundamental to healthy childhood development.

When such care is missing from children's lives, trust can be replaced with stress: children are constantly on high alert because they don't know what to expect from their parents or caregivers.

Over time, such stress can turn toxic, hindering the building blocks of brain architecture and healthy development. (See glossary on page 35.)



“The way that we show or build trust with kids might be in different kinds of actions over time, but it starts with infants and newborns,” says Dr. Christina Rinaldi, a PhD in school/applied child psychology and a professor in educational psychology at the University of Alberta. “It’s that dependability and reliability of trust in those who take care of them that their needs will be met.”

Something as simple as consistently picking up your newborn when he cries helps him develop healthy brain architecture and build trust. But a baby who cries day after day, week after week, without being cared for can experience toxic stress and will find it hard to trust that adults will look after him when he needs them.

“We know a lot in terms of the stress response and what happens to children’s stress response systems when, chronically, their needs are not met and how that can shape and change the brain,” says Dr. Kate Schwartzenberger, a PhD in psychology who works with abused children through the Sheldon Kennedy Child Advocacy Centre at the Alberta Children’s Hospital in Calgary. “It’s an interactive process.”

We “serve and return” with our children

A newborn cries, you pick her up. An older baby coos and you coo back. Through serve and return (back and forth interactions between a child and adult), children learn they can rely on (and trust) the adults in their lives to take care of them. Serve and return is the building block of brain architecture, creating a solid base for future development. Healthy brain architecture helps children buffer all kinds of other stressors later on—from walking to school by themselves to trying out for the volleyball team in high school.

“We really learn from those first interactions,” says Rinaldi. “Am I being cared for? Are my needs being met? Are they consciously thinking all these things? Not necessarily. But they start to internalize: ‘When I cry somebody picks me up, I can depend on them’ versus ‘Nobody is coming to get me and I have to cry for hours and hours and I am starting to feel really bad.’”

Spending time with children shows them they’re important and helps build trust. As children get older, we can continue to show that we will

respond in a caring, consistent way by spending time with them and paying attention to what they’re up to.

Carving out that time can be a challenge in busy families but it’s crucial we don’t brush off our kids, says Patrick Dillon, provincial coordinator for the Alberta Father Involvement Initiative. “Building trust is all about relationships,” he says. “Particularly with younger kids, up to six, it’s important to spend time with them doing a variety of things; learning about boundaries, what’s appropriate, how to work through things and problem solve, that all comes with trust.”

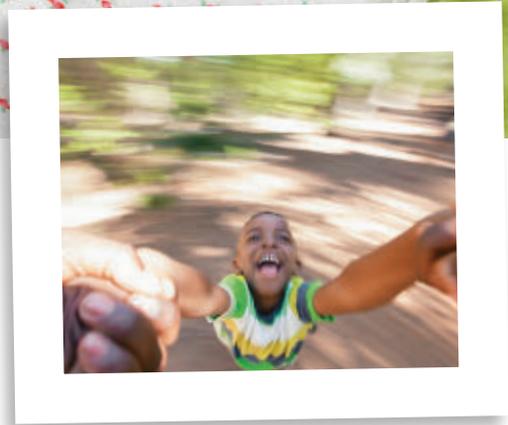
It’s important for children to trust their parents, caregivers and other adults. “There are many adults in our changing society who care for kids,” says Rinaldi. “That could be extended family members, childcare educators, it could be a day home, it could be a whole list of people.”

When asking for a ride means “talk to me”

Children communicate their needs in different ways at different stages. A nine-month old opens her mouth for



Spending time with children shows them they're important and helps build trust



another bite of lunch. A five-year-old crawls onto your lap for a cuddle. A teenager slams his bedroom door.

"It can be tricky to read cues and it gets a little bit harder as children get older," says Schwartzenberger. "Sometimes, when adolescents are showing a lot of verbal aggression or stomping around, that may be an indication that they need some support or closeness." Or, she says, when your daughter asks for a ride to the mall: "It might be a child's way of saying 'I want to talk to you on the ride over to the mall and I want some connection.' It's a great time to talk."

It can be challenging to stay calm while we try to figure out what our children are trying to tell us. Newborns can be exhausting. Older kids can be trying. You may be angry or frustrated by your child's actions or confused by her cues. In any case, it's important to step back and "look for the meaning behind their behaviour," says Schwartzenberger. "What are the attachment needs they are communicating to me at this time and how can I try to address that need?"

No parent is perfect

We all try our best when it comes to raising children. Some days will be great, others not so great and a good portion will fall somewhere in the middle. No parent or caregiver is going to get it exactly right day after day. And you don't have to.

What's important is that you are honest, open and do what you say you'll do as much as possible.

"Children are very resilient, so parents don't have to be perfect all of the time to develop a securely attached child," says Schwartzenberger. "Parents are going to make mistakes and it's really how they go back and address those mistakes that can lead to healthy attachment."

If you lose your cool—and your patience—take a minute to regroup and go back and respond appropriately. "You can just say, 'I made a mistake and this is how we're going to fix that mistake,'" suggests Schwartzenberger. That can show children how to handle their own mistakes and can "be a really important step to attachment."

That conversation is different from

giving your children feedback if they skirt their chores or skip their homework. "If somebody left a mess in the kitchen, it's fair to say you need to clean up or it's not OK to leave a mess after you've played," says Rinaldi. "Giving feedback is an art in a way. You want to do it constructively without being damaging or using extreme putdowns."

When kids grow up knowing they can trust adults to take care of them, their brains are wired to be more resilient. By teaching your children trust, you're setting them up to explore their world, form strong relationships and bounce back from disappointment. They will still hit bumps in the road, but having trust ensures they will have a smoother ride when they do. ■

To learn more about parenting programs and support where you live, visit humanservices.alberta.ca and search for parent link centres.

Air traffic control helps kids soar

Executive function is like an air traffic control tower, allowing us to focus, hold and work with information, filter distraction and switch mental gears.

Valerie Berenyi looks at how kids can build such skills by playing

If a child is to soar in life—finding success in school, work and relationships and enjoying good health—she'll need some specialized equipment to get off the ground.

That flight gear is a set of social, emotional and cognitive skills called executive function.

Think of executive function as the air-traffic control tower at a busy airport. It makes sure hundreds of planes safely arrive and depart from multiple runways without crashing into each other. Without it? Chaos.

In the brain, executive function is a child's very own personal control tower, allowing her to focus, hold and work with information, filter distraction and switch mental gears. Without it? Chaos.

And a young child's got a lot going on: learning to pay attention, plan ahead, deal with conflicts and follow rules at home, in school and on the playground.



Building these skills can be done in fun ways, including time-honoured games such as Peek-a-Boo or Simon Says

She needs strong executive function to help her manage the steady bombardment of information, prioritize and complete tasks, handle stress, practise self-control and generally avoid crashes in her mental airspace.

While children aren't born with executive function, they all have the potential to develop and hone these skills beginning in infancy and continuing through childhood and the teen years into early adulthood.

It may sound daunting, but it really

is child's play. Building these skills can be done in fun ways, woven into regular life at home, in childcare and at school, using time-honoured games such as Peek-a-Boo or Simon Says.

In playing and spending time with her, the caring adults in a child's life are the key players in helping young brains master the three core executive function skills:

Working memory—the ability to hold information in one's mind and use it.

Self-control—the ability to master thoughts and impulses, resist temptations, distractions and habits, and to pause and think before acting.

Mental flexibility—the capacity to switch gears and adjust to changing demands, priorities or perspectives.

Then, once she's properly equipped, stand back and watch her fly!

Let the games begin

The following games and activities for building executive function in



children are taken from *Enhancing and Practicing Executive Function Skills with Children from Infancy to Adolescence*, a booklet published by the Harvard University's Center for the Developing Child. To download the booklet, visit: bit.ly/1y0IcDo.

Games for six- to 18-month-olds

*Pat-a-cake, pat-a-cake, baker's man.
Bake me a cake as fast as you can.
Pat it and roll it and prick it with a "B."
Then put it in the oven for baby and me!*

Pat-a-Cake, a nursery rhyme dating to the 17th century, is a perfect example of how "supportive, responsive interactions" with you, an adult, can help a child create the foundation to build working memory and practise basic self-control.

Simply having a conversation with baby boosts the same skills, as does finger-play (think: Itsy Bitsy Spider).

And because babies are natural copycats, they learn beautifully from imitation games (you cuddle a doll, then pass it to baby to follow suit).

Games for 18- to 36-month-olds

*I'm a little teapot, short and stout.
Here is my handle. Here is my spout.
When I get all steamed up,
hear me shout: Tip me over and pour me out!*

Toddlers develop language and physical skills quickly. A song game such as I'm a Little Teapot helps them pay attention to the song's words, hold them in their working memory and use them to cue their movements.

Other song games such as Motorboat, Motorboat that require little ones to slow down and speed up ("step on the gas!") are excellent for self-control. Imaginary play—pretending to cook and eat from a

pot, for example—starts to move beyond just copying grown-ups to developing simple plots.

Encourage this by narrating what toddlers are doing or asking questions about what they're making ("Are you baking cookies?" and pretend to eat one, if it's offered). Provide an array of household items, toys, props and dress-up clothes to spark their imaginations.

Games for three- to five-year-olds

Everyday errands, such as going to the doctor's office, are good material for a preschooler's imaginary play. Talk about the doctor and what she does, and when you get home, encourage role-playing. A grownup's white shirt and a lanyard attached to a circle of paper can serve as the doctor's coat and stethoscope. The "doctor" can wrap a sock around



the “patient’s” upper arm to check blood pressure.

Let the child direct the play; adults can make suggestions, provide support or ask questions such as “What’s going to happen next? Does the doctor send baby to hospital?” but it’s best if they have a secondary role. As preschoolers grow older and more confident with learning rules and structures, they ideally shift from being regulated by adults to self-regulation.

Obstacle courses, skipping and yoga poses (“take a big breath and stretch like a cat!”) challenge focus and self-regulation and get the wiggles out.

Games for five- to seven-year-olds

Simon says, jump in the air! Simon says, turn around! Stick out your tongue!

Fun song games such as Simon Says, Red Light, Green Light and musical chairs or statues (freeze dance) require quick responses and challenge children’s self-control, attention and cognitive flexibility.

At this age, children begin to appreciate rules; it’s increasingly important for adults to stand back and let them take charge. Learning to toss a coin or pick a number teaches negotiation and fair play.

Board games such as Sorry!, Battleship and checkers that require planning ahead and changing strategies to counter an opponent’s moves are excellent for honing executive function. So are puzzles, brainteasers, easy word finds and basic card games such as Go Fish.

Games for seven- to 12-year-olds

A deck of cards can build young brains in many ways. Start with

games such hearts or rummy and move to harder games such as bridge and poker.

Fantasy play is hugely appealing for kids this age. The computer game Minecraft or the tabletop role-playing game Dungeons and Dragons stretch minds with “complicated information about places visited in imaginary worlds, rules about how characters and materials can be used, and strategy in attaining self-determined goals,” says Harvard University’s Center for the Developing Child.

Good old hide and seek, tag or flashlight tag in the dark are thrilling; they also require fast reactions, constant monitoring of one’s surroundings and self-control.

Children this age also benefit greatly from organized sports, learning to dance, sing or play a musical instrument. 📺

Simon says put your hand on your head.





Illustrations: Celia Krampien

Talking about sex and intimacy with your kids

Start early with little conversations

Michele Holden (not her real name) has been talking about sex with her three children since they were little. “No one talked to me about it, I figured it out on the street, and I wanted to be upfront about it with my kids,” she says about the conversations she started before her kids started school. But

many parents—including Holden’s husband—are not as comfortable.

“Lots of people are scared and uncomfortable about it. You don’t want to think that your children will ever be sexually active,” says Jennifer Munoz, a reproductive health expert with AHS’s Healthy Living, Population, Public and Aboriginal

Health. “The fact is young people whose parents discuss all aspects of sexuality with them tend to delay becoming sexually active compared to children of parents who don’t discuss the topic at all.”

She suggests having a series of little conversations about sexuality over the years, starting when your

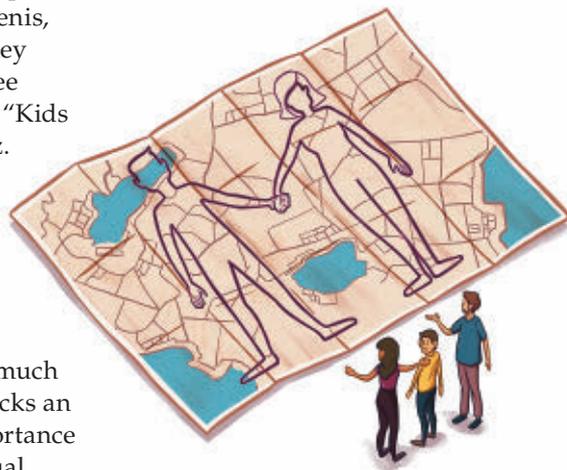
children are little and using proper terms for body parts, such as penis, vagina, anus and breasts. As they get older, you can check in to see what questions they may have. “Kids are super curious,” says Munoz. “Sexual health education is a shared responsibility of parents, schools and communities. We all need to be talking about it.”

At puberty and beyond, kids need to understand that sex is much more than just mechanics; it packs an emotional wallop. But the importance of emotional intimacy in a sexual relationship can be easily forgotten when kids are accessing pornography on their phones or seeing models posing in their underwear in every magazine and shopping mall. “How does that make them feel? Do they think that’s a realistic representation of women? Do they know what’s real and what’s not?” says Munoz. “You can’t assume kids know.”

Try answering children’s questions about sex in the same straightforward manner you’d answer ‘Why does my arm bend?’ There’s no “magic wand” to make the conversation easier, Munoz says, but you can always practice what to say: “And just know that it’s going to make your child safer.”

Older kids can get queasy discussing sex with adults. “You can recognize their discomfort and stop and say: ‘I know you’re uncomfortable. I’m just going to go forward if that’s OK,’ and keep talking,” suggests Colleen Roy, director of Provincial Sexually Transmitted Infections at the Sheldon M. Chumir Health Centre.

Arm your teenagers with information about how to use condoms, prevent sexually transmitted diseases and getting to



really know and trust any potential partners. “The basis of strong intimate relationships is self-esteem,” says Roy. “That’s what it starts with, that and the ability to start talking with them in a straightforward manner when they’re young.”

Even if one, or both of you, wants to put a pillow over your head.

One of Holden’s sons did just that in one conversation when he was nine. “At first he was completely grossed out,” she recalls. “But as soon as we got into the biology of it, he perked up and had good questions about how twins were made.”

And when she left his bedroom, she almost tripped over his six-year-old brother who had his ear pressed up against the bedroom door, listening to every single word. 

— Jennifer Allford

For more information on talking to your children about sexuality, visit the parents section of TeachingSexualHealth.ca. And you can encourage your older kids to visit SexGerms.com.

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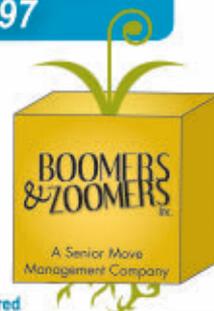
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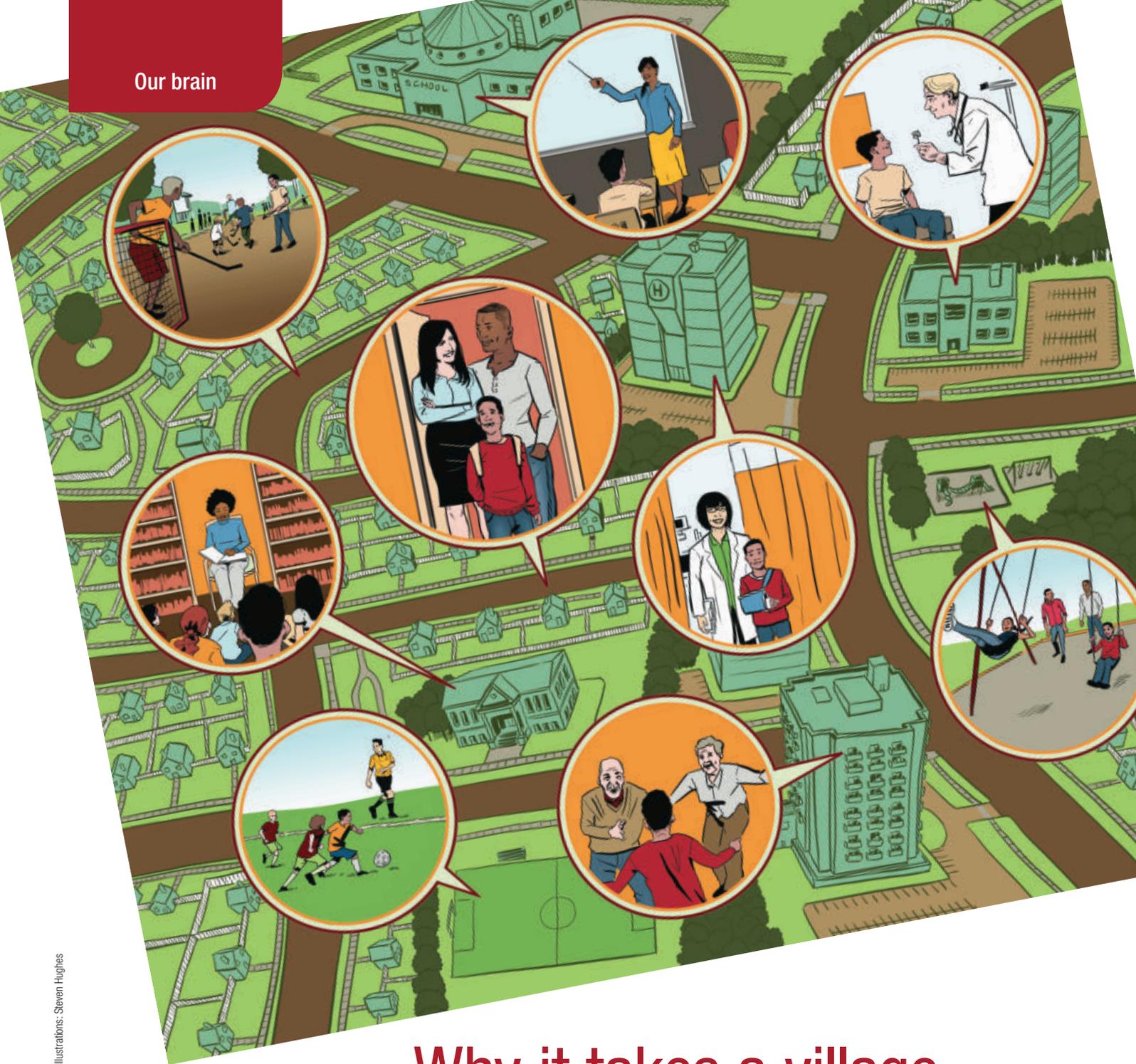
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Illustrations: Steven Hughes

Why it takes a village

More than ever, it takes a village to raise a child. But in today's modern world, what does that village look like? And how can we work together to give the next generation of Albertans what they need to thrive?

Cheryl Mahaffy reports

We're developing a shared understanding of what early childhood development means to Albertans



In a village everyone is connected. And when it comes to giving children the best start in life, connections matter, says Suzanne Tough, a researcher and professor with the Cumming School of Medicine at the University of Calgary and scientific director of the Alberta Centre for Child, Family and Community Research. Tough is also an Alberta Innovates – Health Solutions-funded researcher.

“Simple things that help families feel at home and connected in their neighbourhoods can be very effective.”

Tough's research has found that when parents and children can take part in low cost-activities such as reading or imitation games and community recreation such as story time, the children are more likely to develop the social and cognitive skills they need. What's more, when children's adult caregivers (including parents) are optimistic, have good emotional health, can resolve conflict and engage with social supports, the children can thrive.

When communities support families, they're supporting early childhood development and brain development. In turn, they're building healthier, stronger communities.

For example, more than 200 Albertans who attended the Alberta Family Wellness Initiative's Accelerating Innovation symposia in 2013 and 2014 have been taking the story of brain development (see page 31) into their communities. Symposia participants on 21 different Innovation Teams are telling the story to colleagues, clients, patients and others in everything from social services and education to childcare and health care.

“Our goal is to bridge the gap between what we know and what we do as a society,” says Michelle Gagnon, the vice president and chief operating officer of the AFWI. “Early childhood matters, enormously. We're developing a shared understanding of what early childhood development means to Albertans and the implications related to policy, practice, and research.”

Pulling together

Across Alberta, the it-takes-a-village philosophy is at work.

Iris Spurrell has dedicated years to creating a village around young children and their families in Calgary's Bowness and Montgomery communities. A retired principal, she's a “tribal leader”—someone everyone in these neighbourhoods turns to for wisdom about giving children the best possible start in life.

Recently, she's been leading one of 100 community coalitions formed in Alberta as part of the province's Early Childhood Map (ECMap) project.

Spurrell is full of stories about how neighbourly connections and support have helped children and families through difficult times. She recalls two moms who brought their babies to a Mother Goose literacy program and discovered they lived side by side in one duplex and could rely on each other for lending a hand. And the parent who took what she'd experienced in play-and-learn sessions to a park program.

“We are inventing ways for parents to stay connected with each other and with us, so they are not so isolated,” Spurrell says.

That's essential work, says Line Perron, of the now completed ECMap project. The project found a higher percentage of young children in Alberta are experiencing developmental difficulties as compared to the Canadian average. Nearly 29 per cent are experiencing great difficulty in one or more areas of development compared to the national average of 25.4 per cent. “If not being ready for school was a disease and 29 per cent of children had it, people would pay attention,” she says. “We need to make supports for preschool children non-negotiable—as standard as Grade 12

As word spreads of the importance of the preschool years, Albertans are responding from the heart

or kindergarten. It's about supporting the whole family. And that's where the village comes in."

No family an island

The Regional Municipality of Wood Buffalo epitomizes the reasons it takes a village to raise a child in today's Alberta.

Encompassing Alberta's oils sands, the city of Fort McMurray and a number of First Nations and Métis communities, the region includes a workforce from around the world that comes and goes. Many workers have no or little extended family around them, notes Tinna Ezekiel, who's helped nurture early childhood networks in the region. "Throughout history, we've always had family and other support around us, and lessons were passed down from our own parents. When you need help here, you have to bite the bullet and call someone else."

In Fort McMurray, friends become family, helping with everything from breastfeeding to childcare to nighttime hospital runs. "Incredible things happen here, in part because we're isolated," notes Leslie Ross, executive director of Children First: Community Child Care Network Society. "When the highway's closed and the planes aren't flying, we have to rely on ourselves."

The community boasts a wealth of services and programs for preschool

children, including top-quality childcare centres and libraries. But with a booming baby population, demand can often exceed supply. Rural families have added challenges, such as navigating who provides what and limited access to essentials such as healthy food.

The community, however, responded quickly after learning more than one in three Wood Buffalo children (one in two in some rural areas) enter kindergarten with moderate to severe challenges. It offered free parent conferences, planned a much-needed multiplex in the Métis community of Conklin and launched projects such as Teddy Bear Fairs, which will bring a range of screening services into First Nation communities.

That "all-in-it-together" approach is crucial, says Ross. "Without the community as a whole working toward healthy child development, it doesn't have the power to be as impactful as it needs to be."

From the heart

Every Saturday, Munira Nagii opens the Montessori preschool in her Calgary home for free, welcoming children and parents who would otherwise miss out. Within six months, the children involved show measurable advances, learning to play together, speak up in a group. Building trust really empowered

us to say we don't have to work in silos say a few phrases in English. "Thanks to Munira, those children have a better chance of school success—and life success," says Launa Clark, who is involved in number of early childhood projects. "When you're building a village, you build it from the heart of the people."

As word spreads of the vital importance of the preschool years, more Albertans are responding from the heart. A Calgary mom with early childhood expertise leads Tea with Bea, which gives parents a chance to discuss everything from anxiety to bullying and beyond. Mount Royal University students stop people on the street to chat and play games that highlight the importance of children having positive relationships and preventing toxic stress in the early years. Another 1,000 Albertans across the province have learned how to have similar conversations through the Community Assets for Education (Café) Institute. In Irricana, numerous groups are creating a one-stop shop for library, health and family resources.

"Building that format of trust really empowered us to say we don't have to work in silos—we can work together," says Debbie Fasoli, the area's coordinator of Pathways to Success coalition.

Indeed, involvement is rippling beyond early childhood circles.



Volunteer firefighters, impressively garbed in full uniform, are dedicating Saturday mornings to reading with kids at Irricana's library. A Punjabi radio station is airing parenting tips for dads, knowing that many taxi drivers listen to the station as they work. WinSport Canada's Jennifer Konopaki is sparking conversations about ways to help children be active outdoors.

"When you get people passionate, and it's about their community and their kids, there's power there," Clark says. "People know they can make a difference, and the skills they bring are beyond imagination."

Finding your fit

Principal Tori Healing makes a point of being present as students enter and exit Calgary's Evergreen School each day—and she knows all 570 by name. "I want every student to know

I care that they are at school and feel welcome and valued," she says. It's a simple but powerful example of making children feel they're valued and that you're there for them when they need you.

We all have an opportunity to turn everyday interactions with children and parents into something deeper, says Krista Warners, an Alberta Health Service health promotion facilitator. One way, she says, is connecting on a meaningful level. "Ask kids what is important to them, so that they feel safe and valued in their community." Speak up about the things children need, including welcoming neighbourhoods, healthy food and affordable services, and help families tap into those supports, adds Suzanne Blair, a coordinator with AHS's early childhood programs. "The family is the most significant influence in a child's life,

and it's important for parents to know they don't have to be at a crisis point to ask for support from others."

Del Graff of the Alberta legislature's Office of the Child and Youth Advocate would like to see all Albertans "be the village" to the children who cross their paths. "I've been involved in working with vulnerable children for over 30 years, and invariably those who are able to rise above their circumstances can identify significant adults in their lives who have helped them along the way," he reflects. "Those relationships are really what help young people grow up healthy and have a sense of belonging and wellness as they move forward into their adult lives."

In the words of Calgary "tribal leader" Spurrell, "Everyone can do something for kids. No act of kindness is ever too small, because it has ripple effects." ■

More than 12 steps

Alternatives to addiction treatment

As we learn more about addiction and its link to the brain, **Deborah Lawson** writes, more approaches to its treatment are emerging



“Hello. My name is Bill. I’m an alcoholic.”
For millions of people, Alcoholics Anonymous is a recognized route for overcoming alcoholism and relearning to live a “clean and sober life.”

As we learn more about alcohol addiction and its link to the brain, more approaches to its treatment are emerging.

Wine, beer and spirits have been consumed for thousands of years, but it wasn’t until 1956 that the American Medical Association recognized alcoholism as a disease.

In 2011, the American Society of Addiction Medicine redefined all types of addictions, describing them as “a brain disorder and not simply a behavioral problem involving too much alcohol, drugs, gambling or sex.”

Dr. Michael Miller, a past president of ASAM who helped develop the new definition, says “many behaviours driven by addiction are real problems and sometimes criminal acts. But the disease is about brains, not drugs. It’s about underlying neurology, not outward actions.”

Dr. Raju Hajela, a past president of the Canadian Society of Addiction Medicine and chair of the ASAM committee on the new definition, tackled a long-debated view about whether people with addictions choose to perform anti-social and dangerous behaviours. “The disease creates distortions in thinking, feelings and perceptions, which drive people to behave in ways that are not understandable to others around them. Simply put, addiction is not a choice.”

Recovery, however, always begins with individual choice, although the choice can be difficult for the afflicted person.

The roots of addiction

Well before an addiction takes hold, brain development plays a critical role in a person’s susceptibility to it. Early childhood experiences, including pre- and postnatal periods, can change brain architecture in ways that may make addiction more likely.

Families, friends, neighbours, co-workers and employers can all find themselves caught up in the tentacles of someone else's addiction

Nurturing relationships, especially in early childhood, are essential for healthy brain development. Adverse childhood experiences (ACEs; see page 43) can lead to toxic stress. This can damage brain architecture, brain growth, weaken memory and increase the risk of addiction and several mental and physical illnesses.

Adults who have had several ACEs can have difficulty coping with stress and anxiety—in part because of how their experiences shaped their brains during childhood.

“What happens in childhood is critically important in determining how vulnerable a person will be to addiction later in life,” says Dr. Nicole Sherren, a behavioural neuroscientist and scientific director for the Norlien Foundation, which is based in Calgary and Edmonton. “Supportive caregiving helps buffer children from the effects of stresses like these, but when children are neglected the damage can be great.”

She adds: “Addiction prevention can begin right at birth and continue across the lifespan.”

The idea that certain brains are more at risk of addiction is a major shift in thinking.

The tentacles of addiction

Addiction can affect anyone from any background and affects more than those in its direct grasp.

Families, friends, neighbours, co-workers and employers can all find themselves caught up in the tentacles of someone else's addiction.

Ariella Goodwine Fisher is a researcher and the clinical director of the Women's Recovery Association in California who spoke at the 2013

Alberta Family Wellness Initiative's Telling the Brain Story symposium. She says a family member's alcohol addiction ultimately becomes “the central organizing principle for the family, controlling and dictating their core beliefs, behaviour and development.”

In such families, a paradox exists, says Goodwine Fisher. Family members work hard to “both deny and explain the substance abuse at the same time. They must deny that there is a problem and at the same time explain the behaviour.”

She argues addiction treatment can only be complete when the family's structure and relationships are addressed. This includes everything from family members' roles and rules to how they communicate.

Given the reach of addiction and its effects on families, society, culture, the economy and government, more addiction services are being delivered through primary care networks in Alberta. This is giving people with any addiction and their families more treatment options, expertise and support.

Treating addiction

Evidence-based treatment begins with a comprehensive evaluation of the addicted person, followed—in the case of substance addictions—by stabilization (also known as detoxification). After this, treatment varies, depending upon the people, substances and behaviours involved and can include:

Defining addiction

Addiction is a chronic, relapsing disease affecting the brain's reward, motivation and related systems. Like other chronic diseases, it can be progressive, relapsing and fatal when abuse of a substance or behavior continues.

The Canadian Mental Health Association describes addiction as the presence of “the 4 Cs:”

- Craving
- Loss of control of amount or frequency of use
- Compulsion to use
- Use despite consequences.

Addictive behaviours are signs of an addiction, not the causes.

Michelle Craig, a director at Alberta Health's Addiction and Mental Health Branch, says “addiction covers a spectrum of behaviours and risks,” adding it's not uncommon for people to have more than one addiction.



Alberta treatment options

- **Motivational interviewing:** helps clients to develop the motivation and skills to change behavior by thinking differently and creating the belief that change can happen
- **Cognitive-behavioural therapy:** helps clients to understand how their thoughts and beliefs affect their actions and behaviours
- **Community reinforcement approaches:** a person is offered community and family support, plus life skills development so a sober lifestyle becomes more rewarding than addiction
- **Contingency (or reward system) management:** this method focuses on creating and giving positive consequences; when a behaviour is rewarded it is more likely to be repeated
- **Couples or family therapy:** involves partners and other family members of the addicted person in treatment to share, learn and support.

Addiction treatment is constantly evolving to keep up with the new research, eliminate stigma and ensure all available methods, including harm reduction, are practised, says Craig Staniforth, a project manager in the Addiction and Mental Health Branch of Alberta Health Services.

Addiction prevention is most effective when promoted and supported throughout the community. This can include people contributing to the well-being of those around them, guiding and supporting parents, and government policies and laws that support moderation. 

— with files from Terry Bullick

Addiction is not a choice, but treatment is. Albertans can choose from a variety of treatment options and help is available to find the one right for you or someone you know.

Most addiction treatment programs begin with the 12-step framework of Alcoholics Anonymous. Many are building on that framework as more is learned about addiction and how it affects different people and communities. Alberta's addiction programs include:

Alberta Health Services Addiction Programs and Services
albertahealthservices.ca/services.asp

Alberta Health Services Addiction and Mental Health Helpline
1-866-332-2322

- A one-stop connection to more than 200 Alberta Health Services' programs and services across the province.

Alberta's Primary Care Network
pcnpmo.ca/AboutPCNs

- The province has 42 primary care networks with more than 2,800 family doctors and more than 1,100 other health-care professionals.

South Country Treatment Centre, Lethbridge
403-329-6603 / info@southcountrytreatment.com

- A 28-day, co-ed residential program for adults with alcohol, drug or gambling addictions. Clients learn and discuss how addiction affects their lives.

Fresh Start Recovery Program, Calgary
freshstartrecovery.ca

- A 12- to 16-week, highly structured abstinence-based men's residential and day program that has curfews, chores and meditation on top of basic treatment.

Poundmaker's Lodge Treatment Centre, St. Albert
poundmakerslodge.com

- Treatment based on the traditions and cultural and spiritual beliefs of First Nations peoples.
- Holistic therapies consider the root causes of addiction.

Pastew Place Detoxification Centre, Fort McMurray
780-791-0952 / pastewplacedetox.com

- A 24/7 service that helps people detoxifying from alcohol and other drugs in a safe, controlled setting.

For additional resources, see page 77.



A drink can pack more punch with age

Alcohol use can turn to misuse as you get older

You may not be whooping it up at the club or falling down drunk at Sunday dinner, but as you age, you could be drinking too much alcohol without even knowing it.

“Factors that can lead to misuse of alcohol among older adults include using alcohol to cope with unresolved grief, stress, boredom, anxiety, depression and loneliness,” says Cindy King, program manager of Urban Services, Addiction and Mental Health at Alberta Health Services. Aging can bring on many challenges and changes that older adults find hard to cope with.

The problem can be compounded

by the mind-set of those around you. “Family members and health-care providers frequently deny or minimize problems that might be associated with alcohol misuse in older adults,” King says. “They may have an attitude that the person worked hard all their life and now deserves to take it easy. What harm is a little alcohol?”

Depending on your health and state of mind, a single drink can pack a lot more punch than when you were in your 20s or 30s. Our body’s ability to process alcohol changes as we age. We have a lower proportion of body water, slower metabolism and fewer

enzymes, which can all increase the potency of alcohol.

The truth is, alcohol misuse can be harmful at any age. But when you’re 50 or older, alcohol can pose more serious problems because you’re more likely to be on medications or have deteriorating health. “Alcohol interacts with more than 150 medications commonly prescribed for seniors,” King says.

Canada’s Low-Risk Alcohol Drinking Guidelines strongly advise not drinking at all if using medications or other drugs that interact with alcohol. The guidelines also recommend not drinking at all

when driving or using tools, working, caring for others and several other situations.

Detecting problem drinking (in yourself or others) is not always easy because the signs are similar to symptoms related to aging, such as an overall decline in health, social isolation (introversion), memory loss, sexual difficulties, depression, insomnia and falls.

That's why you may want to ask yourself: how much do I drink—in a week or a day?

While the percentage of older adults misusing alcohol may not be on the rise, the overall population is aging and people are living much longer, making the problem of alcohol misuse among them a growing one. It can seriously hamper your health and

independence and can affect health care, housing and public safety where you live.

Ultimately, the more aware you are about how much you drink, the less likely it will become a problem. 

— Colleen Seto

If you are concerned about your own or another person's drinking, call the 24-hour Addiction and Mental Health Helpline at 1.866.332.2322.

For more information, see Canada's Low-risk Alcohol Drinking Guidelines at bit.ly/1FlmONi.

Canada's Low-Risk Alcohol Drinking Guidelines are for 25- to 65-year-old adults. For those over 65, the Addiction and Mental Health Branch of Alberta Health says that depending on your health, state of mind and activities, you may want to:

- If you're a woman, have fewer than 10 drinks a week (and have no more than two drinks a day most days)
- If you're a man, have fewer than 15 drinks a week (and no more than three drinks a day most days).

Whatever your age, always check with your doctor or pharmacist before using alcohol with any medication.

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We see addictions differently

Albertans are more forgiving of substance addictions

Let's consider two people with different types of addictions. One has a gambling addiction and sits at VLT machines longer than her paycheque can support. Another is addicted to alcohol, and drinks at the bar most nights beyond what's good for both his health and job.

Do you have more compassion for one person over the other? Or do you think they're both a couple of losers and deserve whatever troubles their addictions bring them?

If you're like most Albertans,



Illustration: Michael Ebyers

you'll tend to cut people with a substance addiction a little more slack than people with a behavioural (or process) addiction. Researchers surveyed 4,000 people across the province and found that we tend to take a dimmer view of people addicted to behaviours such as shopping or video gaming, compared to people addicted to substances such as alcohol or cocaine.

"Substances are generally perceived to be more addictive than behaviours, and therefore more

difficult for a person to control their use of," says Dr. Cameron Wild, who has a PhD in psychology and is a professor in the School of Public Health at the University of Alberta.

"Moreover, people tend to see behavioural addictions as the result of a blameworthy character flaw or moral failing, whereas substance addictions are seen more in the context of a disease or health issue."

Research is showing that behavioural addictions have the same

Albertans tend be more forgiving of people with substance addictions than those with behavioural addictions

Re-defining gambling

Mental health professionals have been debating how best to understand activities that begin as an enjoyable pursuit and, for some, become an extreme problem, such as gambling or video gaming.

The Diagnostic and Statistical Manual of Mental Disorders (DSM), generally considered the mental health profession's authoritative classification of mental disorders, in 2013 reclassified gambling as an addiction. Previously it was listed as an impulse control disorder, putting it in the same family as kleptomania and pyromania.

Now called gambling disorder instead of pathological gambling, it's the only behaviour listed in the DSM as a substance-related and addictive disorder.

The shift reflects growing evidence that those with gambling problems have many of the same negative experiences as those with substance addictions and that many of the roots of the addictions are the same and involve the same reward systems.

roots as substance addictions, with potentially many different factors coming into play: early childhood and brain development, adverse childhood experiences, epigenetics (the combination of genetics and environment) and even personality.

"It's an unhelpful misperception to see behavioural addiction as some kind of moral failure," Wild says. "Like substance addiction, it

is a chronic illness that needs to be treated."

Dr. Barna Konkoly Thege, who has a PhD in health psychology and is a post-doctoral researcher at the University of Calgary, notes there are unfortunate consequences when people with behavioural addictions face stigma. "People with these disorders have serious problems, but they're judged less favourably, which

might prevent them from asking for help from professionals or friends," he says.

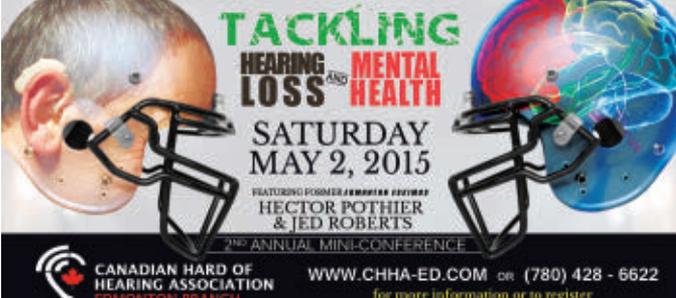
"Seeking help is already rare among behavioural addicts. And at the end of the day, the number of people seeking help influences the number of programs and professionals available." 

— Greg Harris

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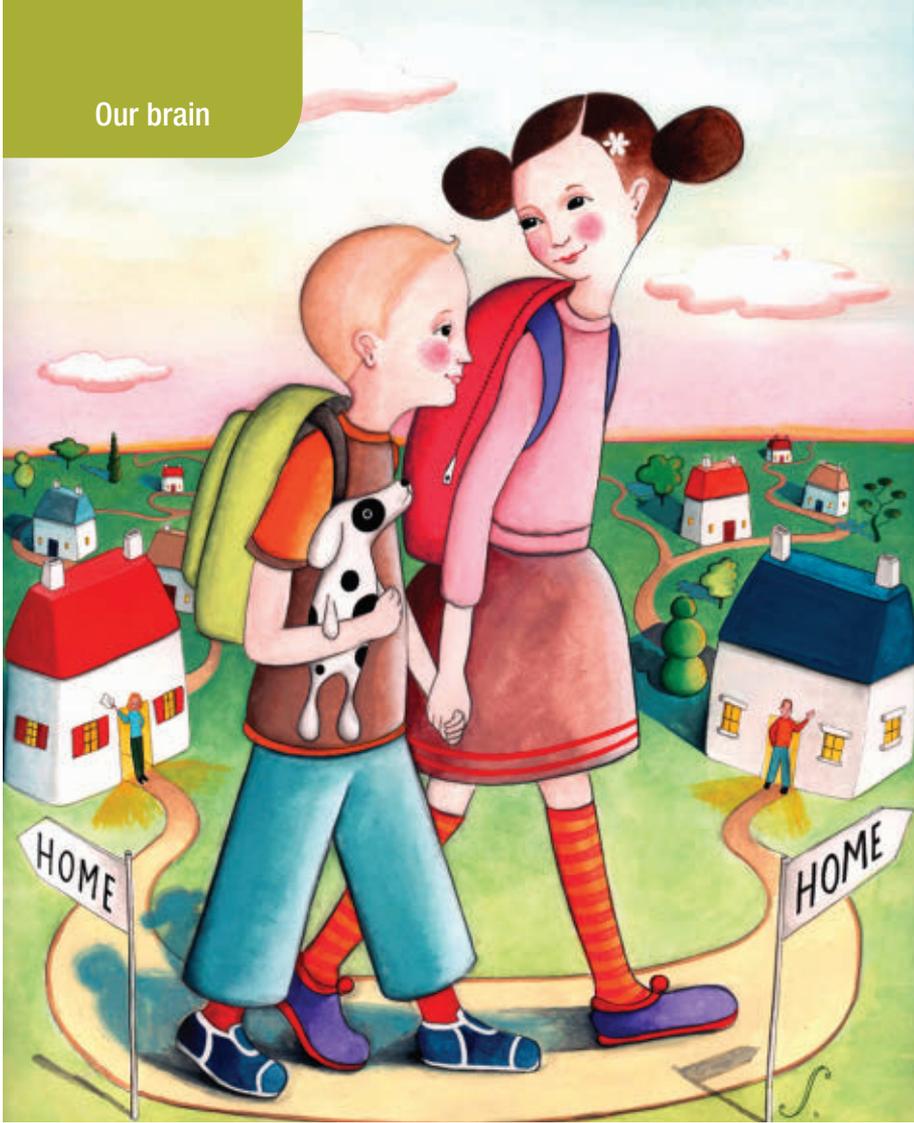


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Illustrations: Sophie Blackall

Avoiding the breakup earthquake of divorce

Ending a marriage is never easy for a couple, and it can be downright damaging for their children when a breakup turns into a battle. **Mike Fisher** looks at how families can reduce the shockwaves of the breakup earthquake

When a couple breaks up, it sends shockwaves through a family.

Depending on the seismic force of this breakup, anger, sadness, confusion and conflict reverberate through the family.

These feelings can tear apart family relationships in the same way an earthquake tears apart buildings, bridges and other structures. When the breakup earthquake goes on and on, it can generate toxic stress. Toxic stress is never good, but it's especially harmful to children because it can block or weaken brain development.

"The shockwaves of the breakup earthquake can start early with children very aware of the underlying conflicts," says Janis Pritchard, a collaborative practice lawyer and mediator with Pritchard & Co. Law Firm in Medicine Hat.

But families can avoid the damage of the breakup earthquake with legal options different from traditional divorce and separation methods.

Avoid conflict in divorce

One is collaborative practice, a relatively new way that divorcing or separating couples can resolve disputes respectfully and equitably—

The right help can calm the aftershocks of divorce

and without going to court.

Collaborative practice helps couples focus on their most important goals, especially their children, as they end their marriage, be it legal or common law. It also keeps spouses in control of the process—not lawyers or judges.

Collaborative divorce and mediation are problem-solving rather than adversarial procedures. They are ways for parents to avoid or lessen the shockwaves of a breakup for themselves and their children, Pritchard says. “Engaging the right professionals and organizations can help to calm the shock.”

In comparison, the traditional divorce system is adversarial, pitting parents against each other and often increasing and prolonging the conflict. A couple’s breakup does not have to lead to a nasty divorce battle in court, although many Albertans are unaware of the more peaceful options for divorce and separation, says Beryl McNeill, a registered collaborative practice lawyer and mediator with McNeill Family Law in Calgary. She is also past president of the Canadian Bar Association, Family Section (Alberta-South).

Collaborative practice is based on giving families ways to work together

and communicate. Lawyers, family counsellors, and financial specialists help and advise a divorcing couple and their family.

Pritchard and McNeill are part of a team of lawyers and family counsellors working to help Albertans understand their legal

options to divorce. Almost half of marriages in Alberta will end before a couple’s 30th anniversary.

“The more people hear about this model of practice, the more they choose it and the more other lawyers come on board to be trained,” McNeill says.

Breaking up can be easier to do

These resources offer divorcing or separating couples options to the traditional divorce system.

- **CollaborativePractice.ca:** This website from the Collaborative Divorce Alberta Association includes frequently asked questions about the practice and lists registered and trained professionals in your area, as well as family counsellors and financial experts.
- **Newways4families.com:** A respected and effective program in Medicine Hat, the New Ways for Families Program helps separating couples with children build their parenting skills and reduce the effects of high-conflict divorce and separation on children. “It teaches flexible thinking, learning how to manage emotions, moderate behaviours and checking yourself, among other skills,” says Pritchard.
- **afms.ca:** Visit the Alberta Family Mediation Society website to find registered family mediators and parenting coordinators.
- **justice.alberta.ca:** Families can find a range of resources from Alberta Justice and Solicitor General Mediation and Counselling Services, including mediation services to resolve parenting issues. Subsidies available.

Listen, speak and support: 10 TIPS

Respect and good communication can help families get safely through the breakup earthquake of divorce or separation.

1

Really listen to your spouse and your children. Think before saying anything.

While it may be hard, control your criticism, anger and distress in front of your children.

2

3

Find one-on-one time for each of your children so they feel nurtured, loved and listened to.

4

Encourage your children to have a good time with your spouse.

5

If your children will spend time in two homes, make them feel welcome and comfortable in yours.

7

Remind yourself that putting your kids first is important for them—now and in the future.

8

Let your kids know:

- They are not to blame for your breakup
- They will not be abandoned
- You and your ex will still be their parents.

9

Give your kids consistent guidance and boundaries. They need to know what you expect of them.

10

Work with your spouse to have calm, healthy and relevant communications.





Passing a new judgment

As people working in Alberta's legal system learn about early childhood brain development, they're using their knowledge to reshape their services and decisions—and better understand how people can become entangled in the law. **Valerie Berenyi** explains

The story of brain development is an **important** story for police to hear, and it really resonates with them

It's a heartbreaking case:

A judge must decide what's best for an infant born in a mental-health facility to a homeless mother.

The baby girl, placed in foster care the day after her birth, is now 11 months old. Her mother, a traumatized refugee struggling with mental illness and past drug use, has taken parenting classes and wants to raise her daughter.

But the mom is emotionally flat, sometimes suicidal. When she's able to see her baby, she can't focus on the child or give her basic care, such as changing her diaper.

The father is abusive, has a criminal record and wants no part in raising the child.

In 2014, in a noteworthy case, Provincial Court of Alberta Judge Ted Carruthers drew upon a growing body of evidence about the importance of early brain development to decide whether the baby would be better off with her biological family or adopted into a new one.

Understanding the roots of problems

The human condition—mental illness, homelessness, addictions, violence, family breakup—plays out daily in Alberta's courts. Increasingly, people who work in the legal system are trying to understand the roots of these problems. They're learning how early brain development affects lifelong health.

"As a community we need to be educated so that we all understand the core story of brain development," says Nancy Flatters, a non-sitting provincial court judge who, as a volunteer, teaches legal professionals (such as lawyers, judges, social workers and clerks) and parents to consider children's brain development while they're settling stressful conflicts in court.

Science tells us that when children have warm, positive experiences with family, friends and school, the brain builds strong architecture. On the other hand, if children are neglected or abused they can experience toxic

stress, which can weaken brain architecture and increase their risk of physical and mental health problems, including addiction, throughout life.

People within Alberta's legal system are taking this powerful knowledge and using it in innovative ways.

For example, the Policy and Program Development Branch of the Public Security Division in Alberta Justice and Solicitor General, which oversees policing in the province, began telling the core story of brain development to police officers in domestic violence training sessions in 2013.

"It's an important story for police officers to hear, and it really resonates with them," says Kathleen Collins, executive director of the branch.

"We teach them to note if there are children in the house [when they're responding to a domestic violence incident], to understand what effect toxic stress has on developing brains and to provide resources for the family."

Collins says one of the best teaching tools is a four-minute video produced by the Alberta Family Wellness Initiative. (See the video at albertafamilywellness.org.)

“The metaphors it uses, such as brain architecture, serve and return and toxic stress, are wonderful and everyone can understand them,” she says.

Employees with police-based victim service units throughout the province are also learning the core story. “This is where victims of crime are referred by police, and they may be traumatized by their experiences,” Collins says. “We’re trying to get the story and message out wherever we can.”

Legal meets health care

Increasingly, people employed in the legal system are working with those

in health care. “We have a lot of the same clients,” Collins says.

Many of them are repeatedly in and out of the correctional system, says Dr. Francesco Mosaico, a family physician working at the Boyle McCauley Health Centre. The centre offers primary health care and health promotion services to people in inner-city Edmonton experiencing poverty, homelessness, addiction, mental illness and social isolation. The centre is also part of two programs trying to stop the revolving door clients go through.

One is Alberta Justice’s Priority Prolific Offender Program, or P-POP. It targets people who have multiple nuisance offences—shoplifting, theft from vehicles, aggressive panhandling, urinating in public—but haven’t typically caused bodily harm to others. Many are addicted

to alcohol or drugs, have mental-health issues or come from difficult backgrounds. A diverse team works to keep them from getting into more legal trouble.

“We collaborate to support our mutual clients, such as someone who doesn’t have any identification or a health-care account,” Mosaico explains. “These people are the highest users of the justice system. It might be someone who steals to pay for their drug habit.”

Centre staff work to find clients housing, legal assistance, food, clothing and more. “Sometimes, we can address some of the root causes—abuse, for example. I can write a letter documenting untreated abuse issues, advocating for funding so that client can see a psychologist.”

The centre also works with AHS’s Corrections Transition Team,

We collaborate to support our mutual clients, such as someone who doesn’t have any identification or a health-care account





With this program we see **less relapse** into destructive behaviour

a voluntary program that supports people with mental illness and addiction who are about to be released from a corrections centre into the community.

Typically, Mosaico says, the health-care system and correctional services have little contact. "Someone would be released from jail without adequate medications, housing or clothes. He has no work, a criminal record and nowhere to live. It takes a while to save up for rent and a damage deposit. Without support, he'll relapse quickly and end up back in jail.

"We work with the Corrections Transition Team so that, ideally, we pick up the clients the day they get out of jail. As well as looking after their health-care needs, we get them warm clothing so they don't get frostbite. We write letters to Human Services, asking for money for damage deposit and first month's rent," Mosaico says.

The centre also works with clients with addictions to help reduce their risk of reoffending while awaiting more specialized treatment and support.

"With this program we see less relapse into destructive behaviour."

Understanding rather than punishing

Addiction is a brain disease that is more likely to affect people who have had three or more adverse childhood experiences (see page 43).

"Addicts are ostracized, shamed

and they're told they're bad people, and when they try to treat their pain, we jail them," said Dr. Gabor Mate, a Canadian physician and author specializing in addictions, in a recent interview with CBC Radio. "We traumatize them further by sticking them in jail."

Treating addiction as a brain disease removes the notion that it's somehow a conscious choice, adds Flatters.

"If you see addiction as a choice, you punish people. But if you see it as a disease—you wouldn't punish someone for having cancer or diabetes—you respond like you would to any other disease: what's the plan, what if there's a relapse?" she says. "And you provide effective, efficient and responsive intervention very early to break those intergenerational cycles of addiction."

In his Calgary courtroom in the fall of 2013, Carruthers weighed the science-based evidence about toxic stress and early brain development as he decided whether to return a baby girl to her mentally ill, homeless mother.

In his judgment he drew on expert evidence from Evelyn Wotherspoon, a clinical social worker and early childhood mental health consultant. "The child," Carruthers wrote, "is in a period of exuberant brain growth, she is vulnerable to disruptions in that growth through exposure to toxic stress."

Adoption, he decided, was in the baby's best interests. ■

Resource guide

From understanding your child's development better to finding help for dealing with an addiction, the following resources can help.

Getting started

Addiction and Mental Health Hotline

- Free 24-hour-a-day confidential and anonymous help from Alberta Health Services for those with mental health and addiction concerns
- Call 1-866-332-2322 or visit albertahealthservices.ca/mentalhealth.asp

Alberta's Primary Care Network

- A listing of the province's 42 primary care networks, which include more than 2,800 family doctors and more than 1,100 other health-care professionals
- Visit pcnpmo.ca and search for PCNs in Alberta

Health Link Alberta

- Free health advice over the phone from Alberta Health Services' nurses 24 hours a day
- Call 1-866-408-LINK (5465)

My Health Alberta

- Online health and wellness information and tools to help manage your health
- Visit myhealth.alberta.ca

Early childhood development and families

Adverse Childhood Experiences

- acestudy.org
- acetoohigh.com
- albertafamilywellness.org
- cdc.gov/violenceprevention/acestudy

Alberta Family Wellness Initiative

- Information and research on early childhood development
- Resources on brain architecture and development during the early childhood years
- Visit albertafamilywellness.org

Early Childhood Development

- Programs, referrals and home visitation
- For a list of services and locations
- Visit earlychildhood.alberta.ca

Enhancing and Practicing Executive Function Skills with Children from Infancy to Adolescence

- A booklet published by the Harvard University's Center for the Developing Child
- Visit bit.ly/1y0IcDo to download the booklet

Early childhood development and families continued

Family and Community Resource Centre

- Access to health information, resources and individual support
- Focuses on family-centred care
- 1-877-943-3272 (FCRC)
- fcrc.albertahealthservices.ca

First 2000 Days Early Childhood Development Network

- A community-based organization with accessible resources about children from conception to age six that supports healthy development
- Visit 2000days.ca to learn more

Local Libraries

- Programs, resources and tools for all ages
- Visit thealbertalibrary.ab.ca to find a library near you

Parent Link Centres

- Where parents and children come together to share information and experiences
- Supportive staff to answer questions and concerns
- Find a Parent Link Centre near you
- humanservices.alberta.ca

Supporting Father Involvement

- Fathers and extended families can find support and resources to help understand the importance of father-child relationships and involvement
- famcentre.ca

Talking to your children about sexuality

- Visit the parents section of TeachingSexualHealth.ca
- Encourage your older kids to visit SexGerms.com

Addiction and mental health

Addiction Helpline

- Free, confidential, 24-hour support
- Provides information and locations of services near you
- 1-866-332-2322
- albertahealthservices.ca/addiction.asp

Addiction Information, Prevention and Treatment

- AHS programs and services for those seeking help with addiction
- Information, facts and shelter locations
- Visit programs.alberta.ca and search for addiction treatment services

Al-Anon

- A place where people meet to share experiences and stories about overcoming addiction
- Offers support for teens and adults
- al-anon.org

Alberta Health

- Information and resources on mental health, substance abuse and addiction
- Visit health.alberta.ca and search for addiction-mental health



Alcoholics Anonymous

- Uses a 12-step recovery process for people recovering from alcoholism
- Meetings are co-ed and all ages are welcome
- Find a time and location near you
- aa.org

Canada's Low-Risk Alcohol Drinking Guidelines

- Definitions and advice on safe drinking from the Canadian Centre on Substance Abuse
- bit.ly/1FlmONi

Canadian Association for Suicide Prevention

- Accessible crisis services provided in Alberta
- Information and resources available to help prevent suicide
- suicideprevention.ca

Fresh Start Recovery Program, Calgary

- A 12- to 16-week, highly structured abstinence-based men's residential and day program that has curfews, chores and meditation on top of basic treatment
- freshstartrecovery.ca

McDougall House, Edmonton

- A second-stage treatment centre for women who have completed an inpatient residential program Assist clients in understanding the dynamics behind their addiction
- mcdougallhouse.com

Mental Health and Wellness Services

- Programs, services and locations in Alberta
- albertahealthservices.ca/mentalhealth.asp

Mental Health Hotline

- Confidential and anonymous help
- 1-877-303-2642
- albertahealthservices.ca/mentalhealth.asp

MyHealth.Alberta.ca

- Health information and tools about drug use for young adults
- Visit myhealth.alberta.ca and search for information-for-young-people-what-is-addiction

Narcotics Anonymous

- Community based resource for people recovering from addiction
- Men and women attend meetings to support each other in staying clean
- na.org

Pastew Place Detoxification Centre, Fort McMurray

- A 24/7 service that helps people detoxifying from alcohol and other drugs in a safe, controlled setting
- 780-791-0952
- pastewplacedetox.com

Poundmaker's Lodge Treatment Centre, St. Albert

- Treatment based on the traditions and cultural and spiritual beliefs of First Nations peoples
- Holistic therapies consider the root causes of addiction
- poundmakerslodge.com

South Country Treatment Centre, Lethbridge

- A 28-day, co-ed residential program for adults with alcohol, drug or gambling addictions; clients learn and discuss how addiction affects their lives
- 403-329-6603
- info@southcountrytreatment.com

Southern Alcare Manor, Lethbridge

- A residential, long-term intensive treatment program for people with substance addiction
- 403-328-0955
- alcare@telusplanet.net

Sunrise Native Addiction Services Society, Calgary

- An Aboriginal-based program that includes elder involvement and traditional ceremonies
- Holistic approach aims to heal both mind and body
- nass.ca

Thorpe Recovery Centre, Blackfoot

- Client centered, community based
- Treats those with more than one addiction, including gambling and sexual addictions
- Separate programs for men and women
- thorperecoverycentre.org

{ Passion for Health }



We share your passion for health.

So we're connecting with you to share stories about health and health care in our province.

We look forward to meeting with you at community events, Apple Talks and open houses throughout Alberta.

For details, visit our Passion for Health pages at: albertahealthservices.ca/passionforhealth



Praising Passion

Our Praising Passion column celebrates inspiring Albertans who go above and beyond to improve the health and well-being of people in their communities.

Nominate someone in your community or vote for the person you'd like to see featured in the next issue of *Apple* by emailing apple.mag@albertahealthservices.ca or calling 403-943-1993. Comments are welcome and voting is open until April 30, 2015.

The nominees are:

Bill Brooks

A *Calgary Herald* columnist, Bill Brooks is also a tireless volunteer whose hard work and dedication have prompted 18,000 Alberta men to be tested for prostate cancer. For the past 17 years, he has hosted an annual fundraiser that's raised more than \$6.3 million for prostate cancer research and treatment.



Jordanna Lambert

Jordanna's ongoing support and enthusiasm has helped the Northern Lights Health Foundation fund more than \$1.8 million of health-care services and resources and improve patient care in the Fort McMurray/Wood Buffalo area. She also encourages healthy relationships between her colleagues, foundation staff and volunteers.



Gordon Mathezer

For more than a decade, Gordon has volunteered with Calgary stroke survivors who have aphasia, a language disorder that makes it difficult to speak. His weekly meetings connect stroke survivors to each other and give them an opportunity to practise their communication skills.



Garett Richardson

Promoting healthy eating, active living and community safety is a career and a way of life for Garett, a health promotion facilitator in Grande Prairie. He writes a weekly column to share his knowledge, experiences and resources with communities, co-workers and friends. He enjoys inspiring others to live healthy, active lives.



Scott Calling Last

An outreach worker with Alberta Health Services, Scott works with First Nations, Metis and Inuit people who are homeless and living on the streets of downtown Calgary. Rain or shine, he is committed to finding the resources and support they need to improve their health and lives.



Delivering a vision for oral health

Denise Kokoram is the driving force behind the Alex Dental Health Bus

Denise Kokoram is a registered dental hygienist who is taking it to the streets. The head of the Alex Dental Health Bus in Calgary, she works with other dental hygienists, dentists, teachers, schools and project supporters to take oral health care to the community.

The Alex bus visits more than 30 schools from September to June each year offering youth from six to 24 years old services such as fluoride varnish and sealants to prevent cavities.

To help those with serious tooth decay, Kokoram asks dental practices across the city if they will host a Smiles Dental Clinic. Staff with the Alex Centre and participating practices then give free dental services to youth in need of care on Sunday mornings or Wednesday evenings.

“The exciting thing Denise has brought to the program is her connection with the dental community,” says Chris Wood, the director of Health Services for the Alex Centre. “It has allowed us to go to the next step. What do you do with the kids who have restorative needs and you have no place to put them? Denise has been able to engage her colleagues. She’s a well-respected individual.”

Kokoram and Wood see every day how poor oral health affects overall health. It can be hard for children



Photo: Grant Black

to learn when they have a cavity or infection and they can end up missing school and other activities. Cavities and gum disease are also linked to many serious conditions, including diabetes and respiratory diseases.

“My big vision is accessible oral

health care for everybody,” Kokoram says. She wants to make timely quality oral health care available to everyone so “people don’t have to live with that kind of pain and infection.” [a](#)

— Jeff Collins

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BUILDING BETTER BRAINS

SERVE AND RETURN

Positive Interactions Build Strong Brain Architecture

Kids naturally reach out for interaction, which is like a “serve” in a game of tennis. When a caregiver “returns” the serve by responding to the child, it strengthens healthy connections in the child’s brain. These serve and return interactions are the bricks that build a healthy foundation for all future development.

