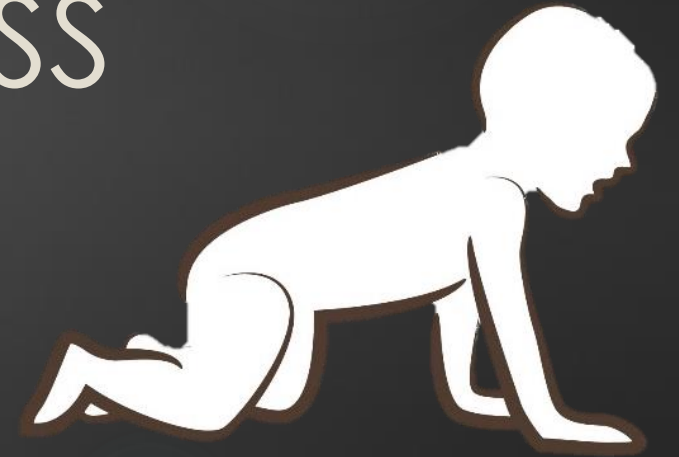




PRODUCTIVE PLAY STRATEGIES FOR BABIES' HEALTHY GROSS MOTOR DEVELOPMENT

PEDIATRIC PHYSIOTHERAPY



propel physiotherapy

Propel Physiotherapy provides personal and professional treatment for people of all ages whether you have suffered a stroke or traumatic brain injury; experienced a complex orthopedic injury caused by a motor vehicle accident, workplace accident or sports; are recovering from childbirth, illness, a simple strain or sprain; or you are looking to improve your performance in your daily activities.

Our integrated healthcare team serves the Greater Toronto Area from our two convenient locations in Etobicoke and Pickering, and also provides mobile services that will come to your home, place of business or other location in the community that best suits your needs.



INTEGRATED HEALTHCARE
PROGRAMS



EVIDENCE-BASED TECHNIQUES



PROFESSIONALLY TRAINED
THERAPISTS



COMPREHENSIVE CLIENT-
CENTRED CARE



PEDIATRIC PHYSIOTHERAPY: PRODUCTIVE PLAY FOR BABIES' HEALTHY GROSS MOTOR SKILLS DEVELOPMENT



By Registered Physiotherapist Janna Marvyn

Janna's career has given her the opportunity to work with a variety of populations including individuals with spinal cord injuries, brain injuries, and complex orthopedic conditions. Her passion led her to the field of [pediatric physiotherapy](#), where she has focused on treatment for infants, children and youth with congenital conditions, orthopedic and neurological injuries, including cerebral palsy, Downs Syndrome, Global Developmental Delay, torticollis and club foot.

Janna holds a Bachelor of Science in Kinesiology degree from the University of Waterloo, and a Master of Science degree in Physical Therapy from Queen's University. Her education has continued post-graduation, and includes additional training in NDT/Bobath techniques, pediatric motor development, torticollis management, pediatric gait training, and strength training for both typically developing children and children with neurological disorders. Janna has also achieved her Cuevas Medek Exercises (CME) Level 1 certification.

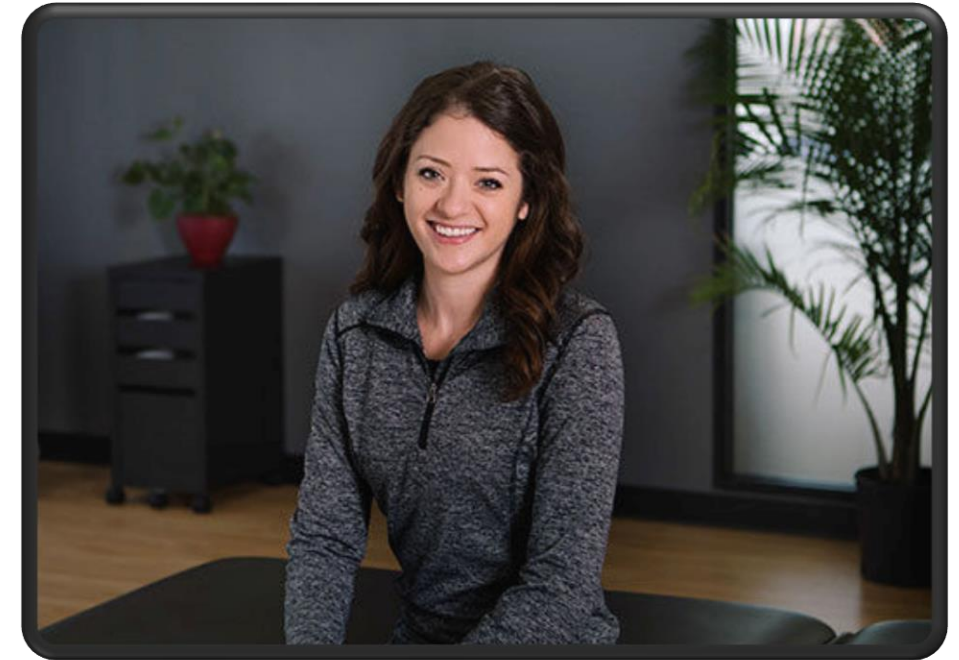


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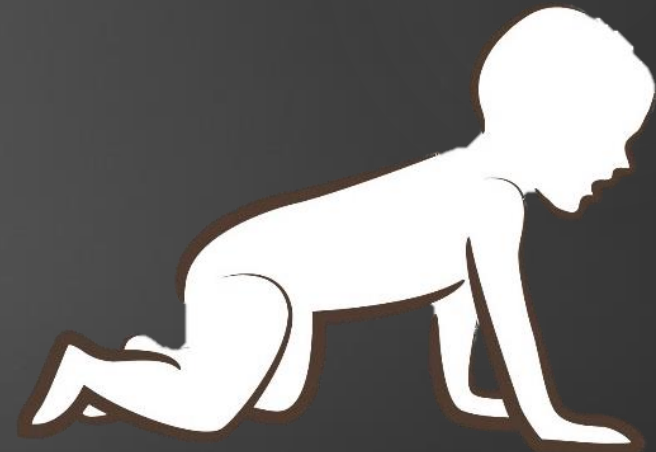
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INTRODUCTION

Pediatric physiotherapy is the delivery of physiotherapy services to children and youth, from birth to 21 years of age. Every child's goals and needs are uniquely different. At Propel, we work closely with family members, caregivers, teachers, doctors and other health care professionals on your child's integrated healthcare team. Treatment will focus on optimizing your child's participation in daily activities based on your child's function and your family's goals and needs.

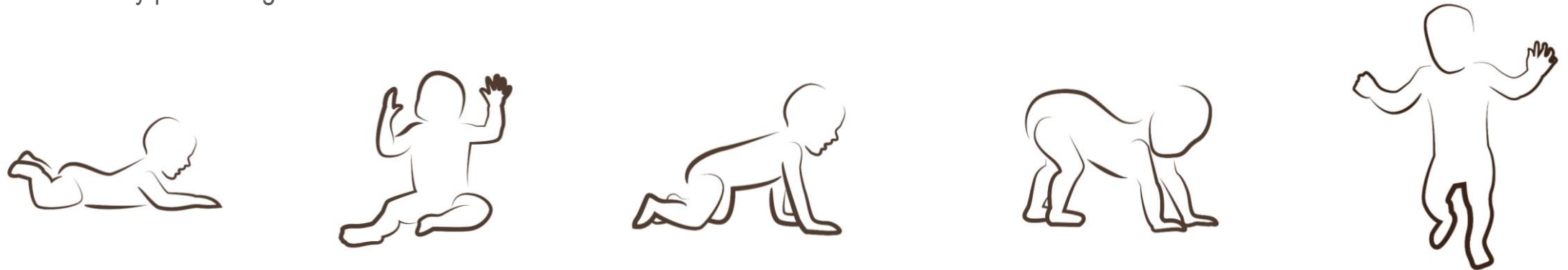
Infants, toddlers and young children who require physiotherapy intervention may not fully grasp the purpose or function of therapy services; as such our pediatric physiotherapy sessions incorporate functional play and exciting motivators while creating a fun atmosphere to help accomplish therapy goals.



THERAPEUTIC OPTIONS & GOALS

Every child's development is different and milestones might be reached within a wide range of what is considered 'normal'. In cases where there are no significant health concerns, both children and parents can benefit from a comprehensive physiotherapy assessment.

Our pediatric physiotherapist, [Janna Marvyn](#), performs a comprehensive assessment of the child's gross motor function. The assessment will evaluate the baby's posture, strength (sitting, standing), movement (rolling, crawling, cruising, etc.), flexibility, balance, coordination and sensory processing.



A summary of the assessment will be provided in a detailed report that includes the observations, analysis and a personalized plan that includes productive play strategies with tips and techniques specific to your child to use at home to work towards your goals and education on what to expect during each stage of their development .





CLIENT CASE

HEALTHY 10-WEEK OLD BABY BOY

SUBJECTIVE

- Parents report unremarkable pregnancy and birth history
- Baby boy has been healthy to date
- He is eating well and is starting to sleep for 5 consecutive hours at night
- Experiencing some abdominal gas
- Parents have no significant concerns at this time



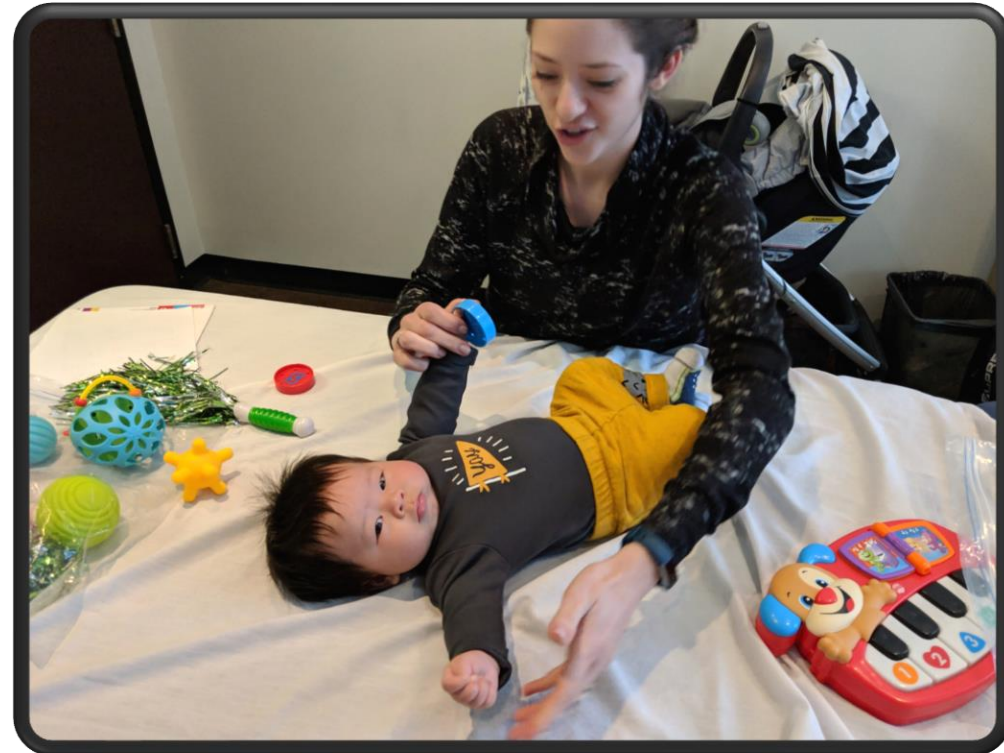
PROBLEM LIST

- Abdominal gas



GOALS

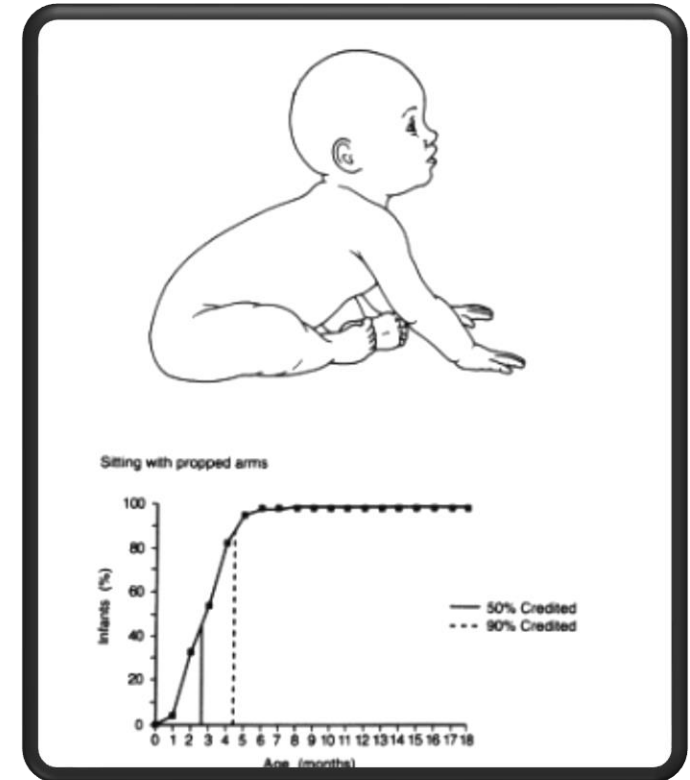
1. Relieve abdominal gas
2. Improve head control
3. Increase cervical extension in tummy time
4. Increase strength and endurance overall



OUTCOME MEASURES

The Alberta Infant Motor Scale (AIMS) was administered during the assessment. The AIMS is designed to evaluate gross motor skills in infants 0-18 months of age, in four different positions: *supine*, *prone*, *sitting* and *standing*.

The AIMS takes into consideration three criteria related to quality of movement: weight distribution, posture and movement against the force of gravity. A raw score and percentile score are obtained.



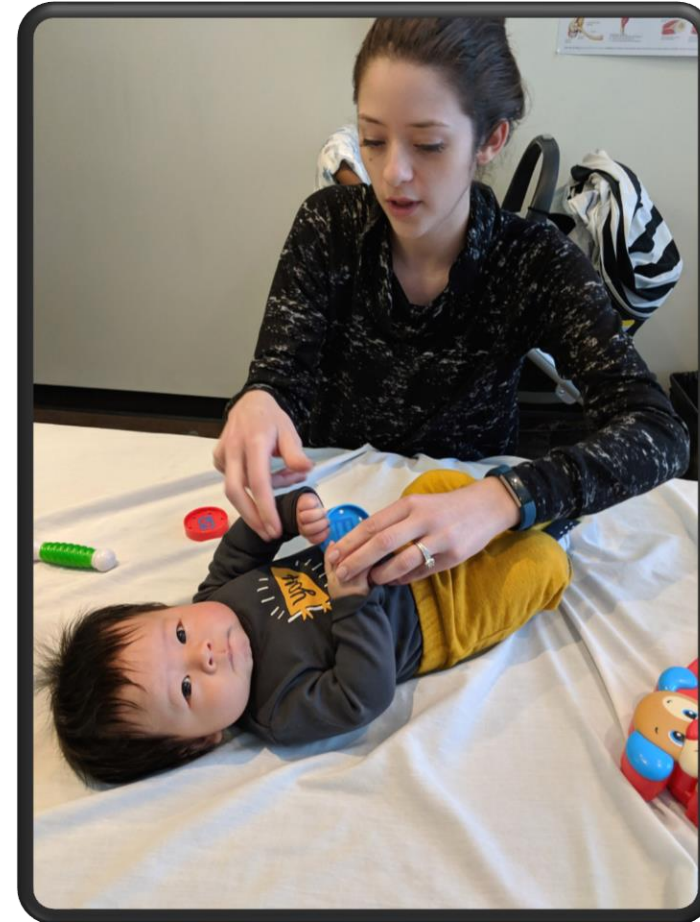
INTERVENTIONS

- Provide support and stimuli in tummy time position
- Provide support to baby in sitting (on various surfaces)
- Give baby the experience of weight bearing through his legs
- Assist baby into side lying



INTERVENTIONS

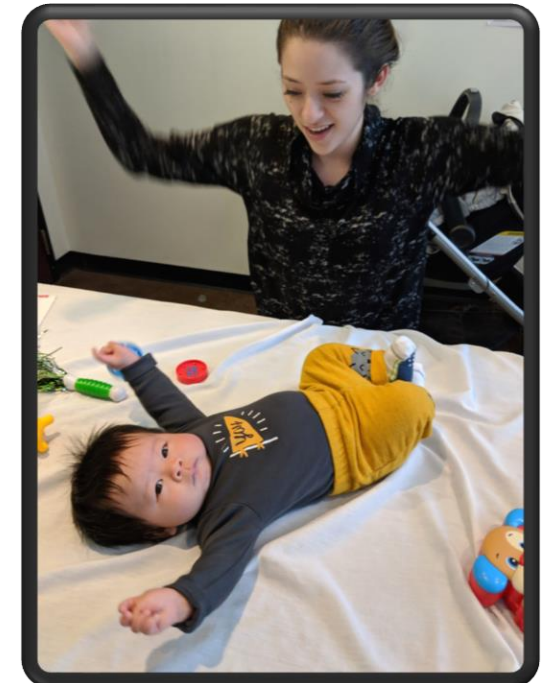
- Encourage baby to look both directions more often
- Encourage baby to reach for toys in supine
- Bring baby's knees towards his chest and make small circles with his hips flexed to assist with movement of abdominal gas
- Providing sensory experiences during play including visual stimulation (colours, lights), auditory (musical toys, singing), and tactile (different materials, rubber toys/balls, etc.)



RESULTS

SUPINE

- Random arm and leg movements performed frequently, brief moments of reciprocal kicking observed
- Rotates head left and right in response to verbal and visual stimulation, prefers to keep head to right
- Full neck rotation and side flexion
- Easily brings hand to mouth
- Not yet bringing hands to midline
- Initiates unilateral reach for toy, accurate grasp emerging
- Tracks toys with eyes easily in both directions



RESULTS

PRONE

- Lifts head asymmetrically approx. 45 degrees for brief periods of time (<2-3 seconds), elbows behind shoulders in tummy time
- Increased cervical extension strength and endurance when facilitation to back extensors with shoulder girdle support provided by PT

TRANSITIONS

- Maximal support required to facilitate rolling at this time



RESULTS

SITTING

- Maintains head in midline for up to 15 seconds with support under his arms/around his upper chest when sitting
- Decreased head control when support moved to lower-ribcage in seated position

STANDING

- Intermittent hip and knee flexion observed in supported standing
- Head maintained in midline up to 10 seconds with support at upper-chest
- Intermittent and brief weight bearing through both legs observed



TAKEAWAYS

At 10 weeks old, this baby boy scored 9 points on the Alberta Infant Motor Scale, which places him in the 50th percentile compared to age-matched peers. This indicates that his gross motor skills are developing within expected limits at this time.

He tolerated the session very well, but was evidently fatigued towards the end. Education was provided to parents regarding activities for productive play to increase his strength and stamina, as well as movement of abdominal gas.

The family is to complete the personalized home activity program for 4-6 weeks, after which time, we recommend updating the activity program.





We have set ourselves apart by the quality of care our clinicians provide and the unique setting we provide to meet the individual of these clients. Our comprehensive client-centered approach allows each clinician to spend valuable and meaningful time with each client. This is especially important for people who have sustained a brain or spinal cord injury. To accommodate these complexities, we will see some of our clients for an hour to an hour and a half for assessments and treatment sessions; and there is additional preparation time that goes into each appointment.

All of the physiotherapists at Propel Physiotherapy have training in the Bobath Concept or Neuro-Development Treatment and have completed post-graduate certifications and course work in the specialty area of neurology. We consider current principles of neurophysiology, motor learning and the capacity of the nervous system to change through neuroplasticity when treating each client.

We take a hands-on approach to treatment. Our therapists have specific training required to address the needs for this type of clientele, which includes manual therapy, soft tissue release, NDT/ Bobath assessment and treatment techniques, normal movement, vestibular rehabilitation, acupuncture, massage therapy, chronic pain management, exercise programming, and mindfulness.

After a full assessment, we develop a customized treatment program to meet each client's specific goals. We work together with Case Managers, Occupational Therapists, Speech Language Pathology, Social Work, Psychology and a number of other healthcare professionals to provide comprehensive care in the clinic and community.





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