# Chiropractic history and examination forms for the infant, pre-school, and school-aged child

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#### Introduction

Chiropractic education typically includes a cursory level of education within pediatrics¹ which varies from institution to institution. Practitioners interested in pediatrics can pursue additional education through continuous education courses (continuing professional development), a diplomate, or a Master's degree, through a range of providers. Surveys have shown that the majority of practitioners see children of all ages, but feel they have inadequate skills in assessment and treatment.¹

Triaging musculoskeletal (MSK) and non-MSK complaints is of the highest priority when assessing the pediatric patient.<sup>2</sup> Some apparently-MSK presentations have serious red flag causes, such as bone or joint infection, malignancy, or non-accidental injury.<sup>2</sup> Other conditions which appear to be MSK at first glance may be due to potentially disabling pathology, including orthopedic hip conditions, rheumatological diseases, or neuromuscular diseases.<sup>2</sup> Ability to triage is therefore a vital skill and knowledge base for practitioners to develop when seeing the pediatric patient, as differential diagnosis and treatment vary significantly from the adult patient.<sup>3</sup> Children, and particularly infants, are not small adults. There are specific and different concerns which must be addressed with an appropriate history and examination.

### Aims

The European Academy of Chiropractic (EAC) is working to provide post-registration education for practitioners. One of the EAC's special interest groups (SIGs) is pediatrics, where members are working to advance education around pediatric practice. The pediatric SIG is a team of four, each with advanced education within chiropractic and/or pediatrics (post-graduate Master's degree or PhD), and each with expertise in clinical practice, research, or education.

Fungible pediatric history and examination forms for chiropractors and other manual therapists have not yet been made available. Consequently, a key initiative of the SIG over the past year has been to provide basic history and examination forms for the infant, pre-school, and school-aged child, for use by practitioners with limited education in this area. The forms presented with this article have been designed to organize the pediatric history (Tables 1, 4, and 7) and examination (Tables 3, 6, and 9), giving it form and consistency, aiding the practitioner in

undertaking a thorough assessment. The primary focus is on triaging common musculoskeletal (MSK) and non-MSK presentations in the three pediatric age groups, and on identifying red flags which are indications for referral (Tables 2, 5, 8). In highlighting non-MSK and red flag presentations,<sup>4,5</sup> there is an emphasis on safety, particularly identifying and referring the ill child for medical assessment and care. These forms are helpful in reaching the goal of arriving at the correct diagnosis or diagnoses, in order that the proper management can be recommended.

#### **Process**

The pediatric history and examination forms have been reviewed by all members of the SIG in an extensive, iterative process spanning 18 months. Within the SIG and for each age group, an initial draft was created, multiple iterations were developed, and meetings were held to discuss and resolve disagreements by consensus. In total, six meetings were held between members of the SIG. Once agreed upon within the group, the forms were then discussed at length with a pediatrician (MD), and recommendations adopted. This iteration was then shared with and reviewed by chiropractors with expertise in the pediatric patient, and their comments were reviewed by the authors.

### **Recommendations for chiropractors**

The authors recommend adopting these forms in clinical practice. Just as these forms reflect the fact that the child is growing and developing, treatment is also adjusted based on age and development. That said, our recommendations include referring the neonate to another chiropractor with more education and experience as this patient group has special considerations not all covered in the infant form. The age group delineations are not ideal as the 13-monthold is not developmentally the same as the 5-year-old. We will be working to develop more optimal forms. The toddler is difficult to evaluate and because of this, may require advanced skills in evaluation and treatment. The 6-year-old presents challenges, for example, as they may refuse to undress for proper evaluation as developmentally, blossoming self-awareness may result in shyness with strangers.

For those practitioners with additional education and experience with these age groups, there may be additional information you wish to seek in the history and assessment you will carry out in the examination. Using these forms as a foundation will provide a safety net, highlighting non-MSK conditions and red flags for the different age groups within the pediatric patient.<sup>4,5</sup>

These forms will be available to download from the European Academy of Chiropractors' website. Accompanying 'addon' history and examination forms for common presenting complaints, such as the crying infant, childhood headache, and scoliosis, are currently being developed. A series of recorded lectures to accompany these forms are in progress, discussing key aspects of the history and examination of the pediatric patient. These will also be available through the European Academy of Chiropractic and the General Education Network for Chiropractic (GEN-C).

#### Conclusion

These forms represent a minimum standard for assessing pediatric patients to ensure safe and effective management. The implementation of these forms should not only raise competence of practitioners, but with widespread use, enable data collection on a large scale for future research. This is a starting point in a series of work, aimed at elevating the safety and quality of musculoskeletal care provided by chiropractors to babies, children, and their families.

**Editors Note:** The forms are included on the following pages, and can be found on the JCCP website as stand-alone PDFs which can be easily downloaded for your use.

# Table 1. Infant history form (0-12 months)

Patient information and consent	
Patient name	
Patient date of birth	
Parent/guardian names	
Legal relationship to child	
General practitioner/pediatrician	
Consent to contact other healthcare practitioners	
Consent to care	
Consent to use anonymized data for research purposes	
Date	
Antenatal health	
Maternal illness in prognancy	
Maternal illness in pregnancy	
Previous pregnancies  Estal health in pregnancies	
Fetal health in pregnancy	
Direct.	
Birth	
Duration of pregnancy Duration of labor	weeksdays
	1st stage hours 2nd stage hours
Presentation (cephalic, breech)	
Intervention during labor/birth	
Medication perinatally, including analgesia	
Obvious signs of injury after birth (e.g. bruising, skin damage, cephalohematoma)	
Baby's health after birth	
Time between birth and first feed	
Procenting complaint	
Presenting complaint Parent/guardian concern/s	
Onset, associated symptoms, timing/course,	
aggravating and relieving factors, severity	
Crying	
Timing/frequency	
Pitch/intensity	
Consolability	
Associated symptoms/behaviors (e.g. pulling ears, scratching eyes)	
Can the baby be put down?	
-1 L	
Sleeping	
Time and duration	
Positioning (supine or other)	
T	
Location (e.g. cot, car seat)	

# Table 1. Infant history form (0-12 months) - continued

Table 2. Red Flags in the infant (0-12 months) – Indications for referral

Age group	Sign/symptom	√ / ×
Any age	Labored breathing	
	Rib retractions	
	Fever	
	Fewer than 4 heavy wet nappies in 24 hours	
	Slow or halted growth (weight, length, head circumference)	
	Halted or regression of development	
	Fractures in non-ambulatory child	
	Lethargic, difficult to rouse	
Development:	Not responding to loud noises	
1-3 months	Not following objects with eyes by 2-3 months	
Development:	Not supporting head well	
3-4 months	Not weightbearing on feet when held upright	
Development:	Stiff or contracted muscles of extremities	
4-7 months	Hypotonia or floppiness of neck or extremities	
	Head not held when pulled from supine to sitting by arms	
Development:	Not crawling by 12 months	
8-12 months	Asymmetry in crawling, e.g. dragging one leg	
	Not standing when supported	
	Not sitting steadily by 10 months	

Table 3. Infant examination form (0-12 months)

General observations General appearance, movement pattern, skin, handedness			
Head, face, eyes, ears, nose Marks, bruising, swelling, discharge, rash, mucous, asymmetry			
Cardiovascular and respiratory Chest wall deformities, respiratory effort, color			
Abdomen Distention, rigidity, umbilicus			
Social interaction Child and parents, child and practitioner			
Measurements*	Weight:	lb.	kg
	Length:	in	cm
	Heart rate:		BPM
	Respiratory rate:		RPM
	Capillary refill:		secs
	Temperature:	°F	°C

### Table 3. Infant examination form (0-12 months) continued

Cranial nerve screening	Normal/abnormal response
CN 2: Pupillary light reflex	*
CNs 3, 4, 6: extra-ocular movements	
CN 5: facial sensation, masseter/temporalis motor	
CN 7: blink response, facial expression	
CN 8: hearing screen	
CN 9, 10: speech swallow, gag	
CN 11: active head rotation	
CN 12: active tongue movement	
Primitive Reflexes	Normal/abnormal response
Rooting reflex	
Sucking reflex	
Moro Reflex	
Plantar grasp	
Palmer grasp	
Babinski	
ATNR	
Stepping reflex	
Muscle stretch reflexes	Normal/ahnormal recognice
	Normal/abnormal response
Biceps	
Brachioradialis	
Triceps	
Patella	
Hamstring	
Achilles	
Orthopedic examination	Normal/abnormal findings
Hip examination if indicated  Issues with walking	
Observation and palpation for spinal and extremity deformity, e.g. scoliosis	
Musculoskeletal examination	
Palpation	Findings
Active and passive range of motion	Cervical:
Spine, extremities — as indicated	Thoracic:
	Lumbar:
	Pelvic:
	Upper extremity:
	Lower extremity:
Static and motion palpation for	Cervical:
regional restriction, tenderness	Thoracic:
Spine, extremities — as indicated	Lumbar:
epine, entremine no minemen	Pelvic:
	Upper extremity:
	opper extremity.

# Table 4. Pre-school aged child history form (1-5 years)

Patient information and consent	
Patient name	
Patient date of birth	
Parent/guardian names	
Legal relationship to child	
General practitioner/pediatrician	
Consent to contact other practitioners	
Consent to care	
Consent to use anonymized data for research	
Date	
Primary complaint	
Description (ask parent/guardian & child)	
Onset	
Course since onset	
Possible causes/contributing factors	
Aggravating factors	
Relieving factors	
Behavioral changes	
Associated symptoms	
Previous episodes and management	
Pre-school attendance, engagement	
Activities affected	
Nutrition	
Diagnosed or suspected allergies/intolerances	
Usual diet and any restrictions	
Growth (weight, height, head circumference)	
Sleep	
Sleep patterns	
Any concerns about sleep	
Activity levels	
Physical activity What, how long, how often	
Sedentary time	
Screen time	

# Table 4. Pre-school aged child history form (1-5 years) continued

General health	
Diagnosed conditions When diagnosed?	
Suspected conditions	
Medications Prescribed and OTC	
Supplements	
GP or hospital visits/admissions When and why?	
Other healthcare professionals seen	
Surgeries What and why?	
Atopic: Skin, respiratory, gastrointestinal	
Injuries	
Infections	
Vaccinations — normal schedule followed?	
Family medical history Who, what, management, outcome	
Review of systems	
Respiratory Recurrent coughs, mucous, wheeze	
Skin Rash, eczema	
Gastrointestinal Pain, vomiting, wind, stool	
Output Frequency of urination and defecation in 24hrs	
Positional or postural preference Asymmetry of head, trunk, or limbs	
Injuries or falls	
Development Does the child move and interact like other children the same age?	
Other Any other thoughts or concerns not covered?	

Table 5. Red Flags in the pre-school aged child (1-5 years) - Indications for referral

Sign/symptom	√ / ×	
Labored breathing		
Rib retractions		
Fever		
Reduced urinary output (dehydration)		
Slow or halted growth Weight, height, head circumference		
Halted or regression of development (loss of skills)		
Marked difference between left and right sides of body Strength, tone		
Marked high or low tone, especially with impact on motor skills/development		
Extreme lethargy, difficulty rousing		

Table 5. Red Flags in the pre-school aged child (1-5 years) - Indications for referral continued

Age	Developmental	skills	√ / ×
>1 year	Fine motor	Unable to do the following:	
		Point with finger to picture in book	
		Hold a cup	
		Hold a toy with both hands at midline	
	Gross motor	Not sitting upright steadily	
		Not crawling	
		Unusual crawling pattern	
		Not pulling up to standing	
	-	Not rolling over	
>2 years	Fine motor	Unable to do the following:	
		Scribble	
	-	Stack at least four blocks	
		Put round or square pegs into holes	
	Gross motor	Frequent falling and difficulty with stairs	
		Cannot stand alone at 14 months	
		Cannot walk by 18 months	
		Fails to develop a mature heel-toe walking pattern Walks exclusively on toes	
		Not jumping by 30 months of age	
		"Walking" their hands up their bodies to achieve a standing position	
		Still "toeing in" at two years of age	
		Unusual creeping patterns	
>3 years	Fine motor	Cannot grasp a crayon between thumb and fingers	
,		Cannot copy a circle	
		Cannot stack 4 blocks	
	Gross motor	Cannot jump in place	
		Cannot ride a trike	
		Cannot stand tandem	
>4 years	Fine motor	Movements seem shaky or stiff	
- )		Arms and hands seem very weak	
		Is not able to cut a piece of paper with scissors	
		Cannot copy a cross (+)	
		Is not able to draw a circle and straight lines	
	Gross motor	Stands out from the group in structured motor tasks	
		Difficulty getting up from floor	
		Excessive slouching during sitting activities	
		Limping	
		Cannot climb stairs alternating feet	
		Cannot hop	
>5 years	Fine motor	Movements seem shaky or stiff	
. ,	- 110 1110101	Arms and hands seem very weak	
		Is not able to cut along a straight line	
		Is not holding her crayons or pencils with her thumb and fingers	
		Is not able to draw a circle, square and cross	
	Gross motor	Cannot hop on one foot	
		Cannot jump	
		Cannot throw a ball	
		Cannot bounce a ball	
		Cannot skip	
		Cannot stand on one foot	
		Cannot walk on a balance beam	
		Fatigue during movement activities	

# Table 6. Pre-school aged child examination form (1-5 years)

Observations and	:					
General observati General appearance	ions 2, movement pattern, skin, h	andedness				
Head, face, eyes, Marks, bruising, st	ears, nose welling, discharge, rash, mu	cous, asymmetry				
Cardiovascular aı Chest wall deformii	nd respiratory ties, respiratory effort, color					
Abdomen Distention, rigidity	y, umbilicus					
Social interaction Child and parents,	child and practitioner, friend	ds				
Measurements	Weight:	lb	kg			
	Length:	in	cm			
	Heart rate:		BPM			
	Respiratory rate:		RPM			
	Temperature:	°F	°C			
	Blood pressure:		mmHg			
Neurological exa When indicated, pla Cranial nerve scr	us additional neurological e:		ited (tone, co-ordinati Normal/abnormal i		e, gait, etc.)	
When indicated, pla Cranial nerve scr	us additional neurological e: reening				e, gait, etc.)	
When indicated, place Cranial nerve scr CN 2: Pupillary li	us additional neurological e: reening ight reflex				e, gait, etc.)	
When indicated, place Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra-	us additional neurological e: reening				e, gait, etc.)	
When indicated, place of Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa	us additional neurological exeening  ight reflex  ocular movements				e, gait, etc.)	
When indicated, place of Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa	us additional neurological exeening  Ight reflex  Focular movements  Ition, masseter/temporalise  Inse, facial expression				e, gait, etc.)	
When indicated, place Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa CN 7: blink respo	us additional neurological exeening  Ight reflex  Occular movements  Intion, masseter/temporalise  Inse, facial expression  Inseen				e, gait, etc.)	
When indicated, place Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa CN 7: blink respo CN 8: hearing scr	us additional neurological exceening ight reflex cocular movements ation, masseter/temporalisonse, facial expression teen swallowing, gag				e, gait, etc.)	
When indicated, pho Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa CN 7: blink respo CN 8: hearing scr CN 9, 10: speech,	us additional neurological exceening  Ight reflex  ocular movements  ation, masseter/temporalis  onse, facial expression  eeen  swallowing, gag  d rotation				e, gait, etc.)	
When indicated, place Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa CN 7: blink respo CN 8: hearing scr CN 9, 10: speech, CN 11: active hea	us additional neurological exceening  ight reflex cocular movements ation, masseter/temporalis conse, facial expression een swallowing, gag d rotation gue movement	s motor		response	e, gait, etc.)	
When indicated, pho Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa CN 7: blink respo CN 8: hearing scr CN 9, 10: speech, CN 11: active hea CN 12: active tong	us additional neurological exceening  ight reflex cocular movements ation, masseter/temporalis conse, facial expression een swallowing, gag d rotation gue movement	s motor	Normal/abnormal	response	e, gait, etc.)	
When indicated, pho Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa CN 7: blink respo CN 8: hearing scr CN 9, 10: speech, CN 11: active hea CN 12: active tong Primitive reflexes	us additional neurological exceening  ight reflex cocular movements ation, masseter/temporalis conse, facial expression een swallowing, gag d rotation gue movement	s motor	Normal/abnormal	response	e, gait, etc.)	
When indicated, pho Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa CN 7: blink respo CN 8: hearing scr CN 9, 10: speech, CN 11: active hea CN 12: active tong Primitive reflexes	us additional neurological exceening light reflex rocular movements ution, masseter/temporalis onse, facial expression reen swallowing, gag d rotation gue movement s	s motor	Normal/abnormal	response	e, gait, etc.)	
When indicated, pho Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa CN 7: blink respo CN 8: hearing scr CN 9, 10: speech, CN 11: active hea CN 12: active tong Primitive reflexes Babkin reflex	us additional neurological exceening light reflex rocular movements ution, masseter/temporalis onse, facial expression reen swallowing, gag d rotation gue movement s	s motor	Normal/abnormal	response	e, gait, etc.)	
When indicated, pho Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra- CN 5: facial sensa CN 7: blink respo CN 8: hearing scr CN 9, 10: speech, CN 11: active hea CN 12: active tong Primitive reflexes Babkin reflex Galant reflex	us additional neurological exceening light reflex locular movements lation, masseter/temporalis lonse, facial expression leen leen leen swallowing, gag led rotation legue movement less lexs lexs lexs lexs lexs lexs lexs	s motor	Normal/abnormal	response	e, gait, etc.)	
When indicated, phe Cranial nerve scr CN 2: Pupillary li CNs 3, 4, 6: extra-CN 5: facial sensa CN 7: blink respo CN 8: hearing scr CN 9, 10: speech, CN 11: active hea CN 12: active tong Primitive reflexes Babkin reflex CA CR	us additional neurological exceening light reflex locular movements lation, masseter/temporalis lonse, facial expression leen leen leen swallowing, gag led rotation legue movement less lexs lexs lexs lexs lexs lexs lexs	s motor	Normal/abnormal	response	e, gait, etc.)	

# Table 6. Pre-school aged child examination form (1-5 years) continued

Muscle stretch reflexes	Normal/abnormal response
Biceps	
Brachioradialis	
Triceps	
Patellar	
Hamstring	
Achilles	
Babinski flexor response	
Orthopedic examination	Normal/abnormal findings
Observation and palpation for spinal and extremity deformity, e.g. scoliosis	
Posture	
Hip examination if indicated  Issues with walking	
Musculoskeletal examination	·
Palpation	Findings
Active and passive range of motion	Cervical:
Spine, extremities — as indicated	Thoracic:
	Lumbar:
	Pelvic:
	Upper extremity:
	Lower extremity:
Static and motion palpation for	Cervical:
regional restriction, tenderness	Thoracic:
Spine, extremities — as indicated	Lumbar:
	Pelvic:
	Upper extremity:
	Opper extremity:

### Table 7. School-aged child history form (5-12 years)

Patient name	
Patient date of birth	
Parent/guardian names	
Legal relationship to child	
General practitioner/pediatrician	
Consent to contact other practitioners	
Consent to care	
Consent to use anonymized data for research	
Date	
Primary complaint	
Description (ask parent/guardian & child)	
Onset	
Course since onset	
Possible causes/contributing factors	
Aggravating factors	
Relieving factors	
Behavioral changes	
Associated symptoms	
Previous episodes and management	
School attendance, engagement, achievement	
Activities affected	
Transport mode to school	
Car, walk, bike	
Any history of emotional trauma	
e.g. bereavement, bullying, abuse	
Nutrition	
Diagnosed or suspected allergies/intolerances	
Usual diet and any restrictions	
Growth (weight, height)	
Sleep	
Sleep patterns	
Any concerns about sleep	
Activity levels	
Physical activity	
What, how long, how often	
Sedentary time	

### Table 7. School-aged child history form (5-12 years) continued

General health	
Diagnosed conditions When diagnosed?	
Suspected conditions	
Medications Prescribed and OTC	
Supplements	
GP or hospital visits/admissions When and why?	
Other healthcare professionals seen	
Surgeries What and why?	
Atopic: Skin, respiratory, gastrointestinal	
Injuries	
Infections	
Vaccinations — normal schedule followed?	
Family medical history Who, what, management, outcome	
Review of systems	
Respiratory Recurrent coughs, mucous, wheeze	
Skin Rash, eczema	
Gastrointestinal Pain, vomiting, gas, stool	
Output Frequency of urination and defecation in 24 hrs	
Positional or postural preference Asymmetry of head, trunk, or limbs	
Injuries or falls	
Development  Does the child move and interact like other children the same age?	
Other	
Recreational drug use	
Any other thoughts or concerns not covered?	

Table 8. Red flags in the school-aged child (5-12 years) – Indications for referral

Sign/symptom	√ / ×	
Labored breathing		
Rib retractions		
Fever		
Reduced urinary output (dehydration)		
Lethargy, difficulty rousing, change in mentation		
Slow or halted growth		
Growth curve/chart		
Halted or regression of development (loss of skills)		
Marked difference between left and right sides of body		
Strength, tone		
Marked high or low tone, especially with impact on motor skills/development		
Persistent toe-walking		

Table 9. School-aged child examination form (6-12 years)

General observati General appearance	ons e, movement pattern, skin, ha	ındedness	
Head, face, eyes, e Marks, bruising, su	ears, nose velling, discharge, rash, muc	ous, asymmetry	
Cardiovascular ar Chest wall deformit	nd respiratory ties, respiratory effort, color		
Abdomen Distention, rigidity	ı, umbilicus		
Social interaction Child and parents,	child and practitioner, friend	s	
Measurements	Weight:	lb	kg
	Length:	in	cm
	Heart rate:		BPM
	Respiratory rate:		RPM
	Temperature:	°F	°C
	Blood pressure:		mmHg

# Table 9. School-aged child examination form (6-12 years) continued

Cranial nerve screening	Normal/abnormal response
CN 2: Pupillary light reflex	•
CNs 3, 4, 6: extra-ocular movements	
CN 5: facial sensation, masseter/temporalis motor	
CN 7: blink response, facial expression	
CN 8: hearing screen	
CN 9, 10: speech, swallowing	
CN 11: active head rotation	
CN 12: active tongue movement	
Muscle stretch reflexes	Normal/abnormal response
Biceps	
Brachioradialis	
Triceps	
Patella	
Hamstring	
Achilles	
Babinski flexor response	
Developmental screening	√ / ×
Stand steadily with feet together, eyes closed	
Stand steadily on one leg	
Stand steadily on one leg with eyes closed	
Heel-toe walk	
Finger-to-nose	
Dysdiadochokinesia	
Retained primitive reflexes	
Orthopedic examination	Normal/abnormal findings
Observation and palpation for spinal	
and extremity deformity, e.g. scoliosis	
Posture	
Adam's forward bend (scoliosis)	
Musculoskeletal examination	
Palpation	Findings
Active and passive range of motion	Cervical:
Spine, extremities — as indicated	Thoracic:
	Lumbar:
	Pelvic:
	Upper extremity:
	Lower extremity:
Static and motion palpation for	Cervical:
regional restriction, tenderness	Thoracic:
Spine, extremities — as indicated	Lumbar:
	Pelvic:
	Upper extremity: