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## " YTP UPDATE 2020"

### EXERCISES FAVOURING QUALITY OF WOMEN'S LIFE

#### EXERCISES PROMOTING FERTILITY

- **Recommendations** for exercise Australian and international guidelines recommend at least 30 minutes of moderate-intensity physical activity, such as brisk walking, gardening or dancing, on most and preferably all days of the week
- As part of weight management, guidelines recommend that **overweight or obese** adults perform 225 to 300 minutes moderate-intensity exercise every week (about 35 to 45 minutes per day). How exercise can improve fertility and ART outcomes (1)
- For **overweight and obese women** with PCOS regular exercise can increase the frequency of ovulation which leads to more regular menstrual cycles. (2)
- While studies show that exercise boosts female fertility it is important to note that a large amount of very high intensity exercise may actually reduce fertility and the chance of having a baby with ART. So, it's a good idea to avoid very high intensity exercise while trying for a baby. Obesity in men can reduce **sperm quality** and fertility. Regular moderate exercise can help men lose weight or stay in the healthy weight range and thereby improve sperm quality
- Studies indicate that light or moderate intensity exercise improves **quality of life and emotional wellbeing** in healthy women and men.
- As part of a lifestyle improvement program, reduced symptoms of anxiety and depression and **improved self-esteem** occurs
- Minimise the amount of time you spend sitting and if you have to sit for long periods, take a break and move around as often you can.
- Effects on women with exercises: increases cortisol levels and lowers body fat. (3)
- **Exercises favoring fertility:**
  - Cardio : walking, jogging, aerobics, zumba
  - Strength training: weight lifting withing your comfort level
  - Stretching and yoga
- **Exercises to be avoided:**
  - Intense workout or those for long durations
  - Sprinting or running for long distance on daily basis
  - Without a rest day
  - Core strength exercise during ovulation





**NEED OF EXERCISE POST IVF/IUI :** Best to have light morning or evening walk, or simple yoga or breathing exercises.

Busy lives can make it hard to find time for exercise. Incorporating exercise in daily activities increases the chance of achieving the recommended physical activity goals. Whenever possible, walking or cycling rather than driving, taking the stairs rather than the lift, and getting off a tram or bus a stop or two before your final destination and walking the rest will help you get the exercise you need for good health and optimal fertility. One effective technique for doing so is the **Fertility Assessment and advice Targeting lifestyle choices and behavior (FAST) approach**, which is a couple-based assessment and guidance procedure utilizing motivational interviewing to address health and lifestyle concerns.(4)

## EXERCISES PROMOTING EASE IN NORMAL DELIVERY

### Few instruction prior to exercise

- Wear loose comfortable clothes and footwear
- Control the room temperature
- Drink plenty of water
- Warm up with stretches
- Not to overexert
- Avoid standing for long duration

### Advantage :

- Improves posture
- May prevent gestational diabetes,
- Relieves stress
- Builds more stamina needed for labour and for delivery
- Chances of eutocic labour are high (5)

### Avoid aerobic exercise during pregnancy if you have :

- Hemodynamically significant heart disease
- Restrictive lung disease
- Incompetent cervix/ cerclage
- Multiple gestation at risk for premature labor
- Persistent second- or third-trimester bleeding
- Placenta previa after 26 weeks of gestation
- Premature labor during the current pregnancy
- Ruptured membranes
- Preeclampsia/pregnancy-induced hypertension





## Take precautions with aerobic exercise during pregnancy if you have:

- Severe anemia
- Unevaluated maternal cardiac arrhythmia
- Chronic bronchitis
- Poorly controlled type 1 diabetes
- Extreme morbid obesity
- Extreme underweight (BMI < 12)
- History of extremely sedentary lifestyle
- Intrauterine growth restriction in current pregnancy
- Poorly controlled hypertension
- Orthopedic limitations
- Poorly controlled seizure disorder
- Poorly controlled hyperthyroidism
- Heavy smoker

## First Trimester Pregnancy Exercises for a Normal Delivery

The first trimester (initial three months) is the most vulnerable period and mothers are advised to avoid any tiring activity, which includes lifting heavy weights, extreme cardio or high-intensity workouts. Gentle exercises are permissible, but only after consulting your doctor.

### 1. Wall Slide

This exercise is helpful in stabilising your spine and lower abdomen when you experience a backache.



### 2. Clam Shell

This exercise helps tone the muscles, abs, thighs, buttocks and pelvic floor. As your tummy grows through pregnancy, it is advised to do this exercise with your back against the wall.



### 3. Hip Raises / Bridge

This exercise will support the lower back to accommodate the growing belly. It also strengthens the buttocks and helps during labour.





## Second Trimester Pregnancy Exercises for a Normal Delivery

Abdominal cramps are common and movements of the baby are felt easily, as uterine contractions become frequent. Workouts in this phase are usually safe after a consultation with your doctor.

### 1. Downward Dog

Helps pregnant women in the second trimester to become more flexible and stretch their body.



### 2. Lying Cobbler Pose

This helps relax your mind and body during pregnancy while stretching your body and improving flexibility.



## Third Trimester Pregnancy Exercises for a Normal Delivery

In the third trimester, heavy workouts must be avoided, as a heavy and strenuous activity like lifting heavy weights can cause complications like leakage of the amniotic fluid, for instance.

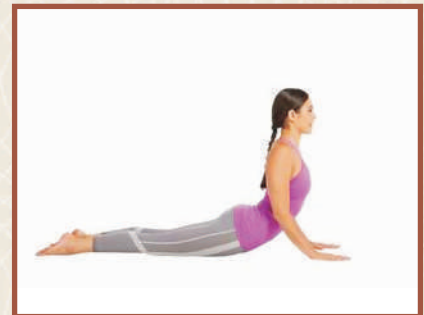
### 1. Butterfly Pose

This pose widens your hips and eases pain in the lower back.



### 2. Pelvic Stretches

Exercising the pelvic floor muscles is essential when you are preparing for labour. Kegel exercises for a normal delivery focus on strengthening the pelvic floor muscles. To isolate and exercise these muscles, try stopping the flow of urine without using your abdominal muscles, thighs or buttocks. For slow Kegel exercises, start by sitting with a straight back comfortably on the workout ball.



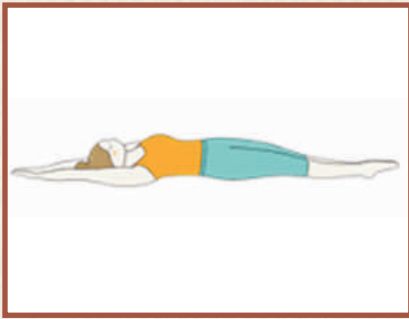
#### Steps :

- **Slow Kegel exercise:** Hold the contracted muscles for 3-10 seconds for 10 sets.
- **Fast Kegel exercise:** Contract and relax the pelvic floor muscles 25-30 times before relaxing for five seconds, and perform four sets of exercises



### 3. Yoga

Yoga during pregnancy for normal delivery is highly recommended for expecting mothers and there are plenty of forms and *aasanas* that can help increase the flexibility and endurance in an expecting mother. Some *aasanas* that can be done include:



**Yastikasana (Stick pose):**



**Vakrasna (Twisted pose):**



**Konasana (Angle pose)**

### 4. Squats

Squats are important, as they help in the contraction and loosening of the pelvic muscle and help reduce delivery pain. Taking position with the support of a gym ball or holder will give a good pressure to the pelvic area and thighs.



### Benefits of Exercise for a Pregnant Woman

Exercising in pregnancy offers a range of benefits for the mother and ensures higher chances of normal safe delivery.

It also provides the following **benefits**,

- Prevents weight gain
- Prepares a mother's body for a normal delivery
- Reduces labour pain
- Improves circulation and keeps the heart rate stable
- Improves your stamina and makes you more flexible
- Helps you recover quickly, post-delivery
- Reduces the chances of high blood pressure and pregnancy-induced diabetes

### When to Stop Exercise in Pregnancy

Generally, about half an hour of exercise is adequate and recommended. An expectant mother must stop when the following is observed:

- Fatigue
- Pre-existing blood pressure problems, asthmatic conditions, cardiac disorder, diabetes etc.
- Vaginal bleeding
- History of a preterm delivery or wasted delivery
- Experience augmented contractions shortly after exercising.

A proper exercise routine for pregnant women can be very helpful in making normal delivery more likely, additionally reducing labour time and its pain. To ensure safe practices, one should ask the doctor about exercising in detail and perform the exercises under supervision. (6)



## EXERCISES POST MENOPAUSE

- Framingham study declared increase in percentage of women failing to lift even 5 kg of weight with increasing age reaching 65 % above 75 years (7)
- Women's health initiative (WHI) trial and million women study (MWS) have brought controversial opinion over role of hormonal therapy and one needs the exercise program for postmenopausal women should include the endurance exercise (aerobic), strength exercise and balance exercise;
- Aim for two hours and thirty minutes of moderate aerobic exercise every week, 75 minute of vigorous exercise per week, 10 minutes interval with strengthening 2 days per week
- To manage stress, techniques like deep breathing exercise, yoga, gardening and stretching exercise have been found helpful.
- Every woman should be aware of their target heart rate range and should track the intensity of exercise employed.
- Women with osteoporosis to avoid high intensity work out
- For a sedentary person, even walking is feasible
- **BENEFITS:**
  - Increases cardiorespiratory functions.
  - Helps create calorie deficit and minimize midlife weight gain
  - Increases bone mass; reduces low back pain
  - Elevates the mood and reduces stress

Maximum heart rate: subtract 220 from women's age

**Range :** multiply maximum heart rate by 50/100 and 80/100

Baseline prior to starting exercise: aim at lowest part of the target zone during the first few weeks building upto 75 percent.

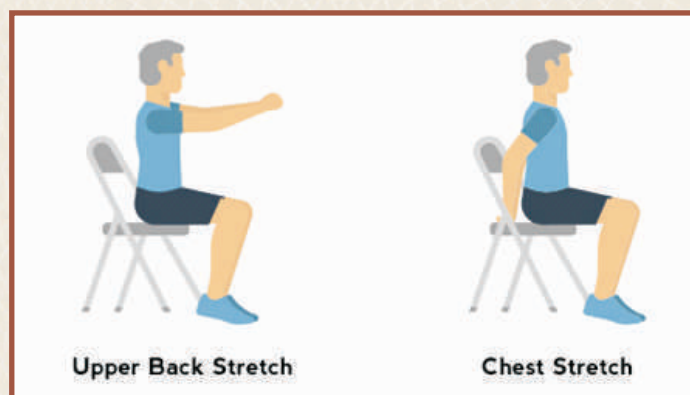
Women on beta blockers: consult cardiologist prior to exercises (range should be lowered) (8)

### Types of exercise:

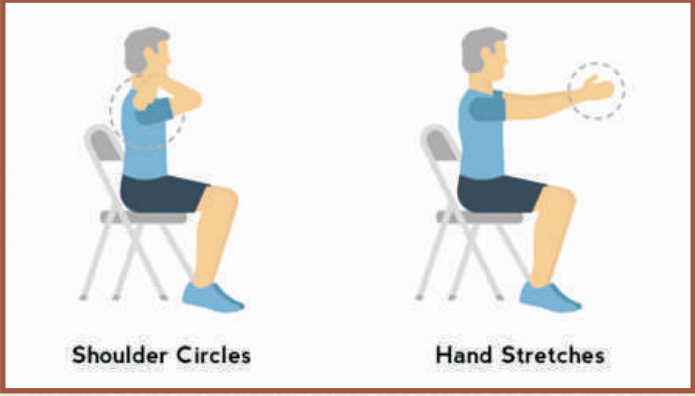
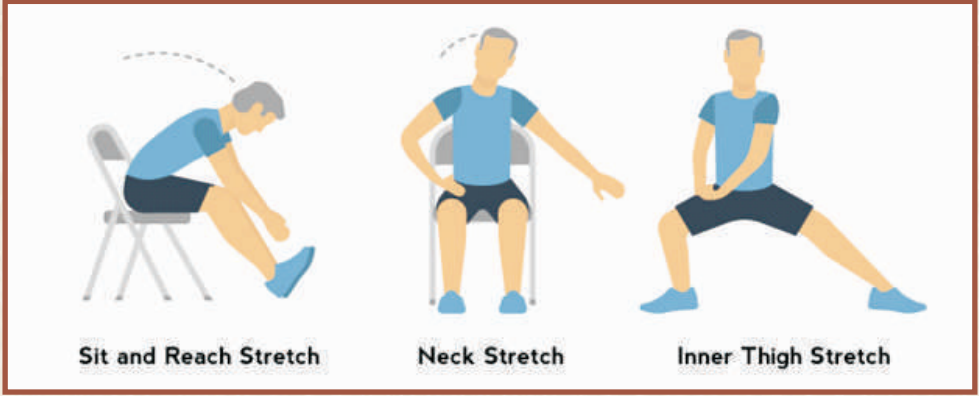
- Weight bearing, high impact exercise: dancing, running, jogging, jumping, climbing stairs or sports – not for frail, lower bone mass and osteoporotic
- Weight bearing, low impact: walking, elliptical training machines, stair step machines – who wanted to build bone mass
- Weight or strength or resistance training exercise: lifting weights
- Non weight bearing, non-impact activities: cycling, swimming, stretching, and flexibility exercises.
- Non-impact exercises: exercises helping in balance and postures :work on back extensors and lower extremities muscle groups.

## BEST REGIMEN

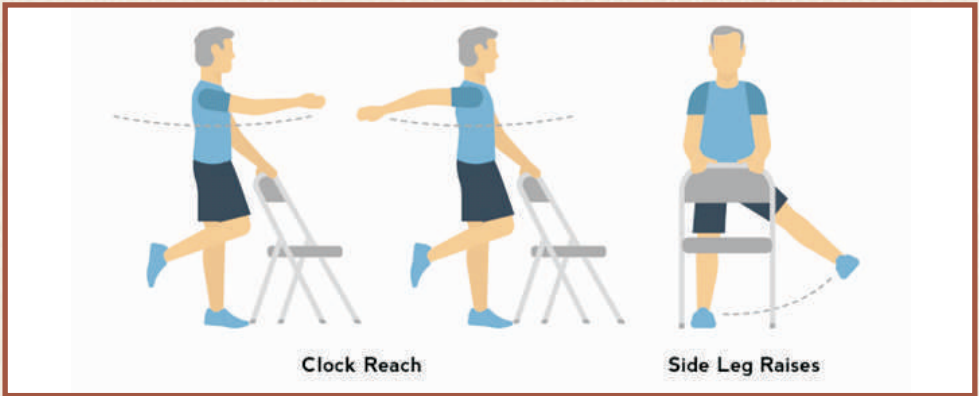
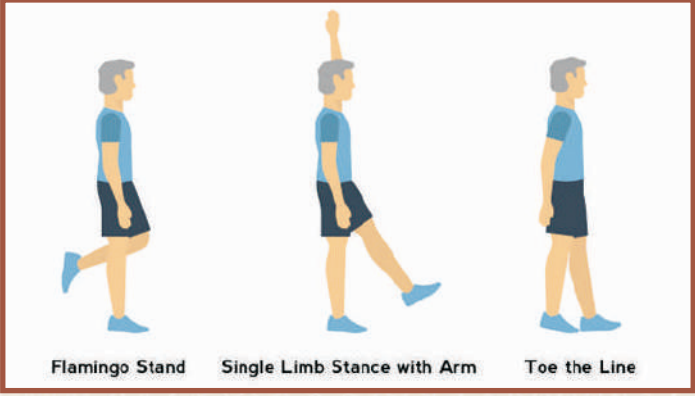
### STRETCHING EXERCISES







**BALANCE EXERCISES**





## CHAIR EXERCISES



Front Arm Raises



Seated Shin Strengthener



Plies



Tummy Twists

## CORE EXERCISES



Leg Lifts



Bicycle



Seated Twists



Side Bends



Seated Knee Lifts



## CARDIO OR LOW IMPACT EXERCISES



Biking & Elliptical



Tai Chi

Tai chi: flowing, meditative movements with greater loading than walking and reduces risk of falling. It has strong favourable benefits of T'ai chi for improving pain and physical function in individuals with osteoarthritis.



Speed Drill



Step Ups



Water Aerobics

## STRENGTH EXERCISES



Partial Squat, and Half-Squat  
Against a Wall



Wrist Curls



Bicep Curls



Upright Front Row



Knee Extensions



### When to avoid exercise?

Recent ECG change or recent MI; uncontrolled arrhythmia, unstable angina, third degree heart block, acute progressive heart failure, elevated blood pressure, cardiomyopathy, valvular heart disease, complex ventricular ectopy, uncontrolled metabolic disease.

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