**PROGRAM MODIFICATIONS**

**Orthopedic Concerns**

Please note: *this document should not supersede the advice of a physician or physical therapist.* The intake form asks if member has consulted medical professional. If answer is no, please be sure member understands if exercise causes any pain or discomfort, it is best to seek medical advice & clearance before beginning a workout program. Ask clarifying questions regarding orthopedic concerns indicated on MOP Report prior to offering recommendations below. The suggestions below are meant for members experiencing mild discomfort, only. Use your best judgment once you see the member move and execute exercises.

**General Recommendation:**
- Always consult with a physician prior to starting an exercise program
- Establish correct movement patterns prior to overloading the muscles
- Pay close attention to postural alignment in all exercises, as it will greatly affect all joints and help minimize discomfort.
- Be cautious with lifting heavy weights; start with moderate weights and progress gradually as dictated by levels of discomfort.
- If just starting out or getting back to exercising (>6 weeks), please start gradually.

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<th>Concern</th>
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| Lower Back  | - Initially limit range of motion in lower body exercises (i.e. squats, lunges) to determine amount of discomfort experienced.  
- Experiment with stance in lower body exercises (wider stances may help eliminate discomfort).  
- Monitor impact and offer alternatives if impact causes discomfort.  
- Be cautious with overhead lifts.  
- While deadlift type exercises are typically used to strengthen the lower back, proceed with caution and replace the exercise if member feels pain (be sure to differentiate between pain and fatigue). | - Pelvic Tilt  
- Bridging  
- Deadlift & modifications  
- Low Back Extensions  
- Cable Hip Extensions  
- Core Stability Work |
| Shoulders   | - Experiment with a variety of grips in exercises that involve the shoulder joint (i.e. overhead press, lateral raise, chest press, pull ups). Opting for neutral grips may alleviate some discomfort.  
- Initially limit range of motion in all exercises including the shoulder joint (i.e. overhead press, lateral raise, chest press, pull ups, push ups). | - Front & Lateral Raises to 70 degrees  
- Scapular Protraction/retraction  
- Modified Push Ups (focus on shoulder girdle stability)  
- Rear Deltoid Flyes  
- Resistance band or TRX I, Y, T, & W patterns  
- Thoracic Spine Mobility Work |
| Knees       | - Monitor alignment of ankle/knee/hip joint in all lower body exercises.  
- Monitor impact and offer alternatives if impact causes discomfort.  
- Initially limit range of motion in lower body exercises (i.e. squats, lunges) to determine amount of discomfort experienced.  
- Experiment with stance in lower body exercises (wider stances may help eliminate discomfort).  
- Avoid “locking out” the knee joint | - Cycling (recumbent or upright) or Elliptical for cardio  
- Squatting patterns with modifications  
- Deadlifting patterns with modifications  
- Single-leg work  
- Core stability work  
- Calf Raises (knees extended) |
| Hips        | - Monitor alignment of ankle/knee/hip joint in all lower body exercises.  
- Monitor impact and offer alternatives if impact causes discomfort.  
- Initially limit range of motion in lower body exercises (i.e. squats, lunges) to determine amount of discomfort experienced.  
- Experiment with stance in lower body exercises (wider stances may help eliminate discomfort). | - Cycling (recumbent or upright) or Elliptical for cardio  
- Squatting patterns with modifications  
- Deadlifting patterns with modifications  
- Single-leg work  
- Core stability work |
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| **Neck** | - Be sure head & neck are always supported in any supine exercise.  
- Monitor alignment of upper body in all exercises (ensure ears are in line with shoulders and shoulders in line with hips). Of specific concern is rounding of the shoulders and jutting neck forward.  
- Avoid lifting any weight or performing any exercises that would exacerbate neck pain.  
- Avoid twisting while lifting weights; if a pivot is required, be sure to pivot with feet and hips, not your shoulders.  
- Lifting weight away from the body can cause neck pain; if you can, substitute exercises such as front raises or side raises with other exercises that target similar muscle groups closer in to the body. When lifting from the ground, keep the weight in close to the body and use hips and knees to lift. | - Scapular retraction  
- Scapular depression  
- Rowing exercises (either for cardio or strength)  
- Gentle neck, chest and upper back stretches  
- Light weight shoulder exercises, including rear delt flyes, internal and external rotation (be sure to go light enough that there is no chance of straining the neck) |
| **Foot/Ankle** | - Be sure the client has appropriate and supportive footwear.  
- Monitor impact and offer alternatives if impact causes discomfort.  
- Monitor alignment of ankle/knee/hip joint in all lower body exercises.  
- If ankle sprain, monitor lateral movement and offer alternatives if causes discomfort. | - Cycling (recumbent or upright) or Elliptical for cardio  
- Balance exercises (standing, squatting, lunging on BOSU® as tolerated, single leg movements on stable surfaces).  
- Plantar flexion and dorsiflexion (add resistance such as tubing)  
- Foam roll lower leg complex  
- Foot Exercises article: [http://www.active.com/tennis/articles/7-exercises-for-fitter-feet](http://www.active.com/tennis/articles/7-exercises-for-fitter-feet) |
Prenatal Concerns & Tips*

All pregnant women should obtain physician clearance and guidelines for exercise before initiating an exercise program.

Questions to ask:

- Is this your first child? If no, how many other children do you have & ages. (*mindset and time*)
- Do you mind me asking how far along you are? (*different recommendations depending on trimester*)
- Any complications thus far or anticipated? (*necessitates medical clearance or modifications*)
- Have you consulted a doctor and/or been cleared for physical activity? (*MUST make sure this occurs*)
- How active were you prior to pregnancy? (*changes frequency, intensity & duration of workouts*)
- How do you think exercise during pregnancy will help you? (*important to understand motivation*)

Current research supports the recommendation that a moderate level of exercise on a regular basis during a low-risk pregnancy has minimal risk for fetus and beneficial metabolic and cardiorespiratory effects for the mom. Physician-guided exercise is beneficial during and following pregnancy (ACSM/CASM, 2008; ACSM, 2006; RCOG, 2006: SOGC, 2003; ACOG, 2002).

Please keep in mind the following changes that occur in pregnant women:

- **Weight gain** (average 25-40 lbs) – puts stress on back, pelvis, hips and legs
- **Center of Gravity shifts** – results in low-back discomfort and affects balance & coordination
- **Increased flexibility** – as relaxin increases flexibility in the short term, joint stability could become an issue
- **Cardiac reserve decreases** – this causes increased physical demands to feel more challenging
- **Thermoregulatory system is affected** – body temperature and ambient temperature are important to monitor

If the following health conditions exist, she should not exercise:

- At risk for pre-term labor
- Vaginal bleeding
- Premature rupture of membranes

**General Recommendations for Prenatal Fitness Programs:**

**Activity Recommendations:**

- **If previously active,** may continue exercise program during 1st trimester to max of 30-40 min at frequency of 3-4 days/week. Gradually reduce intensity, duration & frequency of programs during 2nd and 3rd trimesters.
- **If not previously active,** begin slowly with 15 min of low-intensity exercise & gradually increase to 30 minutes (Plan A or B would be best if you determine she has less experience than previously indicated via intake form). Gradually reduce intensity, duration & frequency of programs during 2nd and 3rd trimesters.
- Use RPE instead of heart rate to monitor exercise; if experiencing a pounding heart rate, breathlessness, and dizziness, you should have her reduce intensity.

**Avoid the Following:**

- Extensive jumping, hopping, skipping, bouncing or running
- Deep knee bends, full sit-ups, double-leg raises, and straight-leg toe touches
- Bouncing while stretching
- Activities where falling is likely (*this does not mean eliminating BOSU or Stability Balls, necessarily*)
- Prolonged exercise in supine position after 1st trimester (more than 5 min)
- Long periods of standing (*keep moving or sit and rest*)
- Exercising in high temperatures or humid environments (*fans and good ventilation will be helpful*)

**Suggest the Following:**

- Proper fluid intake
- Extended warm-up and cool-down periods and light stretching (*adjust the workouts in MOP Report*)
- Supportive shoes as feet tend to swell and react to increased weight
- Supportive, well-fitting bra as breasts grow during pregnancy
- A small snack prior to exercise and the extra calories required daily during pregnancy

**Now is typically not a good time to lose weight.**

Discontinue exercise and discuss with physician prior to resuming if experiencing: vaginal bleeding, dizziness/faint feeling, increased shortness of breath, chest pain, headache, muscle weakness, calf pain or swelling, uterine contractions, decreased fetal movement or fluid leaking from the vagina. (ACOG, 2002)
Postnatal Concerns & Tips*

All new moms should obtain physician clearance and guidelines for exercise before initiating an exercise program. While physical activity is encouraged at low-moderate levels early, timeline for official clearance to resume workouts varies. This typically occurs between weeks 4-8. If past the 8-week mark, still confirm clearance has been obtained.

Questions to ask:

- Is this your first child? If no, how many other children do you have & ages. (*mindset and time*)
- When did you give birth? (*helps determine what modifications to use*)
- Were there any complications with your pregnancy or birth? (*might necessitate modifications*)
- Have you consulted a doctor and/or been cleared for physical activity? (*MUST make sure this occurs*)
- How active were you prior to pregnancy and have you been active since? (*will help you customize plan*)
- How do you think exercise during pregnancy will help you? (*important to understand motivation*)

Many women are anxious to get back to ‘pre-baby’ weight as quickly as possible, which may lead to unsafe practices and unrealistic expectations. After obtaining medical clearance, it is extremely important to move the mother back into exercise in a safe and effective manner with respect to the changes her body has gone through, is going through and will continue to go through during the ‘4th trimester’ and beyond! We must also consider her psychological state including sleep deprivation, added responsibilities and general stress that a newborn brings.

Goal of Exercise/Physical Activity:

- Birth to 6 weeks – gradual increase in physical activity to relax, find personal time and regain sense of control; avoid focus on improving physical fitness (if C-section, may require more time to become active)
- Beyond 2 months post birth - gradually improve fitness level

**Most women do not reach their predelivery performance level for two to three months post birth, at least. Patience is important!**

General Recommendations for Prenatal Fitness Programs:

- Begin slowly; gradually increase duration and then intensity. Focus on developing consistency, first.
- Walking is a great way to get started.
- Avoid excessive fatigue through exercise, and consider fatigue from sleep deprivation before exercise.
- Stay hydrated and fuel your body appropriately (extra calories may be necessary if nursing).
- Wear a supportive bra.
- Focus on core work including plank and plank variations, as well as lower back exercises (more so than traditional crunches; be mindful of *diastis recti* possibility).
- Relaxin can exist in the body for some time after birth; be mindful of increased flexibility at this time.
- Stop exercise if unusual pain is experienced.
- Stop exercise and seek medical attention if bright red vaginal bleeding occurs that is heavier than a menstrual period.

Suggested Resource:

Exercising Through Your Pregnancy, James F. Clapp III. M.D.

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*Adapted from ACE® Personal Trainer Manual, 5th Edition ©2014*