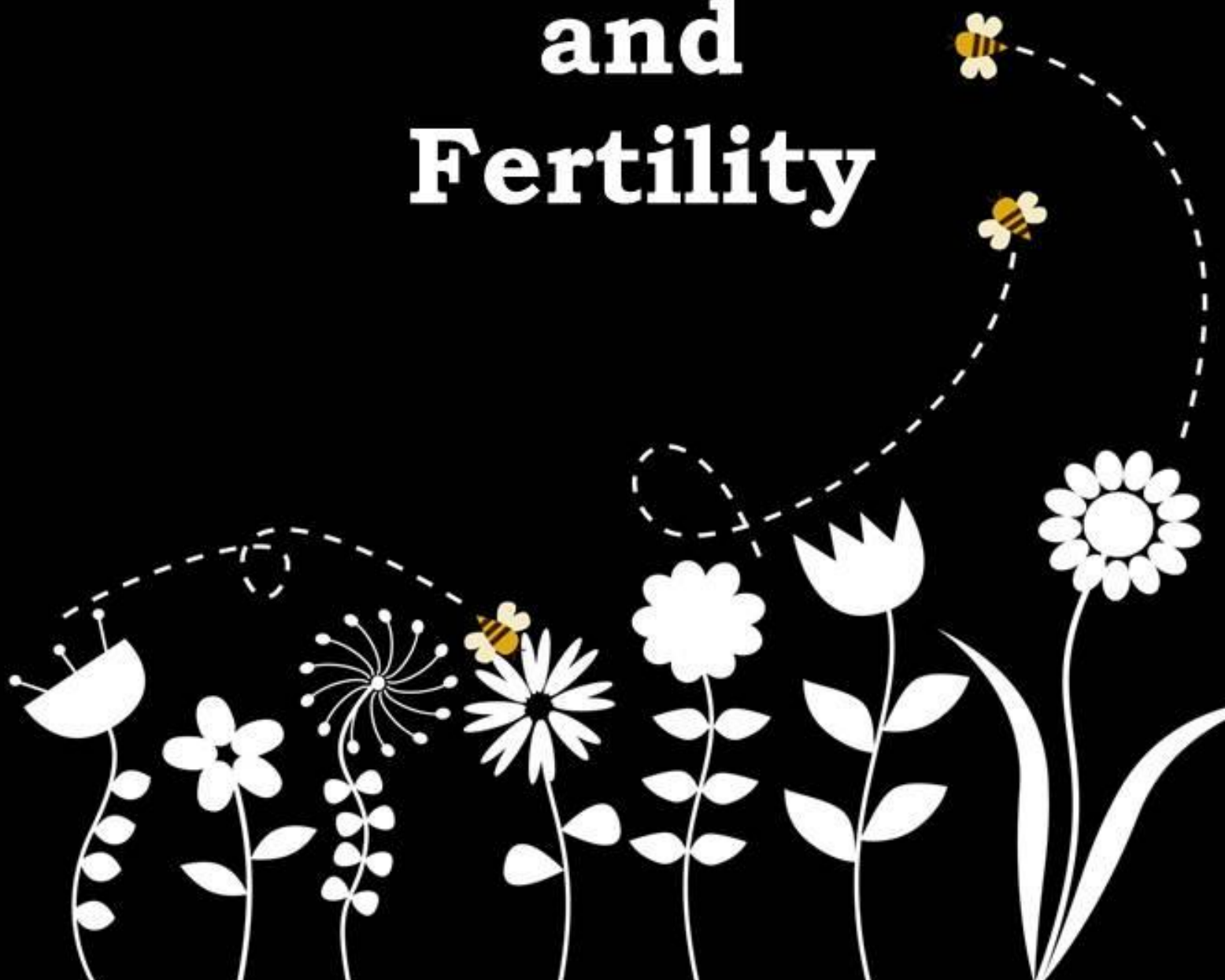


Else Marie Lehman

Mini Guide to

**Exercise
and
Fertility**



Mini Guide to Exercise and Fertility

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This guide

I met the “fertility universe” in 2004 when my own pregnancy had been a long time coming. Three years later, I became pregnant thanks to a little help from this formerly unfamiliar world. During this rather long, drawn-out process, I had a million questions. And I was lucky that leading experts in the field were kind and generous enough to answer them when I knocked on their doors.

And they did even more. Later, they also helped me write a book to share all this knowledge with fellow sisters and brothers, *Klar til børn – guide til fertilitet og sundhed* (“Ready for kids – your guide to fertility and health”), a book that touched upon most issues I wished I had known during my first course of fertility treatment.

One of the topics it covered was the impact of exercise on fertility. What? How much? When and when not? Because exercise has huge benefits and it is one of the things that you can do to make a difference and to improve your chances of becoming or making someone pregnant. But, as with most good things in life, there are pitfalls and things you should be aware of to make the most of it.

Personally, I needed to stay sane during months and years of so much focus on my ovaries, uterus and unsuccessful treatment. And the hormones and occasional high-calorie self-indulgence caused the bathroom scale to show numbers I did not appreciate. Exercise helped me. And exercise, I could control. Exercise really grew on me during those years!

I hope that you will get the same joy and benefits from it and that you will find this guide helpful in doing so.

All the best,
Else Marie Lehman

Copenhagen, September 2013.

Exercise improves your fertility

- Exercise promotes a healthy lifestyle. When you work out on a regular basis, it becomes more fun and easier, and the need to eat healthy, to drink less alcohol and caffeine, and to quit smoking becomes much more obvious.
- Exercise can help men and women obtain and maintain a healthy weight. It burns calories and can help regulate your appetite, and with a healthy weight, you can avoid the hormone disruptions that too much fat can cause.
- During and after your workouts, your brain will produce endorphins – “happy hormones” that will boost your mood, help you think positive and relax. They will also help reduce stress, including stress caused by fertility challenges.
- Exercise will give you a break from your daily duties, hassles and issues and will give you a chance to focus completely on breaking a sweat, having fun and doing something good for yourself.
- You will sleep better, and you will have more energy to cope with the challenges that come your way.
- Exercise improves your immune system.
- Exercise increases blood circulation throughout your body, including your reproductive organs, potentially making them more fertile.
- Exercise increases the insulin sensitivity of your muscles. This is very beneficial to women with PCO/PCOS.
- Your body will become stronger and healthier. It will be better prepared for a pregnancy and for giving birth when that day comes.
- Exercise can increase your and your partner’s sex drive and can improve your love life.

As you see, there are plenty of reasons to exercise. It can make a huge difference and help your baby project go in the right direction. And it helps you stay strong and sane on the journey.

How much exercise? And when?

To obtain the benefits of physical activity, you do not even have to work out to extremes. The official recommendation from the Danish *Sundhedsstyrelsen* is 30 minutes of physical activity per day for adults. The U.S. *Department of Health & Services* recommends 150 minutes of moderate-intensity aerobic activity (walking, running, cycling...) a week plus some muscle-strengthening activity.

If you want to lose weight or to get in significantly better shape, you may want to take it up a notch, though. What is important to get results is that you make sure to challenge yourself and make your heart rate peak at least a couple of times a week and build up some muscle by doing strength training.

If your focus is burning calories, it matters less if you work hard for a short time or work out at a lower intensity for a longer period of time. After burn is said to increase from high intensity workouts, but most of all you need to enjoy what you do and feel like doing it again. Therefore, choose what fits your temper, but remember to vary whatever you do and to keep challenging your body.

How much, how often and how hard you should work out depends. It depends on your shape, your health condition and your preferences. If you have any doubts, ask your doctor for his input before you get started. Based on input from different experts, various scientific studies and my own experiences, my (very) general recommendations are the following:

Before fertility treatment

- ❖ Moderate exercise. Pushing your body in a single training session hardly ruins your fertility, but it may not be necessary to run a marathon or to become an ironman/woman or anything else requiring a lot of intense exercise that may stress your body (and mind) unnecessarily. Save that for later.
- ❖ Some claim that very hard aerobic exercise may disrupt the hormones and thereby the reproductive system. It hardly means that one intense spinning class is damaging, but it may be a good idea to keep it in mind and not exaggerate a good thing.
- ❖ There are many great sports out there. The main thing for you is to find what makes you feel good and reenergized and what you like spending your time doing.
- ❖ Do not underestimate the value of a living room dance, spring cleaning of your house, riding the bike to work and using the stairs instead of escalators. It all matters, and it all counts.
- ❖ If you do not work out already, now is the time to start doing it! Get yourself some healthy habits and a great physical shape before you become pregnant. It will pay off during the nine months of pregnancy, during birth, and after.

During hormone stimulation

- ❖ Continue your moderate, physical activity to the extent that you feel good about it. It is good for your mood and your body. Pay a little extra attention to your body and its signals, though. Some may experience dizziness and nausea from the hormones; some feel their lower body – the ovaries in particular – puff up and become sore. If you feel any discomfort during exercise as the activity in the ovaries increases, accept it, try something else that is more comfortable or wait until another day. Just don't use it as an excuse to completely quit.
- ❖ (Fertility) yoga has many benefits during this particular phase (more about this later). It increases the blood flow in your lower body, which is good for the follicles and the endometrium.

After egg retrieval

- ❖ Egg retrievals differ a lot from one woman to another. I have been tied to the couch in pain for days after egg retrieval. Most times, however, I have felt nothing but a slight soreness. I have even been out running the day after egg retrieval – which I would do again if it felt good (which it did), but I would not officially recommend to others just to be completely safe.
- ❖ Since egg retrievals are so different from each other, general guidelines are difficult to issue. The rule of thumb should be to feel and to listen to your body. Let it decide. Giving yourself a break of a few days is definitely okay. First and foremost, your body needs to recover, bleeding needs to stop, and swelling needs to go down. The important thing is not to work out a lot. The rest is necessary to get your body ready for the upcoming transfer of the fertilized eggs.
- ❖ If you feel like going for a walk or doing some gentle yoga, just do so. If not – don't. Do not feel obliged to lie on the couch for days and do not feel obliged not to. There is no right and no wrong; there is just what feels right for you.

After embryo transfer

- ❖ There is no need to fear that your embryos will “fall out” if you are physically active after the transfer or after an insemination. It will not happen. So you may now continue your exercise routines when you feel ready to do so. You may need a few days of additional rest after the egg retrieval if you are still sore from this procedure.
- ❖ Act as if you are pregnant until – maybe – proven otherwise from the pregnancy test. And pregnant women are allowed to exercise as long as they restrain from any extreme or very high intensity exercise. Stick with gentle and moderate exercise during which your pulse does not peak in red zones all the time and during which you are able to talk while you work out. Long, nice walks are lovely too and may help clear your mind during this exciting waiting time.

- ✿ Postpone swims a couple of weeks to make sure that your lower body's wounds have all healed. This is to avoid infections. (The same goes for bathing in the bathtub).

During pregnancy

Dansk Selskab for Obstetrik og Gynækologi (Danish ObGyn Association) recommends:

- ✿ Healthy pregnant women are encouraged to be moderately physically active at least 30 minutes per day, regardless of their former activity levels.
- ✿ Women who are predisposed to gestational diabetes or preeclampsia should be even more active (exercising for longer periods of time and at a higher intensity)
- ✿ Cardio exercise at moderate intensity is recommended as a starting point for women with little or no prior exercise experience. Women who were physically active before their pregnancy can take the intensity up a notch.
- ✿ Very active women may continue exercising during their pregnancy as long as they feel good about it. Be aware of the signals from your baby and your body, and adjust your routines and intensity as your pregnancy advances and your body changes.

And what should I do?

There is more to physical activity than running and lifting weights. In relation to your fertility, to weight loss and to staying healthy in general, the main thing is to find the type of exercise that you like and actually enjoy. Succeeding in this will increase your motivation and will make sticking with your exercise routine much more likely.

The chart below is far from comprehensive, and the grouping is only instructive. Use it as inspiration and go search further on your own.

Cardio	Strength	Flexibility
<ul style="list-style-type: none"> ✦ Your heart becomes stronger and more efficient. ✦ Your lungs become more efficient. ✦ Your muscles improve their ability to use oxygen 	<ul style="list-style-type: none"> ✦ Your muscles build strength and stamina ✦ More efficient muscles and improved ability to burn calories ✦ Toned muscles 	<ul style="list-style-type: none"> ✦ A more flexible body ✦ Better posture.
<ul style="list-style-type: none"> ✦ Running and walking ✦ Rollerskating ✦ Cycling, spinning ✦ Handball, football ✦ Badminton, tennis, squash ✦ Skiing ✦ Rowing ✦ Swimming ✦ Elliptical workout ✦ Step ✦ Aerobic ✦ Rope skipping ✦ Dancing 	<ul style="list-style-type: none"> ✦ Fitness and weight/strength training ✦ Pump and bodytoning ✦ Pilates ✦ Fitball 	<ul style="list-style-type: none"> ✦ Yoga ✦ Gymnastics

Most sports have elements of cardio, strength and flexibility in varying doses. Mix different types of exercise to get as many health benefits as possible. The variation will help you keep up the spirit, and the various sports will benefit each other and give you a lovely cocktail effect.

Exercise and women with PCO/PCOS

Exercise can be particularly beneficial to women who suffer from PCO/PCOS and have a reduced sensitivity to insulin. When the body responds less to insulin (that is, needs higher insulin levels to respond), processing glucose (sugar) from the blood is challenging, and it becomes difficult to process the food (carbs in particular) we eat. Hence, many women with PCO/PCOS find it challenging to control their weight.

If losing weight is your goal, PCO/PCOS related or not, exercise will help you by burning calories and by regulating your appetite.

If you have some additional weight, it may disturb your hormones. Exercise can help normalize your levels, thereby significantly increasing your pregnancy chances.

Should you not lose weight by exercising, do not despair. It will still be beneficial, and it will still increase your chances of getting pregnant. The reason is that exercise increases insulin sensitivity in the muscles and thereby reduces the need for insulin to process any given amount of glucose the body is exposed to. The body normalizes. Also, by working out, you gain muscle mass. This gives you a larger “machine” to process glucose. Basically, any exercise has benefits for women with PCO/PCOS. Exercise that uses your largest muscle groups in the legs and buttocks (such as running and cycling) does in particular.

A study from New Zealand has shown that women with insulin resistance (reduced insulin sensitivity) had positive results from high intensity (80-90% of maximum pulse) workouts in particular.

Insulin sensitivity is increased when you have done an hour of exercise at moderate intensity. Hence, regular workouts – at least 2-3 times a week – will help a woman with PCO/PCOS keep her insulin sensitivity in control.

Let's get physical

Have a look at your daily routines and find ways to sneak in a little more physical exercise. Even the small stuff matters. Ride the bike to work instead of jumping on the bus. Walk up/down the escalator instead of letting it carry you all the way to the subway or to the next floor at the mall. These small changes matter more health- and weight-wise than you may think.

Easy everyday activities

Here is how you can become a little more physical in your daily life:

- ✿ Ride the bike to work.
- ✿ Stand up and walk around while you are on the phone at the office and at home.
- ✿ Bring your notes and receipts to your colleagues yourself rather than emailing everything or sending it by internal mail.
- ✿ Get off a bus stop before your final destination and walk a little farther.
- ✿ Carry all your grocery bags to the third floor.
- ✿ Dance alone and with your boyfriend.
- ✿ Vacuum the house and give the bathtub a scrub.
- ✿ Walk the dog a little farther and a little faster.
- ✿ Collect apples in the garden and mow the lawn.

Work the pelvic floor

Exercising the pelvic floor is something we should all do throughout life. It is not just for pregnant women and new moms. Men, too, can gain a lot from strengthening their pelvic floor – and yes, they do have one, too. For men as for women, a healthy, strong pelvic floor improves sex life. It eliminates the need for Viagra and other medical helpers, and it reduces the risk of having incontinence problems.

The muscles of the pelvic floor are closely connected to our reproductive organs due to their location. The female pelvic muscles are located around the vagina, urethra and anus, and they also support a woman's bladder and uterus.

The male pelvic muscles are connected to the bladder, urethra, anus, and penis.

When you know how to find and exercise your pelvic floor muscles, it is very easy.

Women:

Contract your perineum around the vagina and anus. You should feel the pelvic floor lift a bit. Breathe nice and easy and keep your buttocks and inner thighs relaxed. Imagine holding in a fart. A way to get a feel for the muscles is to experiment a bit while you pee: Stop the urine flow (stop peeing) and notice the muscles you use for this. They are the ones you have to find and strengthen during your pelvic floor exercise.

Men:

Squeeze and contract the muscles around your anus as if you are holding in a fart. Keep your buttocks and thighs relaxed. Feel your pelvic floor and penis lift a bit.

In its most simple form, exercise of the pelvic floor could be:

1. **Contractions:** Contract your pelvic muscles, count to 5 or 10 and relax. Repeat 5 times or more.
2. **Quickies:** Contract your pelvic muscles and relax right away. Make quick shifts. Repeat 10 times or more.
3. **The Pyramid:** Contract your pelvic muscles, count to 5 or 10 and relax. Hold the next contraction for twice the time. Keep doubling the length of the intervals for as long as you can.
4. **The Elevator:** Contract your pelvic muscles and count to 5. Contract and lift a bit more; count to 5. Continue adding a bit more contraction for as long as you can. Imagine riding an elevator, floor by floor, until you are at the top.

Combine and vary the exercises from day to day. You can do the pelvic floor exercises lying down, sitting or standing. Doing these exercises a few minutes a couple of times a day will work wonders.

Your daily pelvic workout

Women and men should exercise their pelvic muscle every single day. The good news is that you can do it anywhere, any time without getting into your sweatpants. You can work your pelvic muscles...

- ✿ in the car on your way to work
- ✿ while you log on to your computer
- ✿ waiting in line at the supermarket
- ✿ carrying kids and groceries to the second floor
- ✿ watching your favorite TV show
- ✿ talking on the phone with your best friend or mom
- ✿ having brunch at your favorite café

It is easy, quickly done and free. Finding excuses not to get it done is very difficult.

Beware of “intelligent” sportswear

A Swedish study has found that anti-bacterial chemicals in the so-called “intelligent” sportswear contain microscopic silver particles may disrupt hormones.

If you want to avoid these particles, skip clothes marked antibacterial, anti-odor or anti-microbial.

[Source: forbrugerkemi.dk]

Guys, watch your "jewels"

Keep the temperature in your pants low and stable. The production of sperm is a very temperature-sensitive process. Remember this during and after your workout, since it may harm your sperm cells and the sperm in production.

Body temperature will rise when you work out, so avoid working out in tights that force the scrotum and the testicles close to the body. Choose clothes that allow your private parts to hang a little loose and away from the body as they are designed to do.

Do not soak in hot water for long or hang out in the sauna after exercise. Give your scrotum and testicles a chance to cool down after the workout and then shower before you get dressed. Avoid tight underwear and pants in general. Your reproductive parts need to breathe freely and get back to their normal temperature after the workout.

Avoid pressure and any kind of impact. If you are a frequent biker, tip the saddle forward to give your private parts more space or get a saddle with a designed-for-men cutout. Either solution will help protect the soft tissue areas, will keep blood moving and will maintain the natural temperature at the sperm production center.

If you do contact sports like boxing, football/soccer and hockey invest in a jockstrap. It can save you from unpleasant experiences and protect your testicles at the same time.

Do not use any kind of doping. Doping ruins your fertility. Anabolic steroids will shrink your testicles. It is not just a myth. And small testicles typically produce fewer sperm cells than large and healthy ones.

Yoga and fertility

Yoga deserves a separate recommendation because it has special powers when it comes to fertility and nurturing our reproductive abilities. It works the body and physical wellbeing, and it stimulates your mental wellbeing and health.

Yoga can be done in 10-15 minutes or for 2 hours. You can do it at home, at the office or in a hotel. Yoga has benefits for the rookie as well as the experienced yogi, for men as well as for women.

Physically, yoga tones and strengthens your muscles. It improves your posture and how you carry yourself. It improves blood circulation and balances your hormones. And it improves your breathing and breathing control.

Mentally, it calms the brain and reduces stress. It improves your ability to stay focused and your ability to sense and to listen to yourself, your mood and needs.

Every type of yoga has a special focus. Some types focus on the physical execution, while others focus on the mental part. If you are new to yoga, Hatha Yoga could be a comfortable place to start. Hatha Yoga is a gentle, relaxing and meditative type of yoga in which you will use the classic yoga poses. Breath control is a significant part of it. Some types of yoga – like Bikram and Hot Yoga – are practiced in heated rooms. Men should be aware that the heat can have significant impact on the sperm production.

If you have no prior yoga experience, it might be worth getting an introduction to the world of yoga from an experienced instructor. This will help you understand the basic principles and techniques – for instance, body locks and breathing techniques – and will help you understand how to do the poses correctly. An experienced instructor will also be able to help you modify the poses to your specific needs and flaws. You can find experienced, certified yoga instructors in most evening schools, fitness centers and the local yoga shalas.

About the author

Else Marie Lehman:

- ✿ Born 1973
- ✿ Freelance journalist and author
- ✿ Former instructor: Spinning, aerobic, BTS BodyPump (Les Mills), yoga and fertility yoga
- ✿ Weekly exercise routine includes running, lifting weights and doing yoga
- ✿ Married to Thomas. Mother of two (2008 and 2010) – thanks to fertility treatment. And probably exercise, too.

www.elsemarielehman.net



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Mini Guide to

Exercise and Fertility

Exercise has significant benefits for our health, wellbeing and even for our fertility. This booklet guides you to what – and what not – to do when it comes to exercise, if you want to maximise your chances of achieving a pregnancy.

The guide offers advice for him as well as her.

Else Marie Lehman is a Danish writer and freelance journalist. Author of the book *Klar til børn* (2009), a thorough guide to fertility based on interviews and input from leading Danish fertility experts – and an introduction to fertility yoga (2013). Former teacher of fertility yoga and former fertility patient herself. Today mother of two girls from 2008 and 2010.

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