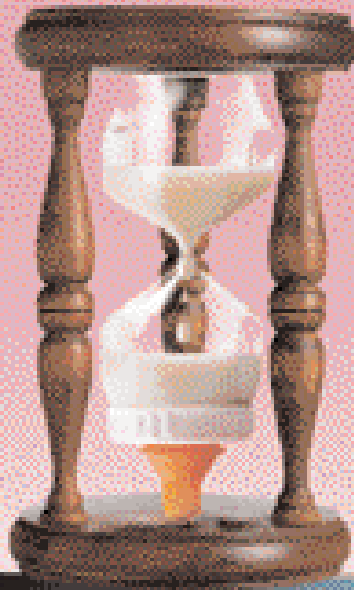


PROTECT *your* FERTILITY



kids **the**
last thing
on your mind?

your decisions
now

can impact your
ability to conceive
in the future




sex
smoking
body weight
getting older
4 reasons to start thinking
about your fertility

AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE

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kids are the last thing on my mind

—why does this stuff affect me?



You're busy. You work or go to school or both. And when you factor juggling those responsibilities with hanging out with your friends, dating, working out and finding time for yourself, kids aren't even a blip on your radar screen.

At the risk of sounding like your high school health teacher, the decisions you make today really can impact your fertility and ability to have kids later.

That's why it's so important to learn how to take care of your body. After all, there's a huge difference between choosing not to have kids and physically being unable to conceive if and when you want to.

Unfortunately, fertility has long been a taboo subject. By the time most people graduate from high school, they are well versed in the risks that alcohol poses to their liver and smoking poses to their lungs. Rarely do they hear the message that they also can protect their reproductive health.

Talking about fertility isn't meant to scare you into having children or convince you to sacrifice or postpone your career. It's about providing you with information about one of your body's most basic functions so that you can be empowered to make smart and informed decisions.

Deciding when and if to have children is an enormous decision for many women—a decision that should be based on facts.

what is infertility, anyway?

Infertility is a disease of men and women's reproductive organs that impairs one of the body's most basic functions—the ability to have children. And although 6.1 million people in the United States are infertile, unlike lung cancer or HIV/AIDS, people are rarely informed of the very direct links between their behavior and their reproductive health.

And that's the goal of this publication—to expose you to the ways in which you can help prevent infertility in the future by examining your behavior now. And even if you don't ever want to have kids, the same measures you can take to avoid infertility can help you live a healthier life.

but can't medical advances reverse infertility?

Even though infertility is a disease, if you're like most people, you probably don't think it will prevent you from having kids. After all, in this age of advanced technology and monumental scientific discoveries, can't doctors just work a little medical magic to make you fertile?

It's not quite that simple.

Around 6.1 million Americans suffer from infertility each year, and many of these people turn to fertility drugs, surgery, artificial insemination or in vitro fertilization (IVF) to help them get pregnant.

The costs for these procedures and medications vary widely. On the low end, fertility drugs such as hormone therapy (used to induce ovulation or sperm development) run from \$200-\$300 a month. IVF, on the other hand (in which the egg is fertilized outside the woman), costs \$8,000 to \$13,000 a pop.

Yet insurance providers in only 14 states (Arkansas, California, Connecticut, Hawaii, Illinois, Maryland, Massachusetts, Montana, New Jersey, New York, Ohio, Rhode Island, Texas and West Virginia) are required by law to cover some type of infertility diagnosis and treatment. The average couple going through infertility treatments pays at least half of their expenses out of pocket—not to mention the immeasurable burden infertility can

place on their psychological and emotional well being.

Infertility and infertility treatments often create one of the most distressing life crises a couple can face together. They can evoke feelings of loss, anxiety, depression, isolation, guilt, worthlessness, bitterness or anger.

And even after procedures have been performed and drugs have been taken, there's no guarantee that the woman will become pregnant and most importantly, carry the child to term. While infertility treatments have helped many couples have children, success rates differ, depending on the type of treatment. For some couples having their own child just isn't an option.

So don't depend on your doctor to make you fertile. Minimizing your risks of infertility is the best way to avoid the financial, emotional and physical stresses of infertility treatments.

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is your fertility at risk?

- Have you ever had unprotected sex?
- Do people tell you or do you think that you're too thin?
- Do you smoke?
- Are you overweight?
- Have you ever engaged in sexual activity and not known your partner's sexual history?
- Do you assume that you can have kids into your 40s?

If you answered yes or did not know the answer to any of these questions, read on to find out how smoking, sexually transmitted infections, unsafe body weight, and age can affect your fertility. For more information talk with your doctor.

infertility warning signs

In addition to the preventable causes of infertility outlined in this publication, other medical conditions can affect your fertility. If you are experiencing any of the following symptoms, talk with your doctor for more information.

- Painful menstrual periods
- Irregular or absent menstrual periods
- Irregular pelvic pain
- Increased hair growth on face/chest/stomach
- Milky discharge from breast
- Yellow vaginal discharge or persistent odor

close-up on smoking

You may think lighting up for a study or work break is harmless because you're young and you'll quit before you cause any real harm to your body. But stopping smoking isn't as easy as you think it will be and damage doesn't just happen to older people.

If you smoke, you probably already know about the health risks that are involved. Smoking-related diseases claim an estimated 430,700 American lives each year. And smoking is directly

responsible for 87 percent of lung cancer cases and causes most cases of emphysema and chronic bronchitis.

But you probably don't know that every puff you take can seriously affect your ability to have children. Former U.S. Surgeon General C. Everett Koop stated in a warning about smoking that women who smoke have decreased fertility, and a study in Great Britain revealed that up to 13 percent of female infertility is caused by cigarette smoking.

looking for an excuse to kick the habit?

look no further.

Research shows that smoking is harmful to women's ovaries, and the degree of damage is dependent upon the amount and length of time a woman smokes. Nicotine and other harmful chemicals in cigarettes interfere with the body's ability to create estrogen, a hormone that regulates ovulation, and cause women's eggs to be more prone to genetic abnormalities. While some damage is irreversible, stopping smoking now can prevent further damage.

So now do you want to stop smoking? The American Lung Association recently launched Freedom from Smoking® Online (www.ffsonline.org) to help. The program is based on the

American Lung Association's Freedom From Smoking® program, which has already helped thousands of smokers quit smoking for good. The Freedom From Smoking® online smoking cessation clinic can be accessed day or night, seven days a week, on any schedule a smoker chooses. Not online? Call 1-800-LUNG-USA to request Freedom from Smoking as a book, video or audiocassette.

For more information about smoking, visit the American Lung Association's website at www.lungusa.org.

SURGEON GENERAL WARNING:
Tobacco Use Increases The Risk Of Infertility, Stillbirth And Low Birth

tips to successfully kick the habit

plan ahead.

Set a quit date and create a plan of action to get there. Once you quit, don't smoke—NOT EVEN A PUFF!

enlist support.

Studies show that you have a better chance of being successful if you have help. Your family and friends can offer support to help you cope with events that trigger cravings.

change your routine.

Include exercise in your daily schedule and focus on managing stress in other healthy ways.

get medication and use it correctly.

The FDA has approved several medications such as nicotine replacement therapy to help you quit smoking. Ask your health care provider for advice.

be prepared for tough times ahead.

Most relapses occur within the first three months after quitting and most people try several times before they finally quit. Try to avoid tempting situations such as drinking or hanging around other smokers.

Source: Centers for Disease Control



close-up on STIs

Everyone knows that if you don't practice safe sex, you might get pregnant. However, most people don't realize that if you aren't using condoms and you do become infected with a sexually transmitted infection (STI), you may never get pregnant in the future, even if you want to.

STIs, transmitted from person to person through intimate sexual contact, infect one in three sexually active people by age 24. Common STIs include chlamydia, gonorrhea, syphilis, HIV, genital warts, herpes simplex virus (genital herpes), hepatitis C & B, trichomoniasis, scabies and pubic lice.

STIs are a leading cause of infertility because they often display few, if any, visible symptoms. Because women are frequently unaware that they have an STI, they fail to seek proper treatment and this threatens their fertility.

For example, long-term infections often result in pelvic inflammatory disease (PID) and blocked fallopian tubes. This happens because the only

way for an egg to get from the ovary to the uterus, where it can be fertilized, is through the fallopian tubes. The blockage makes it impossible for the sperm and egg to meet in a natural, unassisted manner.

So how can you protect yourself (and your fertility) from STIs? Condoms can dramatically reduce your risk of contracting STIs when used consistently and correctly, but they do not provide 100 percent protection. It's also important to talk with your sexual partners about their sexual history. And of course, the only sure way to prevent getting an STI is by not engaging in sexual activity (oral and vaginal).

You also should establish an open relationship with your doctor. Remember that doctors are there to maintain and improve your health, not to judge your sexual decisions. If you are sexually active, ask your physician for an STI screening and make it a regular part of your annual gynecological visit or physical. You can also visit a Planned Parenthood clinic in your area for an STI screening and more information.

For more information about STIs, visit the Center for Disease Control's Report Card on STIs at www.cdc.gov.

You can also find more information on STIs and information on scheduling a STI screening by visiting Planned Parenthood's website at www.ppfa.org/sti.

Sexually transmitted infections infect one in three sexually active people by age 24



STI facts

- STIs often have no symptoms.
- If discovered early, some treatments can be as simple as antibiotics. However, if an STI goes undetected, the damage can be permanent, life-altering or life-threatening. It is impossible to develop an immunity to STIs and some STIs are incurable.
- STIs have nothing to do with cleanliness or grooming. STIs know no geographical or socioeconomic boundaries.
- STIs can be transmitted through oral sex, vaginal sex, or anal sex. Penile penetration is not a prerequisite for transmission.

Source: Centers for Disease Control

close-up on weight

Let's face it—our society is obsessed with body image and thin is in. Some women starve themselves to get skinny while increasing numbers of women are overeating and gaining weight. This behavior puts women at risk for anorexia, bulimia, obesity and, yes, infertility. In fact, 12 percent of all infertility cases are caused because women either weigh too little or too much.

The main ingredient in the body weight and fertility mix is estrogen—a sex hormone produced in fat cells. If you have too much body fat, your body produces too much estrogen and begins to react as if it is on birth control, limiting your odds of getting pregnant.

The opposite is true of women with too little body fat. Although these women may consider themselves healthy because they are thin, by not consuming a healthy

amount of calories and not weighing enough, their bodies can't produce enough estrogen and their reproductive cycles begin to shut down. Both under and overweight women have irregular menstrual cycles in which ovulation does not occur or is inadequate.

It's also important to maintain a healthy body weight not just for fertility purposes, but for overall physical health.

It is estimated that over 60 percent of American adults are overweight or obese. People who are overweight have a much higher probability of developing heart disease, diabetes, certain cancers, stroke and osteoarthritis. And according to the Surgeon General, obesity may soon become as deadly as cigarette smoking.

On the other end, eating disorders such as anorexia and bulimia affect approximately 10 million women and one million men in America. Eating disorders can lead to

malnutrition, dehydration, electrolyte imbalances, muscle wasting, neurological impairment, rupture in the esophagus, sudden low blood pressure, osteoporosis, irregular heart beat and death.

To protect your chances of conceiving and to guarantee

as having a BMI between 25 and 29.9, while an obese adult has a BMI of 30 or higher. Nutritionists define anorexia as weighing less than 85 percent of your ideal body weight. A good goal is to keep your BMI in the 19 to 24 range.

BMI	healthy						overweight						obese			
	19	20	21	22	23	24	25	26	27	28	29	30	31	33	35	
4'10"	91	96	100	105	110	115	119	124	129	134	138	143	148	158	167	
4'11"	94	99	104	109	114	119	124	128	133	138	143	148	153	163	173	
5'0"	97	102	107	112	118	123	128	133	138	143	148	153	158	168	179	
5'1"	100	106	111	116	122	127	132	137	143	148	153	158	164	174	185	
5'2"	104	109	115	120	126	131	136	142	147	153	158	164	169	180	191	
5'3"	107	113	118	124	130	135	141	146	152	158	163	169	175	186	197	
5'4"	110	116	122	128	134	140	145	151	157	163	169	174	180	192	204	
5'5"	114	120	126	132	138	144	150	156	162	168	174	180	186	198	210	
5'6"	118	124	130	136	142	148	155	161	167	173	179	186	192	204	216	
5'7"	121	127	134	140	146	153	159	166	172	178	185	191	198	211	223	
5'8"	125	131	138	144	151	158	164	171	177	184	190	194	203	216	230	
5'9"	128	135	142	149	155	162	169	176	182	189	196	203	209	223	236	
5'10"	132	139	146	153	160	167	174	181	188	195	202	209	216	229	243	
5'11"	136	143	150	157	165	172	179	186	193	200	208	215	222	236	250	
6'0"	140	147	154	162	169	177	184	191	199	206	213	221	228	242	258	

Source: Centers for Disease Control

your total health, you should exercise and eat nutritious foods in order to maintain your healthy body weight. The National Institutes of Health define healthy body weights by using a Body Mass Index (BMI), which is a calculation of a person's weight divided by the square of their height. An overweight adult is defined

You can calculate your BMI by using the chart above. For more information about nutrition, check out the American Dietetic Association's website at www.eatright.org.

age

close-up on

You've heard the cliché before, but it's true: now is a good time to be a young woman in America. You have better access to jobs, education—even sports—and more options in life than your grandmother or even your mother did at your age.

One of these choices is deciding when, or if, to have kids. According to *Newsweek*, the number of women in their early 20s having their first child has dropped by a third since 1970, while the rates for 30 and 40 somethings have quadrupled since 1970. In

In her prime reproductive years, a woman typically has up to 400,000 eggs; by the age of 40 the number has decreased to fewer than 50,000.

fact, at least 20 percent of American women wait to begin their families until after age 35.

After all, you want to establish your career, find the right partner and become financially secure. And you want to be sure that parenthood is right for you.

Unfortunately, as you plan your future, you should know that it is a biological fact that fertility decreases with age. As many women delay having children, they have unrealistic expectations that medical science can undo the effects of aging. This simply isn't true. While women and their partners must decide when and if to have children, it's important to know that women in

their 20s and early 30s are most likely to conceive.

The decreased odds of getting pregnant are due to normal changes that occur with aging. Women are born with a limited number of eggs. Since no new ones are formed throughout a woman's life, the number of eggs available steadily declines over time. In her prime reproductive years, a woman typically has up to 400,000 eggs; by the age of 40 the number has decreased to fewer than 50,000. By menopause, the number has reached almost zero. As women age, the quality of their eggs declines as well.

This doesn't mean that you should run out and get pregnant, or resolve to never have kids. But you should understand the facts. Bottom line: every woman's body ages at a different rate and there is no way of knowing for sure what your fertility will be like, say 10 years from now. And while fertility treatments are an option, they aren't a cure all.

So if you do want to have kids, you should be aware of your body's natural limitations and take every opportunity to protect your fertility by not smoking, maintaining a healthy body weight and protecting yourself from sexually transmitted infections.



what's next?

If you're worried about your fertility (or even a little concerned), don't hesitate to make an appointment with a gynecologist. It's very important to talk with a doctor about the issues discussed in this publication, especially if you feel you may be at risk for infertility.

If you don't have an ob-gyn, click on www.acog.org to search the American College of Obstetricians and Gynecologists' directory of over 40,000 ob-gyns. Or stop by your local Planned Parenthood

Health Center (for a complete listing, go to www.plannedparenthood.org) or visit your college health center.

For more general information about infertility, check out the following organizations' websites:

American Society for Reproductive Medicine
Click on www.asrm.org to read free publications, get the answers to frequently asked questions, and find an infertility specialist. Go to

www.protectyourfertility.org to access definitions and risk factors of fertility as well as free publications and public service announcements. Or call toll free: 866-228-6906

American College of Obstetricians and Gynecologists
A keyword search of "fertility" or "infertility" on www.acog.org brings up thousands of articles and reference material about these topics. Or call 202-638-5577.

RESOLVE:
The National Infertility Association (www.resolve.org) and the American Infertility Association (www.americaninfertility.org) offer sources of support, treatment and information about preserving fertility and maintaining a healthy lifestyle. Their web sites also provide resources on adoption, pregnancy and parenting.

what about my partner?

are briefs and hot baths
really out of the question?

Infertility is not just a disease that affects women—men suffer as well. In fact, new studies show that in approximately 40 percent of infertile couples the male partner is either the sole cause or a contributing cause of infertility.

The single most important step men can take to protect their fertility is to avoid risky behaviors. Drugs such as cigarettes, marijuana and alcohol can negatively affect men's health in many ways, including greatly affecting their virility. This leads to abnormally shaped sperm, decreased sperm motility and/or decreased sperm count.

Sexually transmitted infections (STIs) don't just affect women's fertility. STIs such as chlamydia and gonorrhea are a leading cause of male infertility and, as with women, often have no symptoms. Properly using condoms is a good (but not entirely fool proof) way to reduce the risk of becoming infected with STIs, but it's also very important for men to talk openly with their partners before engaging

in sexual activity. And as with women, abstinence is the best way for men to protect themselves from contracting an STI.

Drugs, smoking, alcohol and STIs all increase the odds that men will produce fewer and lower quality sperm. To fertilize an egg, the sperm needs to be present in large numbers in the semen. It must also be able to move far and fast enough to navigate the female reproductive system and strong enough to break through the outer layers of the egg. The best way to guarantee healthy sperm is to avoid behaviors that put your sperm at risk.

So what about the hot tub? Prolonged exposure to high heat has been proven to lower sperm production. In addition, men who wear heat-retaining clothes or whose occupations require long hours of sitting also experience decreased sperm production. The effects of heat on sperm production are reversible. However, men who are actively trying to conceive with their partners should avoid prolonged exposure.

doctor's perspective:

dr. marcelle cedars

You can think about fertility very simply—it takes eggs, sperm and a way for them to get together (the uterus and tubes). But what most people don't realize is that all women are born with a limited number of eggs and we deplete them at a predetermined rate. This loss actually begins before we're born, and continues throughout life—even before puberty, while we're on the birth control pill, and even if we're pregnant. Not even modern medicine can turn back the clock on our ovaries.

While it is clear that the amount and quality of eggs a woman has and her fertility do decline with age, it's nearly impossible to determine at what age any given woman will go through menopause. Women also mistakenly believe that if their cycles are regular and they live a healthy lifestyle, their fertility is normal. Unfortunately, even in healthy women with normal cycles, the quantity and quality of eggs decline long before menopause and women may not even be aware of these changes. I frequently see women in their late 30s or 40s

who are surprised to find their chances for pregnancy are small due to aging of the ovaries. These women are also shocked to learn that many celebrities who conceive later in life do so by using a younger woman's egg.

So, if you can't lengthen the life span of the "biological clock", what can you do? Well, you can make sure not to unnecessarily shorten it. For example, women who smoke cigarettes tend to go through menopause about two years earlier than their non-smoking peers. Smoking is also associated with lower fertility rates and increased rates of miscarriage. Exercising responsibly, maintaining a healthy weight and not having unprotected sex are also important measures women can take to be proactive.

We can't always choose what obstacles (and joys) life will bring us, but we need to take charge of our future by being informed and protecting our health and our fertility.

Dr. Marcelle Cedars is an OB/GYN and fertility specialist at the University of California at San Francisco Medical Center.

This publication was produced by the **American Society for Reproductive Medicine (ASRM)** to educate women and men about infertility. ASRM is a nonprofit organization devoted to advancing the art, science and practice of reproductive medicine. ASRM is the nation's largest professional organization of fertility experts. Contact ASRM at www.asrm.org or call the Protect Your Fertility hotline toll-free at 866-228-6906.