What can I do to prevent problems?

All kinds of things. Reading this pamphlet is a good start. If you're *not* pregnant or expecting to be, pass it on to someone you care about who may be planning or expecting a child.

Because even though we're not sure about all the factors that can cause birth defects, alcohol is the leading cause that we know about.

And all of the problems it causes *can* be prevented if you just do two simple things:

- If you're pregnant or think you could be, *stop drinking now.*
- If you have a drinking problem, talk to your doctor and get the help that you — and your baby — need.

Whatever you need to do, do it *now*. Because even though a mother's love can seem pretty miraculous in healing a hurt or soothing a scraped knee, sometimes the best love we ever give our kids starts before they're born.

That's the kind of love that *really* lasts a lifetime.

Now, here's looking at *you,* kid. ■

This is one in a series of publications on drugs, behavior, and health published by Do It Now Foundation. Please call or write for a list of current titles, or visit our web site at **www.doitnow.org**.

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Cause & Defect

Drinking, Drugs & Pregnancy

A Do It Now Publication by Christina Dye

Now & Then

We really *have* come a long way — in some ways. Two thousand years ago, the ancient Greeks suspected that drinking could cause problems during pregnancy, although they didn't know why.

Today, science knows how *and* why alcohol causes problems, but we still haven't done enough to spread the word about the risks of drinking during pregnancy.

That's the reason that warning labels from the U.S. Surgeon General have popped up on containers for beer, wine and liquor, and that's the reason we've put together this pamphlet.

Facing Facts. *If you're expecting, expect to wait at least nine months until your next drink.*

In it, we plan to look under the labels at the real risks of drinking during pregnancy and the tragedy of *Fetal Alcohol Syndrome.* We'll also consider the effects of other drugs during pregnancy and discuss how problems get started—and how they can be avoided.

We'll even include some simple steps for reducing the risk of problems in *your* pregnancy.

Because even though it may take centuries to make us aware of a problem, it doesn't have to take that long for us to *do* something about it.

What is Fetal Alcohol Syndrome?

Fetal Alcohol Syndrome (FAS) is the name given to a set of birth defects triggered by alcohol use during pregnancy. Although a link had been suspected since ancient times, FAS wasn't formally recognized until 1973.

Today, at least one of every 1,000 U.S. newborns have FAS or a similar set of defects caused by exposure to drugs during pregnancy.

And for every infant born with full-blown FAS symptoms, 10 others suffer less severe, but equally unnecessary, alcohol- and drug-related problems.

Alcohol is the leading cause of mental retardation in the United States today.

Which birth defects does drinking cause?

Four main types of birth defects are linked to drinking, including:

- **Mental Retardation.** Alcohol is the leading cause of mental retardation in the United States today.
- **Impaired Growth.** Babies born to drinking mothers are physically smaller than the babies of non-drinkers. Most never "catch up" as they grow older.
- **Facial Malformations.** FAS babies often have smaller-than-normal head size, misshapen eyes, and a flattened nose and face.
- **Organ Defects.** Alcohol can disrupt organ formation and growth, causing defects in the heart, kidneys, muscles, joints, and sex organs.

Less severe problems are known as "Fetal Alcohol Effects" (FAE). They are generally milder forms of the problems triggered by FAS, but they're just as preventable.

FAS symptoms occur most often in children born to women who average five or more drinks a day. Still, even a drink or two several times a week—or a single drinking binge—can lead to problems.

So how does drinking cause birth defects?

The same way a bomb causes a hole in the ground. And here's why:

When a person drinks, alcohol races through the bloodstream to all parts of the body. And if that person is a woman and that woman is pregnant, it filters across the placenta and enters the bloodstream of the fetus.

That's where problems begin.

Because the fetal liver is only partially developed, it isn't able to metabolize and eliminate alcohol on its own.

That's why drinking even small amounts can cause big problems during pregnancy — because mom's cocktail or wine cooler stays in the baby's body longer and in higher (and more harmful) concentrations.

Exactly what happens next isn't fully understood. Researchers think that problems are linked to faulty cell development, since alcohol interferes with production of proteins that serve as building blocks for cells and nerves.

Is one stage of pregnancy more critical than others?

They're all important, but most experts agree that the most critical period occurs during the first three months of pregnancy. That's when the brain, central nervous system, and other internal organ systems begin to develop.

Drinking during months four through six is linked with increased miscarriage, while growth retardation and brain damage is more likely to follow use during the final three months of pregnancy (see chart).

And according to one recent study, drinking during the last months of pregnancy is also tied to a ten-fold increase in the risk of leukemia during early childhood.

Is drinking by the father harmful?

Maybe. Because new research is beginning to support the suspicion that a father's drinking may also affect an unborn child.

The *how* and *why* of that begins with the fact that long-term, heavy use of alcohol affects people in different ways.

Some — women and men — seem more susceptible to certain types of alcohol-related damage than others. Certain drinkers, for example, develop liver damage faster than others.

'D' Day. *Delivery and birth can be miraculous, if you're prepared — and unimpaired.*

Since FAS is linked to impaired cellular development and since new sperm cells are produced in males throughout life, those men most vulnerable to such damage could pass susceptibility on to their children.

If I don't drink every day, can I still drink once in a while?

That depends on what you mean by "once in a while." If it means every nine months or so—before and after pregnancy (longer, if you breastfeed)—the answer is yes.

Because alcohol really *does* affect different people in different ways. And that goes for people-to-be, too.

The full set of FAS defects is seen most often in the children of mothers who report heavy drinking throughout their pregnancy.

In fact, research shows that 45 percent of such women bear FAS-affected children while another 20 percent give birth to babies with FAE and other, less severe alcohol-related effects.

Double Trouble: Drugs

Alcohol isn't the only drug that can cause problems during pregnancy—not by a long shot. Experts guess that 15 percent of U.S. women of child-bearing age use drugs. And many don't quit until after the first three months of pregnancy, if then.

So-called "Fetal Drug Syndrome" effects can range from behavioral problems to addiction and stillbirth. Damage depends on which drug is used, when. Examples:

- **Crack/Cocaine:** Higher risk of miscarriage, premature birth, and growth problems. Newborns may suffer seizures and heart defects, and show signs of neurological damage and addiction.
- **Marijuana:** Slow growth, possible miscarriage, excitability or irritability in newborns.
- **Heroin:** Addiction and withdrawal. Linked to breathing problems and higher levels of Sudden Infant Death Syndrome ("crib death").
- **AIDS:** Women who inject drugs run a higher risk of contracting the virus that causes AIDS — and passing it on to their unborn children. ■

A single drinking binge in late pregnancy can cause permanent brain damage, lifelong learning disabilities, and other problems.

Still, just *cutting back* isn't enough to prevent problems, because a range of problems can follow even limited drinking during pregnancy:

- One to three drinks a day may slow growth and trigger FAS-like behavioral problems.
- "Subnormal" IQ scores are linked to as little as three drinks a day.
- One or two drinks *a week* may increase the risk of stillbirth and miscarriage.

Note that the problems we've discussed apply also to women who "binge" drink during pregnancy.

Research shows that a single binge in late pregnancy can cause permanent brain damage, lifelong learning disabilities, and other problems. And two 2006 studies found that children born to women who drank three or more drinks on a single occasion while pregnant were more likely to suffer psychiatric disorders by early adulthood and exhibit problem drinking behaviors by age 21.

So there's no such thing as "safe" drinking during pregnancy?

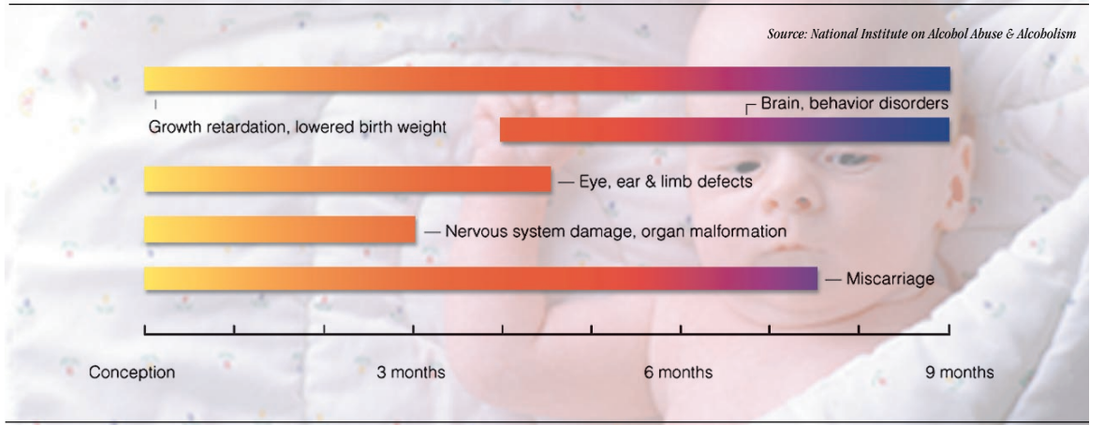
No. As much as we might wish there *were*, there simply isn't a guaranteed "safe" level of alcohol use during pregnancy. That's why all alcohol containers sold in the United States and Canada today carry explicit messages, advising against *any* use during pregnancy.

Some doctors go even further, warning women who are planning a pregnancy to cut down on drinking *three to six months* before conception to avoid problems. Others give the same advice to prospective fathers.

Some women still think the warnings apply only to "real" alcohol — like scotch or vodka.

But today we know that *what* you drink isn't important, but *how much* and *how often* is. That's because a 12-ounce beer, a five-ounce glass of wine, or a mixed drink all contain roughly the same amount of pure alcohol — about half an ounce.

Critical Passages: Reducing the Risk



Risky Business. *Alcohol can cause different problems at different stages of pregnancy. That's why today we know the only way to cut the risk completely is to cut out drinking altogether.*