Developmental Considerations in Structural Work with Small Children

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Abstract

Working with children, especially young children, requires a clear understanding of age-specific developmental norms as well as a willingness to be inventive with one's application of technique. This essay uses one aspect of age-specific criteria—developmental changes to lower body postural patterns—as one way to explore the question: How can we best adapt our work to support very young children?

In writing this essay, I'd like to explore some ideas that I find useful when working with children, sometimes quite young children. In the 14 years that I've been treating small children, I have come to incorporate equally craniosacral, visceral, neural, and structural methods. Each of these schools has a strong foundation in osteopathic principles and offers specific strategies that are useful when considering the complex changes we undergo in early childhood (ages 0-7). Working with children requires a specialized approach in many ways. Working with a 12-year-old may only be slightly different from working with an 18-year-old; but you can imagine that working with a 3-year-old or 3-month-old is quite another matter. Some of what I have written will echo the same foundational structural integration (SI) principles that we use in working with adults. The question becomes: How do I adapt those principles and incorporate new considerations of the specific needs that are driven by age and developmental challenges?

Before going further, I want to clearly acknowledge that this essay considers the musculoskeletal architecture and an overview of gait; particularly, this essay references the milestones used in describing *normal* and/or relatively healthy children. There are many more variations, challenges, and ingenious adaptations that could be explored if we were to turn our attention to children with special needs.

Additionally, surrounding and permeating this architectural focus are the complex topics of neuromotor and cognitive development, the role of environment within the womb and beyond, and especially the embodied self as it emerges from its symbiosis with mother to gain its individuated expression in the family, social group, and world at large. Added to this complexity is the practitioner's task of creating a safe and nurturing experience for the client, no matter how young. The younger the child, the more explicitly we are working not only with the individual, but with the immediate family as well. All of these factors can influence the outcome of our work and are worthy of exploration.

This essay aims to take a quick look at a few of the above aspects and to give an introduction to the richness of working with young people. It is beyond the scope of this essay, as well as my expertise, to expound on all of these subjects. Instead, I will draw from my experience as a bodyworker, and point to areas for further exploration beyond what I can offer.

Morphological Traits of the Skeleton

At birth, most of the skeleton is still developing (Larsen, 2001); it is highly flexible, being comprised of a dense cartilaginous framework and ample space at the joints. As the infant grows, the bones begin to bear more stress and calcify, particularly once the child learns to stand and walk. (In fact, most parents I talk to are surprised to learn just how long it takes

for the skeleton to fully ossify; notably the pelvis completes its ossification in our late teens or early twenties, depending on gender.)

A child's legs, which are held in flexion, abduction, and outward rotation at birth (Figure 1), progress through a series of changes during early childhood. Within the first four to six years, the legs naturally transition from the neonatal flexion pattern to a *bow leg* or *O-leg* pattern by the first year (Campbell, Vander Linden, & Palisano, 2006). This is due, in large part, to the changing neural reflexes which restrict, then release, movement across the hips and knees.

Called *genu varus* in orthopedic and physical therapy terms, the essential O-leg pattern describes what is happening at the knee (*genu*). The pattern includes outward rotation of thigh and relative inward rotation of the tibia. By the end of the second year, the limbs transition to a pattern of inward rotation of the thigh and outward rotation of the tibia called X-leg or *genu valgus* (Campbell et al., 2006). Figure 2 shows the developmental patterns by age-range.

If we look a little closer at these patterns, we can appreciate subtle differences in what our clients present: bony position (tilt versus rotation), asymmetries in joint surface (organic or traumatic), and weight bearing through the leg as a whole.

Figure 1. At birth, a child's legs are held in flexion, abduction, and outward rotation.

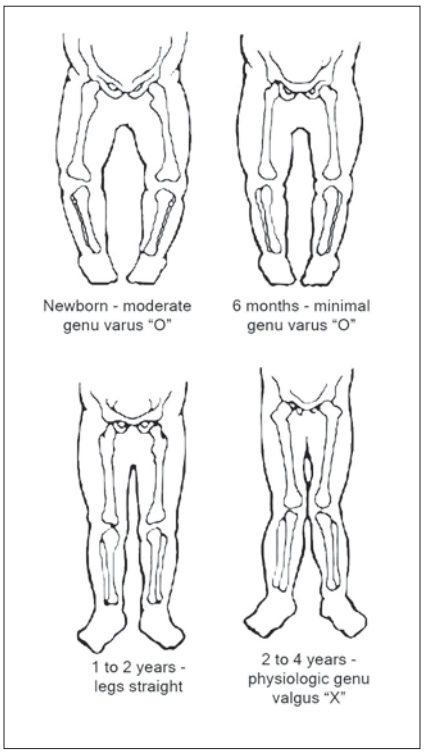

Figure 2. Normal development takes the legs from an ***O-leg*** pattern to an ***X-leg*** pattern within the first two years.

Bony Position

Because our joints are not composed of level surfaces, when we have displacement in one plane (rotation for example), we will also have displacement in at least one other plane—tilt or shift. Either is possible at the knee (Moeckel & Mitha, 2008; Sergueef, 2007). What starts as rotation, can quickly become rotation and tilt—either left-right or anterior-posterior. This is why some clients will present a pattern that is predominantly rotational, while others will present a pattern of the same severity that is predominantly created by tilts. In our assessment (and subsequent treatment), it is very useful to distinguish which is the most compromised plane and which is the secondary plane. To do this, we often begin with visual assessment from some distance away; this approach yields a general impression that can be confirmed by palpating bony landmarks. Landmarks alone can confirm that we have a deviation in both planes, without giving us a sense of which plane is more restricted. We can go further to assess tissue strain in standing as a means of distinguishing which plane is *governing* the pattern. (Such palpatory assessment method is described further along in this essay.) Using palpatory assessment is not unique to working with children, but it does make assessing a wiggly client remarkably efficient and easy.

Asymmetry in the Joint Surfaces

Some people have knee asymmetries that stem from genetic differences in their joint surfaces (Campbell et al., 2006). If these asymmetries were present from birth, it's quite possible that the body has

learned how to negotiate those differences without a localized strain. However, close assessment of the ankles and feet below, as well as the hip above, can help identify how the body has compensated for such asymmetries and perhaps reveal more longitudinal patterns that can be helped with soft tissue release. (N.B.: Many orthopedic texts consider genu valgus and varus, by definition, to be problems with the joint surfaces proper, not a displacement of either bone in space, i.e., tilt or rotation. As such, their recommendation in severe cases is surgical resurfacing and physical therapy in more mild cases to strengthen, and likely shorten, surrounding myofascia.)

Bony variation that occurs from traumatic incidents is usually accompanied by significant compensation, locally and systemically (Barral & Croibier, 1999; Moeckel & Mitha, 2008). In resolving trauma in children, the practitioner must first establish rapport with the child, who likely by that point will have spent a lot of time with other health-care providers or in hospital settings.

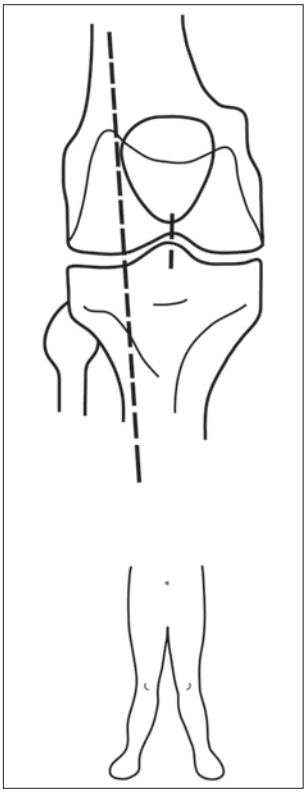

Figure 3. In genu valgus the weight travels through the lateral side of the joint; note the fibula. The close-up illustrates the right knee.

Figure 4. In genu varus the weight travels through the medial side of the joint; again note the fibula. The close-up illustrates the left knee.

Weight Bearing Through the Joint

Figures 3 and 4 show a *functional* definition for genu valgus and varus, rather than measuring the geometry of joint angles. The functional parameter asks the question: How does the weight travel through the leg?

By definition, genu varus or valgus orients to the weight bearing at the knee, but answering this question adequately requires that we also look to the ankle and foot, as well as the hip and pelvis. Figure 5 shows a combined pattern: valgus in the right leg and varus in the left leg. The dotted line indicates that, by definition, we assume that the weight will pass from the center of the hips through the leg to the center of the ankle. Variations in femoral head position or shape change the weight-bearing equation even before we reach the knee. Likewise, if the arches, heel, and ankle structures are dysfunctional or misaligned, the weight-bearing function will not offer proper support upward in weight bearing to the knee. All of these factors compel us to look systemically, rather than locally in order to assess a client's alignment pattern. (SI practitioners are accustomed to such an approach, but sometimes we need to convince our physical therapist, orthopedic doctor, or insurance carriers about the usefulness of this inquiry.) In young

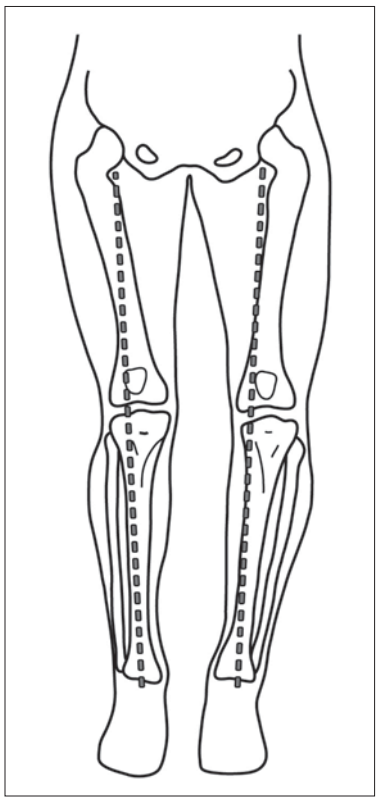

Figure 5. Here we see how a person can have a combined pattern with one leg genu varus and one genu valgus; this is not uncommon in children as they transition between patterns.

Figure 6. Looking at this photo from the 1930s, we can see children of various ages. Most exhibit the X-leg pattern as they walk up the beach; in the older children, the pattern has resolved, more so in the boys than the girl with the white hat.

children, all of these bony structures are in the process of morphing as the child grows, so we must be clear about the assumptions we make in our assessment methods.

If we return to consideration of X-leg and O-leg patterns, we can also see effects on anterior and posterior knee position, pelvic alignment, and arches. With outward rotation of the femur, the knees tend toward hyperextension and the pelvis tends toward posterior tilt (Lee, 2004). This pelvis and leg pattern tends to draw the medial arch upward, leading to a *high arch* which displaces weight bearing to the lateral arch. This is a reiteration of osteopathic "inspir" and "expir" patterns through the whole system.

With inward rotation of the femur, the knees tend toward torsion (with the tibia rotating outward), and the pelvis tends towards an anterior tilt on the femoral heads (Lee, 2004). In this lower body pattern, the weight tends toward the medial arch and ankle, resulting in pronation and outward rotation of the forefoot. We often see this as a postural aberration in our adult clients, but need to appreciate the age-appropriate nature of this pattern in children (see Figure 6). This does not mean that we ignore the pattern, but simply that we appreciate its transitory nature, and then ask ourselves the further question: Is this pattern functional? To answer that, we no longer assess bony alignment, but instead look to tissue resistance and restriction, as described further down.

Contribution of Neurovascular Tissue to Femoro-Pelvic Patterns

Finally, when considering lower extremity patterns, we need to acknowledge the role of the large nerve bundles across the hip, in the thigh, and sometimes even across the knee. If there is either shortening or loss of glide in the neural bundles, the child can have limitation in the hip (Barral & Croibier, 2007). (Remember, we start life as infants with femurs flexed, abducted, and outwardly rotated. Normal development calls for an increase in hip extension, adduction and inward rotation.) Restriction along the sciatic nerve pathway at the femoral head or upper femur limits inward rotation and adduction, and restriction in the femoral/inguinal neurovascular bundle limits hip extension (Barral & Croibier, 2007). Either nerve bundle can limit full extension of the knee, even though the bundles are diminishing as they travel distally.

Balancing the soft tissue around the femur and across the hip joint is often easy to do with children, especially infants who are not yet weight bearing. Consideration of these structures is critical in the first year and at each of the subsequent growth spurts (four to five years, ten to twelve years, and 14 to16 years). As recreational sports become more and more competitive, younger and younger children can be affected by overtraining and/or musculoskeletal injury. (I also think there's a cultural bias that children are inherently flexible, so mobilizing joints before practice and stretching after practice doesn't get the same consideration as it does with older athletes.) All of these indicate a need to check the neurovascular glide in support of free range of motion in joints and soft tissue.

Another topic worth exploring is the contribution of the organ system, particularly in the first two years, before the child is consistently weight bearing. Many alignment challenges in infancy can be related to organ strain—fascial or visceral (Barral, pediatric coursework, 2008). Organ restriction and its role in postural patterns can easily be its own focus of discussion, especially given the current increase in dietary sensitivities and allergies in children.

Common Progression of Movement Patterns in Young Children

Alongside alignment patterns, movement patterns can help us assess whether or not a child's system is free to develop as we would hope. What follows is

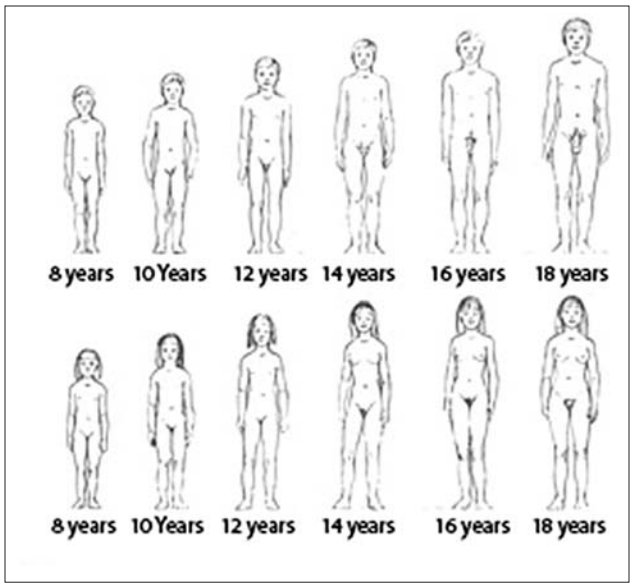

Figure 7. A visual guideline for postural changes from infancy to late teens. Note the changes in lower body alignment patterns (without indication of the subsequent implications for anterior to posterior or rotational planes that we appreciate as SI practitioners). From M.B. Sinclair, *Pediatric Massage Therapy*, 2005, Lippincott Williams & Wilkins. Used with permission.

a general overview of gait development in relatively healthy children. This progression (Campbell et al., 2006) gives us a context within which to place our clients, and to begin to explore the question: How are they developing along this spectrum of reflexes, tasks, and coordinated movements?

Significant deviation from this progression (Figure 7) can be cause for concern, and at the very least, require consultation with practitioners who specialize in neuromotor development. Also useful for the practitioner would be a similar sequencing focusing on the upper body via hand-eye coordination and manual task mastery. (Interested readers can find that information in both physical and occupational therapy realms, and from my resource list: Campbell et al., 2006; and Amiel-Tson & Gosselin, 1998.)

0-9 Months

Infants prepare themselves for walking through various accomplishments: increasing spinal range and strength by rolling over in both directions, coordinating lower and upper limbs by creeping or crawling, coordinating stabilization and strength by standing upright and *cruising* with hands. This single year is rich and complex and could easily be the focus of its own article. Since the focus of this section is gait, I'll just say that limitations arising in the early months will likely translate into walking or postpone the onset of walking, depending on their severity.

10-15 Months

With the onset of walking (ambulation), toddlers walk with a wide base of support (foot placement), which emphasizes lateral stabilization over forward propulsion, hence *toddling*. The arms tend to be held wide as well, offering more stabilization. The hips are predominantly held in abduction, flexion, and external rotation (residual from infancy, and decreasing with age). The tibia shows mild internal torsion, also a remnant of the genu varus alignment of infancy; the heels remain everted within the *flat foot*. The feet are placed full on, and then simply lifted off, the ground, without heel-strike or toe-off per se. Initially, there is no *rolling through* the foot as shown in Figure 8. Postural development focuses on balancing the large heavy segments of the body, especially the head and pelvis, as the child moves through space. Momentum is gained mostly by leaning forward or *walking by falling* with the legs catching up; however toddlers tend to fall both forward and back, revealing the delicate balance between generating and slowing momentum that is seen in any gesture (also called *conservation of energy* in kinesiology and physical therapy texts). Gaining finesse and mastery of any gesture involves repetition to increase accuracy and conservation of energy of the action. (If children don't gain such mastery, it can be seen as a benchmark for assessment and intervention.)

Figure 8. Though evocative, this image is likely ***not*** a moment in gait. More likely this infant is being stabilized from above and placed on the ground for the shot. Too much of the O-leg pattern remains; the feet are too close together, and children don't "toe-off' until much later on.

18-24 Months

As a child grows, the evolving architectural changes result in functional changes in gait. The knees are able to fully extend, the legs gain length in proportion to the rest of the body, and the hip has more extension—though not full—which affects stance and swing phases. The center of gravity drops as the head is no longer as proportionately large compared with the torso; the upper body (spine) begins to differentiate within the three planes. The ribcage starts to transition to more adult proportions, with increased width over depth. Rib cage changes, spinal differentiation, and greater pelvic stability combine to allow greater arm swing.

As stabilization develops, foot placement narrows and the arches begin to splay and spring. Heel-strike emerges, while clear toe-off does not emerge until the next stage. Strength and coordination develop such that more complex gestures are also attempted, such as running, jumping, standing on one foot, and climbing. See Figure 9 for an example of a child tracking movement patterns at this stage.

3-4 Years

By this point, the legs have shifted to a genu valgus pattern as part of normal development. As such the hip, knees, and arches are developed at a new end-range of balance, and the pelvis tends to rest in an anteriorly tilted position with consequent arching in the low back. This valgus alignment pattern remains through early childhood, dissipating by seven to eight years of age.

During that time, the young child continues to develop finesse within his or her movement patterns. Rolling through the arch and toe-off are seen, as is contralateral movement of the upper body around the mid-line axis. (Undulation generally has not yet developed as the pelvis and low back are limited by the valgus pattern in the lower body.)

7-8 Years

In this stage, the valgus pattern, and therefore gait, resolves into leg alignment and function that is considered normal in the adult. This includes heel position, weight bearing through the arches, and knee alignment, as well as stabilization, weight transfer, and conservation of energy. Neurologically, cortical development is complete, which is accompanied by the resolution and integration of most early motor reflexes.

Figure 9. New research shows that sighted children begin tracking movement patterns of those in their environment well before they attempt them. It's often easy to see family patterns literally moving through the generations.

And Beyond

The hip, pelvis, and low back relationships soften, but often the hip does not attain full extension (posturally) until the late teens or early twenties. There is considerable dispute about the reasons or degree to which this is so. Some aspects to consider: the acetabulum does not fully fuse until that later stage (late teens in boys; early to mid-twenties in girls). Often this is linked with pre- and post-adolescent growth spurts (particularly in boys), and/or the onset of reproductive capacity (particularly in girls). It is not uncommon for adolescents to move through a gangly or uncoordinated phase as their bodies rapidly change.

(N.B.: Another compelling line of inquiry could be: How is it that children, born blind, discover their movement patterns? Much of the current thinking about mirror neurons, gestural mimicry, and movement patterning relies on vision as a means for learning. How is it that those without sight accomplish this task, since we know full well that they are able to achieve complex and coordinated movement patterns? What can we learn from them about proprioception, balance, and movement in the world? Again, if readers have particular experience or knowledge relating to this aspect of movement development, I would love to hear from them.)

Assessment and Soft Tissue Work with Children

Given the natural variability of alignment patterns as children age, practitioners need a way to answer the questions: Is this pattern age-appropriate? Is this alignment pattern functional?

Hopefully the earlier discussion of skeletal morphology and alignment patterns gives some clarity for what to expect at different ages. It's useful, with any normative measure, to hold the conceptual framework lightly. All these norms are based on averages and as such, indicate a range of *normal*, *natural*, or *healthy*, rather than a specific individual point (as in blood markers or other homeostatic measures). So, even though we have a context from which to view an individual child, in practice, we are always confronted by the sweet complexity of what is—is this particular child functional? Even more commonly: Are they functional enough?

If they require intervention, what kind of intervention is useful?

To answer this, we will look at assessments, tissue interventions, as well as treatment flow and sequencing for an imagined pre-school age client.

Assessment

Visual assessment can give us useful clues, but I am usually assessing a child's function, not a static posture. (For those of you who have parented, tended, or worked with a two- or three-year-old, you'll know what I mean—they are rarely still!) So, watching the child play and move about the room can give quick indication of gross asymmetries or movement tendencies that the child may have. For example, watching a child crawl across the floor can reveal left-to-right differences in femoral placement, lower leg range and push-off, arm swing, scapular support, even spinal rotation or side-bend patterns. Watching them move about also can answer a lot of developmental questions and you can readily check off all the skills they have already mastered. Sharing this information with parents while the child plays can go a long way toward easing their minds. Just as with adult clients, our work is more complete if we are able to affirm all that is working well in the body, not merely what might need changing.

Palpatory assessment can further clarify which structures are free to move and which are held. Gentle, swift *scanning* touch can help clarify the position of bones or joints, as well as give an immediate sense of which tissue or plane of a segment is restricted. Just as with adults, tissue restrictions are not always close to the joint or segment that is affected; the younger the child, however, the less likely it is that the tissue restriction will be brought on by weight-bearing activities or duration. As discussed earlier, we may see a stronger influence by the neurovascular bundles and/or organs than by the prime movers. So maintaining a generous mind, and not jumping to conclusions when assessing, is especially important.

Touch assessment also allows us to work through clothes, and so not require the child to undress. Many kids adore being naked or barely clothed; but just as often, being undressed may underscore the power differential with the practitioner, or create an overly clinical tone to the session—both of which can inhibit the child from engaging in the work. (Particularly in the 15-months to three-year span, as well as early adolescence, the therapeutic exchange may devolve into a battle of wills. This is a natural possibility since that is exactly the child's developmental task at the time, but such battles can derail the process of change quite quickly if not tended.)

In my experience working with children, I am often struck by the degree of freedom in their tissue. It's soft, pliable, autonomically responsive; tissue that is restricted stands out in high contrast against such a backdrop. As such, the task of figuring out which tissue holds restriction is often much easier than in adults who have layer upon layer of restriction. What is more challenging is *not* to overwork their tissues or their nervous systems, doing only what is necessary and stepping back to allow the body to integrate that change.

Palpatory Skills and Treatment Method

When assessing and treating soft tissue, what we look for is a lack of mobility, a sense of directionality and the degree of firmness to the restriction. With a soft hand, first compress the tissue inward until meeting a clear quality of resistance, and then test that resistance for any preference in directionality. (This can be verbalized by asking "is there an easy way" the restricted tissue wants to move, and/or "is there a hard way" it resists moving?) When exploring the quality of resistance, we can also appreciate how hard the end-feel is, that is: the way in which the tissue stops moving in a given direction. Hardness upon end-feel is another way of assessing the degree

of restriction in soft tissue, and it becomes a useful marker when establishing the order of treatment in a single session. As the end-feel softens with treatment, it also becomes the marker for ending treatment.

Treating tissue is a simple step that follows the above assessment. Once we have distinguished the "easy way" and the "hard way," we have the choice of treating the tissue toward the easy way or toward the hard way. Readers familiar with osteopathic principles will recognize this distinction between *indirect* and *direc*t technique (easy way and hard way, respectively). Because most tissue restrictions in children are not as firmly held, in tissue that is inherently more pliable than in adults, even direct work can be relatively gentle and quick at achieving results. However, if sensory integration is one of the child's challenges, I tend to work the tissue indirectly, at least as a starting point so the treatment can be less stimulating to the autonomic system.

For example, if we find a genu valgus pattern in a three-year-old, we would expect that alignment as age-appropriate. I still want to know whether or not that limb and knee joint are free and functional. If I appreciate that this pattern can be driven either by tilts or by rotations, I'll want to check the soft tissue most likely to evoke those arrangements. For tilts, I might assume the adductors and abductors are likely governors of the pattern; for rotations, if I think locally, I would be interested in the popliteus or the short head of biceps femoris. But I would be remiss if I didn't consider the deep lateral rotators (resisting lengthening) or the upper, anterior adductors as well (especially pectineus resisting shortening).

As the knee and hip are freed, a thorough treatment would also include freeing the anterior septa between vastus medialis and the adductor compartment, and the location of the neurovascular bundle (deep) and the sartorius (superficial). Also, looking below at the ankle and rear foot is essential for a thorough treatment. Is the calcaneus free in its glide? Especially in small children, checking the subtalar joint and arches is useful, since they actively use the foot in many planes as they experiment with standing, walking, running, and other movements.

This treatment plan may seem straightforward or at least a reminder of the possibilities; however, what truly differentiates this treatment from an adult treatment is the *manner* in which it is conducted. I'd like to conclude this essay by highlighting some key principles in *how* to work with children, not just where or why.

The simplest elements of the therapeutic relationship apply: gaining permission to touch, honoring boundaries, allowing the session to remain client-centered.

Rapport

Children don't schedule their appointments with us; they come in because their parents have decided to get our help. That's fine, but it also gives us the particular task of establishing rapport with the child independently from the parent. Obviously, building a safe, nurturing, and professional connection with the parents is also essential. But children and adults take a different route to establishing those connections. The simplest elements of the therapeutic relationship apply: *gaining permission to touch, honoring boundaries, allowing the session to remain client-centered.* I like to allow the child to touch me first as a way of beginning our physical relationship; with small ones, this often happens during a period of mutual play at the beginning of the session. Children are usually clear in their gestures, even if they are not yet verbal. If they don't like or want your touch, they will shake their heads, pull or move away, push your hands off their body, make faces, or stare with irritation. Older children may be socialized not to disobey adults, so we need to be particularly concrete and simple when we give them permission to say "no" during our work. I also make a point of telling them the outcome of their feedback: "I will change what I'm doing." I hope that this dispels any concern about the child getting in trouble if they say "no" to me.

Keeping the session client-centered most often means an ongoing negotiation with the parent's expectations of their child's "problems," of their child's behavior during session, and of the work itself. I like to emphasize that small changes during the session can lead to big changes over time, thus easing the expectation that changes will be numerous or immediately evident during treatment.

Improvisation

School-age children are usually fine to lie on the table for a short while, especially if a parent or sibling stands alongside, chatting or reading or playing with toys. Younger children like to move, explore, and play. It's helpful to adjust our expectations about appropriate client behavior and be willing to adapt our approach—and be able to communicate this

process to the parents in real time. I'm often working with little ones as they move, taking advantage of their physicality; restricted tissue stands out when I feel all the freedom in surrounding tissue. For example, I can instantly compare and treat hip extension from one side to the other if I kneel behind them while they crawl. So I'm on the floor, they're on the floor or crawling in and out of Mom's lap. Sometimes I gently tumble with them; they are engaged and expressive with me or parents, while my hands are swiftly making adjustments at a particular segment. As I mentioned earlier, part of the fun in working with children is how much variety you can have engaging tissue and calling for movement.

Intermittent Contact

The standard caution for working with children is to decrease treatment time to avoid overwhelming their autonomic nervous systems (Campbell et al., 2006; Moeckel & Mitha, 2008; Sinclair, 2005; Werner, 2002). I find that I can be with the child and parents for an hour or half hour, which builds rapport and trust, but I am not working throughout that time. I may be in physical contact for half that time, and even so, as much as half my contact time is receptive—assessing as much as treating. To make this graceful, as with contacting adult bodies, it is tremendously important to pay attention to the quality of touch at the beginning of contact and when ending contact.

Time to Balance

Giving the client's system time to adjust to the work is also useful when planning a sequence of sessions. Ida Rolf identified the "compound essence of time" (Feitis, 1978; Rolf, 1989; Myers & Phipps, KMI coursework, 2003) as a potent factor in structural work. How do we apply this to children? I tend to give more time between sessions for children (usually three weeks) because they are able to sustain more overall change from an intervention than adults do. A larger version of this same idea is allowing the child to grow into his pattern in order to make it evident, and therefore easier to change.

What this all points to is that I rarely take a child through a classic 10 or 12 series. Most often, I complete two or three sessions and then give the child a few months to integrate those changes. I like to check in with them at significant developmental thresholds, such as: the onset of crawling or walking, once initial teething is complete, the onset of schooling, or at growth spurts (usually between ages seven and eight and between twelve and fourteen). Other causes for treatment are any injuries (whiplash, falls, sports) or chronic discomfort (headaches, stomachaches, growing pains). The growth spurts in particular create a great opportunity for a structural approach; I recommend a simple three series for seven- to eight-year-olds and a more classic series once the teenager reaches fourteen or fifteen. Structural work can help their systems adjust on a tissue level, especially since not all tissue types grow at the same rate, as well as giving a holistic sensory experience to help them integrate changes in body image and proprioception.

Conclusion

Working with children is a highlight of my practice. The work demands a clear foundation in principles and methods, because each session is a creative dance of relationship, touch, and movement. This can be said of adult clients as well, but, in my experience, not to the same degree as young ones. My skills and clarity of thinking have developed through working with children, and my sessions with adults are often more adventurous and playful as a result.

Like nesting Russian dolls, there is so much more that can be discussed about this clientele: developmental movement, psycho-social development, family patterns of movement and expression, cognitive challenges that are on the rise in our youth, and nutritional support for healthy development. In practicing a holistic method of bodywork, I like to learn what I can about those other specialties and welcome additional perspectives on what may support my clients. As such, if readers have constructive or additional comments to share about pediatric manual therapies, I welcome their communication via email.

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The anatomy and physiology information in this essay was compiled from many sources, listed below. Any errors in detail or emphasis are the author's alone.

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