Loading for the Sport of Motherhood

By Ilene Bergelson

The research is overwhelming: appropriate prenatal and postpartum exercise programs have a significant, positive impact on the well-being of mothers… and their babies. Yet now that we as fitness professional know more about this very special population, the question remains whether all that pre and post natal programming addresses the demands of motherhood.

Is motherhood a sport? Try lifting an 18kg stroller out of the car trunk, load it with a 7kg child and maneuver it through foot traffic, up and down stairs and then answer the question. The daily life of mothers is filled with physical, mental and emotional challenges. Consider that these amazing ladies spend a great deal of their time performing these challenges while experiencing a multitude of physiological changes including reduced joint stability and predisposition to hypoglycemia, edema and orthostatic hypotension. Is it more appropriate to treat an expectant mother like an invalid, or like an Olympian?

Approaching maternal clientele as we would pre and post rehab athletes increases our toolbox as program designers. In doing so, we expand our approach to paranatal fitness (everything to do with pre and post) to the fullest benefit of those who entrust us with their care. If fitness professionals go a step further by regarding motherhood itself as a sport, we open the door to an array of safe, sport specific programming opportunities for the general population.

Events of the Motherhood Marathon

After conception, pregnancy, labor and delivery, the last and ideally longest event in the sport of motherhood is caring for the child/children. One of the earliest postpartum skill sets required in this event is that of maneuvering a non self-supported load (the baby) in various situations such as supporting, lifting and carrying. What motherhood activities would call upon this skill set? Here's a short list to get you started: putting baby down for a nap, taking baby out of the playpen, setting and securing baby in car seat, bathing, changing, feeding, burping and rocking baby, etc.

Creating safe and appropriate versions of exercises that address the demands of these activities requires we start by answering the following key questions:

1. What are the skills necessary to perform the activity(ies)?
2. How can you address these skills appropriately for her current condition and fitness level, while respecting our industry's safety guidelines and upholding the recommendations of her treating medical professional?

While taking the mother's fitness level, stage of prenatal/postpartum state and the official guidelines into account, we can answer both key questions in part by turning our attention to the conditions of both the mother and the environment in which these skills are performed. There are many sources of information outlining the official guidelines for prenatal and postpartum exercise. While these are crucial factors, for the sake of simplicity, we will focus on conditions only. Let's put the first question on hold for a moment and identify some of the special considerations that shape the parameters of our program design.

We'll start by turning our attention to the highlights of the mother's condition that have the greatest impact on exercise design for sport specific supporting, lifting and carrying.

If pregnant, the given conditions are:

- Compromised balance, reaction time and joint stability
- Distended abdominal wall with obstruction and compromised recruitment
- Ever-changing COG and intrinsic load
- Increased heating and cooling capacity: extended warm up/cool down
- Enlarged/sore breasts
- Pressure on pelvic floor
- Temporary change in length/tension relationships

- Temporarily limited field of vision
- Joint laxity/instability
- Additional cardiac output: adequate positioning and recovery are vital

Pregnant women are prone to:

- Blood pooling, edema
- Varicose veins
- Hypotension: both Orthostatic and Supine syndromes
- Sciatica
- Carpal tunnel syndrome
- Foot pain, particularly heels during third trimester
- Lower leg cramps
- Incontinence when recruiting core musculature

Pregnant women are at risk for:

- Overheating
- Shunting blood supply from fetus
- Diastasis Recti

Staying Safe Once the Bun is Out of the Oven

In order to exercise conscientiously while pregnancy related changes re-adjust, it is important to continue considering the pregnancy related physiological factors when training a newly postpartum client. For example, Relaxin levels remain elevated for up to several months postpartum. Aside from the risk of fetus occluding the Inferior Vena Cava and triggering Supine Hypotensive Syndrome, which is no longer an issue once the baby is delivered, prenatal considerations should continue for several months postpartum and ideally until medical clearance is given.

Postpartum recovering moms who are medically cleared for exercise are also dealing with the following:

- Pelvic floor and abdominal wall recovery
- Possible C-section recovery
- Possible episiotomy recovery
- Overstretched uterine ligaments; may affect uterine position too
- Possible cramping during involution (shrinkage of uterus)
- Possible scar tissue, especially long-term postpartum
- Hot/Cold flashes, excessive perspiration
- Possible postpartum emotional issues

Wild Queendom

Let's look at the conditions under which these skills are performed in the mother's natural habitat. There are several elements that make the motherhood version of this skill set unique include the following:

1. The load is lifted from and carried at various heights.
2. The load often originates from beyond the mother's base of support (BOS).
3. This load may originate from behind a barrier (i.e., bathtub ledge, crib railing, child-safety room barrier, high-chair tray, etc.).
4. This skill set is sometimes compounded with concurrent carrying of additional bulky loads (i.e., stroller, carrier, car seat, etc.).
5. Dropping the load or letting it fall over is not an option.

Please note that maternal physiological conditions aside, all other considerations and resulting program

design can also apply to the non-pregnant or postpartum parent looking to prepare for parenthood.

The key components of the above activities includes:

- Spinal stabilization conditioning
- Extensor chain endurance
- Posterior shoulder girdle strength and endurance
- Pelvic floor and abdominal wall integrity and coordination (strong, stable lower extremity, especially lumbo-pelvic-hip complex)
- Breathing and relaxation
- Coordination

The Liveliest Load

The primary motherhood loading "device" is the baby. It has the unique dual characteristic of requiring support and the ability to move on its own. Other common loads include the car seat, stroller, carrier, diaper bag toys and even other children. Consider the average size, shape and weight of these loads when you select loading devices and choosing your position and grips in the gym. If possible, consider the actual loads your particular client manages or will manage in her life. Depending on her current fitness level and health, she may use these load amounts eventually in her training.

What kind of impact do you think the experience of tailored programming might have on a mother or expectant mother? How about her confidence in the practitioner who provides tailored programming?

The sample exercises outlined below demonstrate how sport specific design addresses skill development and, by doing so, increase the mom's state of readiness for her biggest event. The model moms pictured below range from pre-conception to second and third trimester to fully recovered postpartum.

The optimal time to strengthen the extensor chain is pre-conception through early pregnancy. As the pregnancy progresses and the increasing intrinsic load places more stress on the uterine ligaments and postural stabilizers, shift the priority toward relieving back tension. If the mother is not nauseated, this is usually the easiest time for her to feel her abdominal wall activate and the ideal time to reinforce pelvic floor conditioning. The goal of the following exercises is extensor chain endurance and abdominal wall and pelvic floor integrity, maneuvering baby from beyond BOS.

Activity (see Figures 1 and 2): Bathing infant in bathtub
Example Exercise: Medicine Ball Roll. Roll a medicine ball between hands or with trainer in random directions from behind a ledge for up to one minute, maintaining TVA activation (the pelvic floor should co-activate) and breath.
Example Equipment: Airex pad/Bosu (balls of feet in contact with floor), non weighted or lightweight balls in varying diameters, yoga blocks or stable, propped bar.

Figure 1

Figure 2

Activity (see Figures 3, 4 and 5): Moving the baby carrier/maneuvering baby in car seat/on changing table
Example Exercise: Bicep curl with pass off to other hand from over railing at squat rack. Later versions can progress to bulkier or more dynamic loads. Can place platform, table or bench on other side of railing, if desired.
Example Loads: Free weights, kettlebell, sandbag, actual carrier (progress to loaded)


Figure 3


Figure 4


Figure 5

Activity (see Figures 6 and 7): Picking up baby from floor/playpen/carrier
Example Exercise: Dead lifts and lunges with modified bicep curl
Example Loads: Free weight, kettlebell, medicine ball, sandbag


Figure 6


Figure 7

As mothers, women strive to meet exceptional body, mind and spiritual demands every day. In recent years, emphasis has been given by the medical and fitness communities on the benefits of appropriate training for the pre and post natal population and yet comparably little attention has been paid to incorporating the specific physical, mental and emotional demands of motherhood into personal training. Approaching motherhood as a sport is both practical and opens the door to additional creative impulses inspiring our exercise design. We have more information, tools and resources than ever before to assist a mother through her pregnancy and preparation for a sport that will be played for as long as we are around to play it.

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