

# PCOS Resources for a Healthier You





## **IN APPRECIATION**

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We are thankful to the dedicated team of authors: Phaedra Thomas RN, BSN, Kendrin Sonnevile ScD, RD, LDN, and Katrina Schroeder, RD, LDN. Special thanks to Amanda Kohn, BFA for designing this book, and to Anna Miller, BA for making additions and updates to this book.

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# PCOS Resources for a Healthier You

Inside this booklet you'll find information on what causes PCOS and ways to treat it, a list of the top 10 PCOS tips, healthy ways to manage your weight, medication and period trackers, fitness worksheets, and a glossary to help you understand PCOS-related medical terms.

## **HOW TO USE THIS RESOURCE BOOKLET:**

Finding information is easy—just check out the Table of Contents on the next page. Each topic is listed along with a brief description. We suggest reading the general guide about PCOS first, so you will have a good understanding of exactly what PCOS is and how it affects your body. Then check out the other topics, and be sure to take advantage of the helpful worksheets. Also, don't forget to try some of the delicious PCOS-friendly recipes.

By learning about PCOS, you're taking a very important step in caring for your health. Good luck and happy reading.



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# Polycystic Ovary Syndrome (PCOS)

PCOS is a common problem among teen girls and young women. In fact, almost 1 out of 10 women has PCOS.

## What is PCOS?

Polycystic ovary syndrome (PCOS) is a hormone imbalance that can cause irregular periods, unwanted hair growth, and acne. PCOS begins during a girl's teen years and can be mild to severe.

## What are the signs of PCOS?

Some of the most common signs of PCOS include:

- Irregular periods that come every few months, not at all, or too frequently
- Extra hair on the face or other parts of the body, called hirsutism
- Acne
- Weight gain and/or trouble losing weight
- Patches of dark skin on the back of the neck and other areas, called acanthosis nigricans (a–can–tho–sis ni–gri–cans)

## Could I have PCOS?

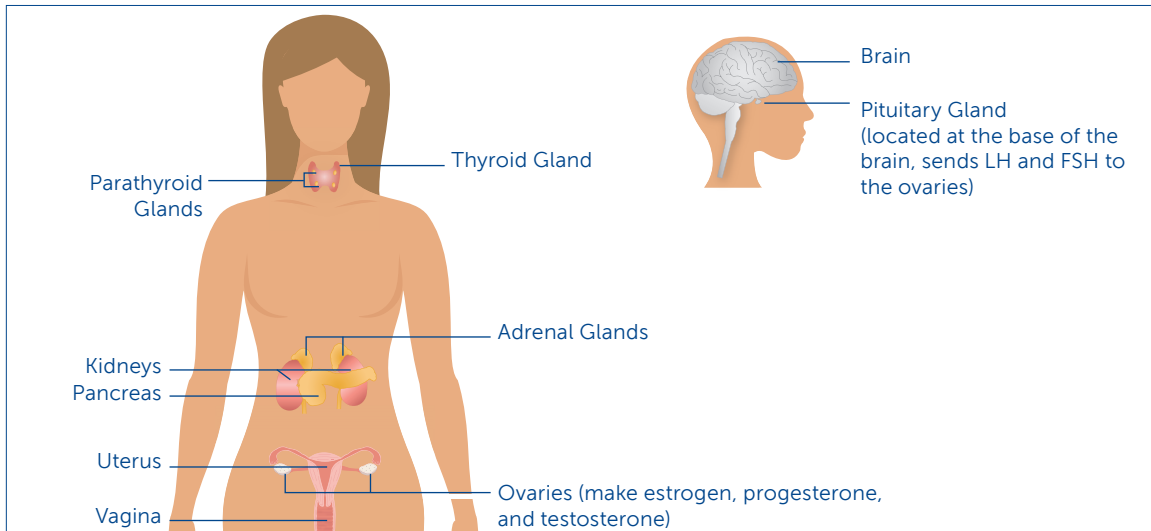
If you have some or all of the above signs, you might have PCOS. There can be other reasons why you might have signs; however, only your health care provider can tell for sure.

## What causes PCOS?

PCOS is caused by an imbalance in the hormones (chemical messengers) in your

brain and your ovaries. PCOS usually happens when a hormone called LH (from the pituitary gland) or levels of insulin (from the pancreas) are too high, which then causes the ovaries to make extra amounts of testosterone.

For a more detailed explanation, take a look at the figure below:



1. The pituitary (pi-tu-i-tary) gland in your brain makes the hormones luteinizing (lu-tin-iz-ing) hormone (LH) and follicle (fall-i-call) stimulating hormone (FSH).
2. After getting the signal from the hormones LH and FSH, the ovaries make estrogen (es-tro-gen) and progesterone (pro-ges-ter-own), the female sex hormones.
3. All normal ovaries also make a little bit of the androgen testosterone (an-dro-gen tes-tos-ter-own), a male sex hormone. The pancreas (pang-cree-us) is an organ that makes insulin. High levels of insulin can also cause the ovaries to make more of the hormone testosterone.

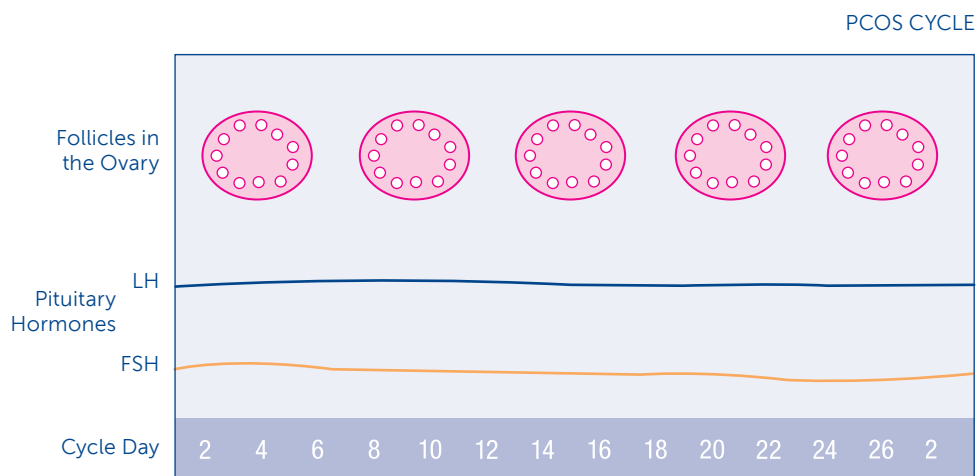
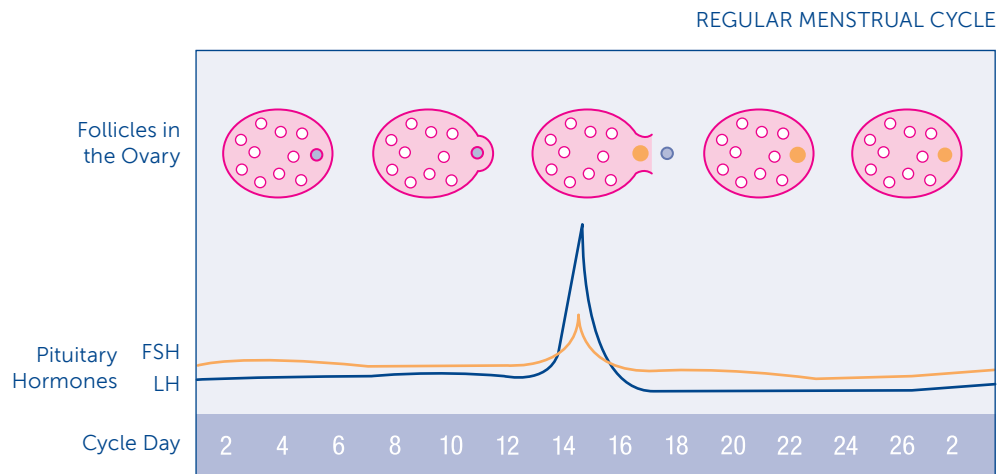
### Why are my periods so irregular?

Having PCOS means that your ovaries aren't getting the right (hormonal) signals from your pituitary gland. Without these signals, you will not ovulate (make eggs) every month. Your period may be irregular, or you may not have a period at all.

### Let's review a regular menstrual cycle.

1. The menstrual cycle starts when the brain sends LH and FSH to the ovaries. A big surge of LH is the signal that causes the ovaries to ovulate, or release an egg.
2. The egg travels down the fallopian tube and into the uterus. Progesterone from the ovary causes the lining of the uterus to thicken.
3. If the egg isn't fertilized, the lining of the uterus is shed. This is a menstrual period.
4. After the menstrual period, the cycle begins all over again.

The diagram on top shows a regular menstrual cycle, and the diagram on the bottom shows a PCOS cycle with no ovulation.



### **Now, let's look at what happens during a menstrual cycle with PCOS.**

1. With PCOS, LH levels are often high when the menstrual cycle starts. The levels of LH are also higher than FSH levels.
2. Because the LH levels are already quite high, there is no LH surge. Without this LH surge, ovulation does not occur, and periods are irregular.

Girls with PCOS may ovulate occasionally or not at all, so periods may be too close together, or more commonly too far apart. Some girls may not get a period at all.

### **What types of tests will my health care provider do to diagnose PCOS?**

Your health care provider will ask you a lot of questions about your menstrual cycle and your general health, and then do a complete physical examination. You will most likely need to have a blood test to check your hormone levels, blood sugar, and lipids (including cholesterol). Your health care provider may also want you to have an ultrasound test. This is a test that uses sound waves to make a picture of your reproductive organs (ovaries and uterus) and bladder (where your urine is stored). In girls with PCOS, the ovaries may be slightly larger (often >10cc in volume) and have multiple tiny cysts.

### **Does PCOS mean I have cysts on my ovaries?**

The term "polycystic ovaries" means that there are lots of tiny cysts, or bumps, inside of the ovaries. Some young women with PCOS have these cysts; others only have a few. Even if you do have lots of them, they're not harmful and they don't need to be removed.

### **Why do I get acne and/or extra hair on my body?**

Acne and extra hair on your face and body can happen if your body is making too much testosterone. All women make testosterone, but if you have PCOS, your ovaries make a little bit more testosterone than they are supposed to. Skin cells and hair follicles can be extremely sensitive to the small increases in testosterone found in young women with PCOS.

### **Why do I have patches of dark skin?**

Many adolescents with PCOS have higher levels of insulin in their blood. Higher levels of insulin can sometimes cause patches of darkened skin on the back of your neck, under your arms, and in your groin area (inside upper thighs).

## Will PCOS affect my ability to have children some day?

Women with PCOS have a normal uterus and healthy eggs. Many women with PCOS have trouble getting pregnant, but some women have no trouble at all. If you're concerned about your fertility (ability to get pregnant) in the future, talk to your health care provider about all the new options available, including medications to lower your insulin levels or to help you ovulate each month.

## What can I do about having PCOS?

The most important treatment for PCOS is working towards a healthy lifestyle that includes healthy eating and daily exercise. There are also excellent medications to help you manage irregular periods, hair growth, and acne. Ask your health care provider about the various treatment options.

## What is the treatment for PCOS?

The most common form of treatment for PCOS is the oral contraceptive pill; however, other kinds of hormonal therapy may include the vaginal ring and the patch. Even if you're not sexually active, birth control pills may be prescribed because they contain the hormones that your body needs to treat your PCOS. Birth control pills (either taken continuously or in cycles) can:

- Correct the hormone imbalance
- Lower the level of testosterone (which will improve acne and lessen hair growth)
- Regulate your menstrual periods
- Prevent an unplanned pregnancy if you are sexually active

## Is there any other medicine to treat PCOS?

A medicine which helps the body lower the insulin level is called *Metformin*. It's particularly helpful in girls who have high levels of insulin, or have pre-diabetes or diabetes. Some girls are treated with both Metformin and birth control pills at the same time.

**Ask your health care provider about treating hair growth.** Only you and your health care provider can decide which treatment is right for you. Options may include bleaching, waxing, depilatories, spironolactone (spi-ro-no-lac-tone), electrolysis, and laser treatment. *Spironolactone* is a prescription medicine that can lessen hair

growth and make hair lighter and finer. However, it can take up to 6–8 months to see an improvement.

**Ask your health care provider about treatment for acne.** There are various ways to treat acne, including the birth control pill, topical creams, oral antibiotics, and other medications.

**Ask your health care provider about a weight loss plan if you are overweight.** If you're overweight, losing weight may lessen some of the symptoms of PCOS. Talk to your health care provider or nutritionist about healthy ways to lose weight such as exercising more and following a nutrition plan that helps manage insulin levels. Healthy eating can also keep your heart healthy and lower your risk of developing diabetes.

#### **Weight Management Tips:**

- Choose nutritious, high–fiber carbohydrates instead of sugary or refined carbohydrates
- Balance carbohydrates with protein and healthy fats
- Eat small meals and healthy snacks throughout the day instead of large meals
- Exercise regularly to help manage insulin levels and your weight

#### **What if I have worries about having PCOS?**

If you've been told you have PCOS, you may feel frustrated or sad. You may also feel relieved that at last there is a reason and treatment for the problems you have been having, especially if you have had a hard time managing your weight, or you have excess body hair, acne, or irregular periods. Having a diagnosis without an easy cure can be difficult. However, it's important for girls with PCOS to know they are not alone. Finding a health care provider who knows a lot about PCOS and is someone you feel comfortable talking to is very important. Keeping a positive attitude and working on a healthy lifestyle even when results seem to take a long time is very important, too! Many girls with PCOS tell us that talking with a counselor about their concerns can be very helpful. Other girls recommend online chats. The Center for Young Women's Health offers a free and confidential monthly chat for girls and young women with PCOS, moderated by a registered nurse and dietitian.

## What else do I need to know?

It's important to follow-up regularly with your health care provider and make sure you take all the medications prescribed to regulate your periods and lessen your chance of getting diabetes or other health problems. Because you have a slightly higher chance of developing diabetes, your health care provider may suggest that you have your blood sugar tested once a year, or have a glucose challenge test every few years, especially if you are overweight. Quitting smoking (or never starting) will also improve your overall health. Because you have a higher chance of developing diabetes, your health care provider may suggest having a:

- Blood sugar test once a year
- A1C test (a test that tells how high your blood sugar has been the past 2–3 months) once a year
- Glucose tolerance test every few years

**PCOS TIP:** Eat a balanced diet. Your body needs carbohydrates, protein, and fat.





# Preparing for Your Oral Glucose Tolerance Test (OGTT)

If you have PCOS and you're getting ready to have an oral glucose tolerance test, you may be wondering how to prepare for the test and what the results may mean. The test can help your health care provider figure out whether you have a high risk of developing diabetes and whether lifestyle changes and medications such as Metformin might be helpful in treating your PCOS.

## What is Glucose?

Glucose is a type of sugar and the main source of energy used by your body. The glucose that your body uses for energy comes from many kinds of foods called carbohydrates, such as; cereal, bread, rice, pasta, and other grains, not just sugary foods. Dairy products, fruits, and vegetables all contain carbohydrates, as well. Your body uses the glucose it needs and then stores the rest as "glycogen" in your liver and muscles.

## What is an Oral Glucose Tolerance Test (OGTT)?

An OGTT is a way to measure your body's ability to use glucose. Your pancreas (a gland located behind the stomach) makes a hormone called insulin, which helps your body use the glucose in your blood. If your pancreas doesn't make enough insulin or if your body is unable to use the insulin it makes, you may have a high blood glucose level. The OGTT involves fasting overnight and then having your blood checked early in the morning. You will then drink a special glucose drink and have your blood tested again after 2 hours. Sometimes blood sugar levels are also checked at other times such as 1 hour, 3 hours, or 4 hours after the glucose drink.

## What if my blood glucose level is high?

If the OGTT shows that your blood glucose levels are higher than normal, your health care provider may tell you that you have "impaired glucose tolerance". This often means that you are at risk for developing diabetes. Rarely, diabetes is diagnosed after an OGTT. Diabetes is an illness that can develop if your body does not make enough insulin, or when your body has trouble using the insulin that it does make.

Your health care provider may suggest a fasting glucose level, an A1C, or an oral glucose test (especially if you are overweight). Depending on the results, these tests are often repeated every few years.

## What do I need to do before the OGTT?

Your health care provider will most likely give you either a glucose drink to take home or a prescription to bring to your pharmacy or the lab. Some tests are done in a health care provider's office, but most often the test is done in a lab at a hospital or clinic.

The test takes several hours (most of it is waiting between blood tests), so you'll need to plan on being at the lab or your HCP's office for most of the morning. If you need to fill a prescription, be sure you call your pharmacy ahead of time to see if they have the glucose drink in stock, because some pharmacies may not carry this item, or they may need to order it.

## Do I need to eat anything special before the test?

### **3 DAYS BEFORE THE OGTT:**

Plan on eating three healthy meals and snacks for 3 days before the test. You do not need to buy special food, but you do need to make sure you have healthy foods to eat. Your meals should be balanced with plenty of carbohydrates.

*Foods containing carbohydrates include:*

- Fruits
- Breads
- Cereal
- Pasta
- Rice
- Crackers
- Starchy vegetables (corn/peas/carrots)

## **12 HOURS BEFORE THE OGTT:**

**DO NOT** eat, smoke, or do heavy exercise 12 hours before the test. (For example: If your test is scheduled for first thing in the morning, ie: at 8 AM—Do not eat, smoke, or do heavy exercise after 8pm the night before). You may drink plain, **NOT** flavored, water.

## **What happens on the morning of the test?**

When you are ready to leave your home to have your test done, be sure to remember to bring:

- Your laboratory slips
- Your glucose drink (unless the lab provides it)
- Reading material/book/magazine (optional)
- Earbud headphones if you want to listen to music while you're waiting (optional)

**VERY IMPORTANT! DO NOT DRINK the glucose drink until you arrive at the lab.**

The lab technician will tell you when to drink the glucose drink.

## **AT THE LAB:**

*First:* A fasting blood glucose test is done. This is a simple blood test that checks your blood sugar before you drink the glucose drink.

*Next:* The lab technician will tell you to drink the glucose drink. It will taste very sweet. It's important to drink the whole amount fairly quickly.

*Waiting:* After you finish drinking all of the glucose drink, you'll be asked to sit until it's time for your next blood test (about 2 hours later). You may read, listen to music, talk, or do another quiet activity while you are waiting.

**VERY IMPORTANT! DO NOT EAT or DRINK** anything except plain water while you're waiting.

**AFTER THE OGTT:**

Once your tests are done and the lab technician gives you permission to leave, you may go about your normal daily activities. You can go back to school or work, eat, drink, and do the regular exercise that you normally do.

**When can I expect to get my test results?**

The lab will usually send your results to your health care provider within a few days. You may already have a follow-up appointment scheduled or your health care provider may call you to review your results and let you know if there are any concerns.

**What do the results mean?**

The first test or "baseline" glucose test is your blood glucose level before you drank the glucose drink. Normal fasting blood glucose levels are less than 100 mg/dl. Your health care provider may also check your insulin level. A high level of insulin means that your body does not use insulin well (even if your glucose levels are normal).

The second result of your 2-hour blood glucose test measures your glucose two hours after you drank the glucose drink. This level should be less than 140mg/dl.

Normal levels of glucose mean that your body is able to use glucose the way it's supposed to.

High levels of glucose mean that you have impaired glucose tolerance (IGT). This means that your body has a hard time using glucose, and puts you at risk for developing diabetes. If your glucose levels continue to be very high, it could mean that you have diabetes.

**What is the connection between impaired glucose tolerance (IGT) and PCOS?**

Health care providers have known for some time that many of the symptoms of PCOS are caused by too much of the hormone testosterone. With PCOS, the ovaries make too much of this hormone which can result in extra facial and body hair and menstrual problems. Many young women with PCOS also have high levels of insulin that can stimulate the ovaries to make testosterone. The high levels of insulin also increase the chance of getting diabetes. Your HCP will look at your OGTT results along with other test results to figure out the best treatment for you including exercise, weight loss (if you're overweight), and sometimes, medication.

Understanding how to prepare for an OGTT test and what the results mean can help you take charge of your PCOS. Making healthy food choices, exercising, and talking about your medication options with your health care provider are the best ways to keep your body healthy.

**PCOS TIP:** Choose healthy carbohydrate foods that are high in fiber and low in sugar.



# My Period Trackers

## Why should I track of my period?

Keeping track of when your period starts and stops is a good way to see if there is a pattern to your menstrual cycle. It's also important to write down how many days you have your period and the amount of flow you have. Make a photocopy of the Period Tracker and bring your it with you when you see your health care provider so that he or she can evaluate your cycle.

## My Monthly Period & Symptom Tracker

My Monthly Period & Symptom Tracker is an easy way to keep track of your menstrual flow, and it's also a way to keep track of cramps, and/or PMS and period symptoms (if you have them) each month.

- Review the sample Monthly Period & Symptom Tracker.
- Make copies of My Monthly Period & Symptom Tracker.
- Simply make a check mark in the appropriate box (or boxes) for each day of the month. If you don't have any flow or any symptoms on any given day, leave the box empty. Refer to the Blood Flow Key at the bottom for "Flow" definitions.
- The numbers at the top are the same as the dates in one month. Some months don't have 31 days, so you may leave some boxes empty.
- Remember to bring My Monthly Period & Symptom Tracker with you to your medical appointments.

## My Yearly Period Tracker

My Yearly Period Tracker is a simple and convenient way to track your period throughout the year.

- Review the sample Yearly Period Tracker.
- Make copy of My Yearly Period Tracker.

- Refer to the Key at the bottom to learn how to fill in the box with the appropriate letter(s). Place a "T" in the box for the hormone pill taken, and place an "R" for reminder (placebo) pills.
- Be sure to note if you've taken a pill during your period by putting a B/T or B/R in the box.
- Remember to bring My Yearly Period Tracker to your medical appointments.
- Talk to your health care provider about whether you should use the monthly and/or yearly tracker to track your period.



**SAMPLE MONTHLY PERIOD & SYMPTOM TRACKER**

**MONTH:** January

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BLOOD FLOW																															
SPOTTING								✓	✓																						
LIGHT										✓																					
NORMAL											✓																				
HEAVY												✓																			
PMS SYMPTOMS																															
ACNE (BREAK OUT)								✓																							
BLOATING							✓																								
CRYING																															
BREAST SORENESS																															
MOOD SWINGS																															
IRRITABILITY								✓																							
PERIOD SYMPTOMS																															
CRAMPS									✓																						
DIARRHEA																															
DIZZINESS																															
NAUSEA																															
VOMITING																															

Blood flow key: Spotting: tiny amount of flow on your underwear or panty shield

Light: 1–3 tampons or pads/day

Normal: 4–6 tampons or pads/day

Heavy: more than 6 tampons or pads/day

# MY MONTHLY PERIOD & SYMPTOM TRACKER

MONTH: \_\_\_\_\_

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
BLOOD FLOW																																
SPOTTING																																
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DIARRHEA																																
DIZZINESS																																
NAUSEA																																
VOMITING																																

Blood flow key: Spotting: tiny amount of flow on your underwear or panty shield

Light: 1–3 tampons or pads/day

Normal: 4–6 tampons or pads/day

Heavy: more than 6 tampons or pads/day

**SAMPLE YEARLY PERIOD TRACKER**

**YEAR: 2016**

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
JAN																																
FEB																																
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Enter appropriate letter in proper calendar day square.  
 Key: S = spotting    T = hormone pill taken  
       B = bleeding    R = reminder (placebo) pill taken

**MY YEARLY PERIOD TRACKER**

**YEAR:** \_\_\_\_\_

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
JAN																															
FEB																															
MAR																															
APR																															
MAY																															
JUN																															
JUL																															
AUG																															
SEP																															
OCT																															
NOV																															
DEC																															

Enter appropriate letter in proper calendar day square.

Key: S = spotting T = hormone pill taken

B = bleeding R = reminder (placebo) pill taken

# The Oral Contraceptive Pill & PCOS

Adolescent girls and young women are frequently prescribed oral contraceptive pills (also called the "Pill") for Polycystic Ovary Syndrome and for irregular or absent menstrual periods, menstrual cramps, acne, PMS, and endometriosis. Oral contraceptive pills lower hormone levels in girls with PCOS and regulate their menstrual periods. Hormone patches (Ortho-Evra, Xulane) and vaginal hormone ring (NuvaRing) also help to lower the hormone levels in girls with PCOS.

## What are oral contraceptive pills?

Oral contraceptive pills contain two types of synthetic female hormones, progestin and estrogen. Similar hormones are made by the ovaries. There are many different kinds of oral contraceptive pills.

## What are some of the possible medical benefits of oral contraceptive pills for young women with PCOS?

- **Regular and Lighter Periods:** Oral contraceptive pills can help to regulate your menstrual cycle so your period comes about every 28 days or less often on extended pill cycles. The Pill usually causes lighter periods, too.
- **Less Unwanted Hair:** Oral contraceptive pills can lower androgen hormone levels and lessen the amount of excess hair growth (also called "hirsutism"). It can take 6 months before there's a decrease in unwanted hair on the face, chest, back, and stomach.
- **Clearer Skin:** Oral contraceptive pills can improve acne. The hormones in most types of the Pill can help stop acne from forming. Be patient though, it can take a few months to see an improvement.
- **Less or Milder Cramps, or No Cramps:** Oral contraceptive pills can help to lessen menstrual cramps.

- **Other Medical Benefits:** Because there is less menstrual bleeding with the use of oral contraceptive pills, girls taking the Pill are less likely to become anemic. Oral contraceptive pills also decrease your chance of getting endometrial (lining of the uterus) cancer, ovarian cancer, and ovarian cysts.

### What are the possible side effects of the oral contraceptive pill?

Most women have no side effects when taking the oral contraceptive pill, but it's possible to have irregular periods, nausea, headaches, or weight change. Each type of oral contraceptive pill can affect a young woman differently.

- **Spotting** (you usually don't need to use a regular pad, just a panty shield) or very light bleeding: This may occur during the first 1–3 weeks of starting the Pill, or if you miss a pill. If the bleeding becomes heavier or lasts more than a few days or the bleeding happens after you have been on the pill for a few months, you should talk with your health care provider.
- **Nausea** (or feeling like you need to throw up): Nausea occasionally occurs when you first start taking the Pill and will often go away in a few days. It is less likely to occur if the Pill is taken after dinner or with a bedtime snack.
- **Headaches:** Headaches may occur because of stress at school or home, too little sleep, sinus infections, or migraines. The Pill can make headaches better or worse. If your health care provider thinks your headaches are related to the Pill, he/she may prescribe an oral contraceptive pill with a lower amount of estrogen or have you go off the Pill for a short time. If you have migraine headaches, talk to your health care provider about whether the Pill is right for you.
- **Mood changes:** Feeling up and down emotionally can sometimes happen to anyone and is unlikely to be caused by the Pill. Exercising regularly and following a healthy diet may help along with talking to a counselor. Make sure you let your health care provider know how you are feeling.
- **Sore or enlarged breasts:** Very occasionally, your breasts may become tender and/or get larger, but usually they will stay the same.
- **Weight change:** Some teens gain weight and some teens lose weight while on the Pill, but most stay exactly the same. Remember to choose healthy foods, watch your portion sizes, drink lots of water, and get plenty of exercise.
- **Blood clots:** A blood clot in your leg or lung is a very rare, but a serious side-effect. If you suddenly have pain or swelling in your leg, or shortness of breath and chest

pain, see your health care provider right away. If you have a history of blood clots, you should not take the Pill. Tell your health care provider if any of your relatives have ever had blood clots, especially when they were young. Blood clots are more likely to develop if you are a smoker, overweight, having surgery, or sitting on a plane for a long time. To lessen your chance of blood clots, don't smoke, and if you're on a long plane trip, get up, walk around, and drink lots of water. If you're scheduled for surgery, talk to your health care provider about stopping the Pill for 3–4 weeks before surgery and after the surgery until you have recovered.

If side effects from the Pill occur, they're usually mild and go away in the first three to four cycles. If you do have side effects, talk with your health care provider. If the side effects are uncomfortable or if they don't go away, your health care provider may switch you to a different kind of oral contraceptive pill.

### **Are there any reasons why I shouldn't take the oral contraceptive pill?**

Most teens can take the oral contraceptive pill for PCOS, but for some, taking the combined Pill (with both estrogen and progestin) is not an option because of certain medical conditions, called "contraindications." If you can't use the combined Pill, your health care provider will talk to you about other medications to treat your PCOS.

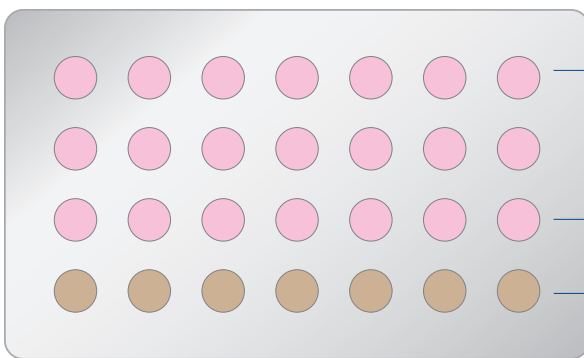
*Reasons why you should NOT take combined oral contraceptives:*

- History of blood clots
- Migraine headaches with aura (spots and flashing lights or difficulty seeing 5 to 30 minutes before the headache starts), or neurological symptoms (numbness, loss of speech)
- Certain kinds of heart disease
- High blood pressure that is not controlled with medication
- Active hepatitis (liver disease) – for starting the Pill
- Jaundice (yellowing of your skin or eyes during a previous pregnancy)





# Taking the Oral Contraceptive Pill



The tablets in weeks 1 through 3 contain hormones that will prevent you from getting your period. These are also called "active" pills.

The tablets in week 4 do not contain hormones. These are called "inactive" pills. During this week, you will get your period.

## 28 Day Pill Calendar

★ Begin Pill Cycle Day    ★ Last Pill Of Cycle

S	M	T	W	TH	F	S
★ 1	2	3	4	5	6	★ 7
8	9	10	11	12	13	★ 14
15	16	17	18	19	20	★ 21
22	23	24	25	26	27	★ 28

The most common pill packs come with 21 *active* hormone pills and seven *reminder* pills, but some packs have 24, 26, or even 28 *active* pills. The example shown on the previous page is for a 28–day pill pack in which *you* take 21 *active* hormone pills, and then seven *reminder* pills that contain no active hormones ("inactive" pills). The last seven pills are just *reminder* pills in most pill brands. They are taken during the fourth week, including during your period. With packages that have 24 active pills, the last 4 are *reminder* pills. There are also pill packages that have 84 active pills for extended continuous hormones and 7 *reminder* pills. Your health care provider will tell you whether you will be taking the *active* pills continuously or in cycles as shown below.

1. To take the oral contraceptive pill, follow the instructions on the package. Your health care provider will explain how to use your pill pack. You will be told to start taking the oral contraceptive pill on a Sunday, on the first day of your menstrual period, or the day you see your health care provider.
2. You should take one oral contraceptive pill each day, **at the same time of day** until you finish the pack. Take the Pill at the same time as something that you do regularly so you don't forget. For example, you could keep them near your toothbrush, or set your cell phone alarm as a reminder. The best time is ½ an hour after a complete meal such as dinner, or at bedtime. You may have slight nausea the first month, but this usually goes away with time. Some young women who take the Pill first thing in the morning find that they are more likely to have nausea, especially if they skip breakfast, so taking the pill after dinner or at bedtime may cure this symptom.
3. After completing a 28–day pack, you should immediately start a new packet of pills the next day. During your fourth week on the pill cycle, you should get your menstrual period. Your menstrual period should stop once you begin your new pack of pills.

Girls who are diagnosed with Polycystic Ovary Syndrome (PCOS) are often prescribed oral contraceptive pills (or the hormone patch, or vaginal ring) to lower their hormone levels and regulate their menstrual periods.

If your hormone levels continue to be high or your excess hair growth doesn't improve, your health care provider may re–check your hormone levels, or may suggest that you take the Pill *continuously*. This means that you would take just the "active pills" for 3–4 months or longer. You would not have a menstrual period until you stop taking the active hormone pills. Some girls may have spotting while taking the Pill continuously.

# The Oral Contraceptive Pill & PCOS FAQ's

## **Do I need a pelvic exam before going on the oral contraceptive pill?**

No. Although it's important for teens to have checkups as part of their general health care, a pelvic exam is not needed for girls with PCOS just to start oral contraceptive pills. Girls with PCOS may have an external genital examination or a pelvic exam as part of their first visit for PCOS, or they may have a pelvic ultrasound to look at their ovaries.

## **Is there any trouble getting pregnant after using the oral contraceptive pill?**

There is no change in fertility with the use of the oral contraceptive pill. However, if you have PCOS and your periods were irregular before you started taking the Pill, it is likely that your periods will be irregular again when you stop taking it.

## **Does the oral contraceptive pill cause birth defects?**

No, the Pill does not cause birth defects or affect the health of future children.

## **Does the oral contraceptive pill cause cancer?**

No. The Pill actually protects against cancer of the ovaries and cancer of the lining of the uterus. A woman is half as likely to get cancer of the uterus or ovaries if she takes the Pill. Most experts believe that taking oral contraceptive pills does not cause any increased risk of developing breast cancer. Even girls with a family history of breast cancer can take the Pill.

## **How long can I be on oral contraceptives?**

It's safe for you to be on the Pill for years, whether to regulate your menstrual cycle, treat your cramps, or as hormone replacement or birth control.

## Do I need to take a break from the Pill?

There's no medical reason that you need to take a "break" from the Pill.

## What if I am also using the oral contraceptive pill for birth control?

If you're also taking the oral contraceptive pill for birth control, you should know that oral contraceptive pills do not protect you from sexually transmitted infections. Condoms help to prevent most sexually transmitted infections and they are also an important backup method of birth control if you miss more than one pill in a row, or if you are sick (vomiting). All of these things can lower the effectiveness of the birth control pill. Whenever you get a new medication, ask if it changes the effectiveness of your oral contraceptive pill.

## What if my period is very light while I'm taking the oral contraceptive pill?

Your period may be so light when you are on the oral contraceptive pill that you may have only a brown smudge on a tampon, pad, panty shield, or underwear. The amount of hormones in the pills is very low. This means that the lining of your uterus doesn't become very thick, so very little blood needs to come out each month.

## What if I forget to take one or more combined oral contraceptive pills?

- **If you miss 1 Pill**, take the pill as soon as possible and then continue taking your pills at the usual time. You may take 2 pills on the same day (one at the moment you remember and the other at the regular time) or even 2 at the same time.
- **If you miss 2 or more active pills in a row**, take the most recently missed Pill as soon as possible and then continue taking your pills at the usual time. You may take 2 pills on the same day (one at the moment you remember and the other at the regular time). **If you are sexually active, use a backup method of birth control such as condoms or do not have sexual contact until you have taken the active hormone pills for 7 days. (1 pill every day for 7 days in a row.)**
- **If you missed the active pills in the *third week***, don't take the *inactive (hormone free pills)*. Instead, finish the current *active* hormone pills and then start a new pack right away. If you can't start a new pill pack right away and you are sexually active, use a backup method of birth control (such as condoms) or do not have sexual contact until you have taken active pills for 7 days (1 pill every day for 7 days in a row).

- **Talk to your health care provider** about whether you should use emergency contraception, especially if you missed any pills during the first week of your pill pack, or had unprotected sex anytime during the past 5 days.

**Emergency contraception is recommended if you've had unprotected intercourse during the time you missed your pills.**

1. The first "morning-after" emergency contraception pill methods approved in the United States are: Plan B One-Step™, Next Choice®, and MyWay®. These products contain only one kind of hormone, a progestin, and come as 1 or 2 pills. EC works best if taken within 3 days (72 hours) of unprotected sex, but can be taken up to 5 days but the earlier it is taken the more effective it is. No prescription is needed. Anyone can buy it without needing to show an ID. It prevents ovulation; it does not affect pregnancy or work after ovulation. It might be less effective in overweight women.
2. Ella™ (ulipristal acetate or UPA) is an emergency contraceptive that works by stopping or delaying ovulation. It's one pill (one dose) that can be taken up to 5 days or 120 hours after unprotected intercourse. A prescription is needed. It's best to check a pregnancy test first.
3. Another type of emergency contraception uses regular birth control pills, which contain two hormones, estrogen and progestin. There are 2 doses. The first dose may be 2, 4, or 5 pills depending on the brand of birth control pills used, and is taken within 120 hours (5 days) of unprotected sex. The second dose is taken 12 hours after the first dose. A health care provider must prescribe how many pills should be taken for this kind of emergency contraception. This method is less effective than the other two, and is more likely to cause nausea.

**Are there any serious side effects that I should be worried about?**

Most young women who take the oral contraceptive pill have few or no problems. If you do have any of the following problems, call your health care provider right away.

**Remember: ACHES**

Abdominal or stomach pain (severe)

Chest pain (severe), cough, shortness of breath

Headache (severe), dizziness, weakness, or numbness

Eye problems (vision loss or blurring), speech problems

Severe leg pain (calf or thigh)

The oral contraceptive pill is much more than a birth control pill. Adolescent girls and young women are frequently prescribed the oral contraceptive pill just for its medical benefits. It's a very safe and effective treatment for many types of medical problems, including PCOS, irregular menstrual periods, menstrual cramps, acne, PMS, and endometriosis.

# Insulin, Metformin, and PCOS

Young women with PCOS often have elevated insulin levels and are more likely to develop diabetes. Metformin is a medication often prescribed for women with PCOS to help prevent diabetes. A lifestyle that includes healthy nutrition and daily exercise is the most important part of a PCOS treatment plan.

## What is insulin?

Insulin is a hormone made by an organ in the body called the pancreas. The food you eat is broken down into simple sugar (glucose) during digestion. Glucose is absorbed into the blood after you eat. Insulin helps glucose enter the cells of the body to be used as energy. If there's not enough insulin in the body, or if the body can't use the insulin, sugar levels in the blood become higher.

## What is insulin resistance?

If your body is resistant to insulin, it means you need high levels of insulin to keep your blood sugar normal. Certain medical conditions such as being overweight or having PCOS can cause insulin resistance. Insulin resistance tends to run in families.

## What can insulin resistance do to me?

High insulin levels can cause thickening and darkening of the skin (acanthosis nigricans) on the back of the neck, axilla (under the arms), and groin area. In young women with PCOS, high insulin levels can cause the ovaries to make more androgen hormones such as testosterone. This can cause increased body hair, acne, and irregular or few periods. Having insulin resistance can increase your risk of developing diabetes.

## How can I lower my insulin levels?

You can help lower your insulin levels naturally by eating fewer starches and sugars, and more foods that are high in fiber and low in refined carbohydrates. Low glycemic foods, on the other hand, don't raise your blood sugar or insulin levels as much as foods that are high in sugar or refined carbohydrates. Exercising is another way to improve your PCOS. Fitting in 60 minutes of exercise each day is recommended, but any amount of exercise you do will help manage your PCOS. Exercise decreases insulin resistance.

## What else will lower my insulin level?

Metformin (also known as Glucophage®) helps to regulate the amount of glucose (sugar) in your blood. It makes your body more sensitive to insulin, and decreases the amount of glucose your liver releases. Young women with high insulin who take Metformin are less likely to develop type 2 diabetes than those who don't take a medication that lowers insulin. Research studies have shown that young women with PCOS who are overweight and who were treated with Metformin and a healthy lifestyle (healthy nutrition and regular exercise) were able to lose weight and lower their fasting blood sugar. Taking Metformin and maintaining a healthy weight also improves cholesterol levels. Metformin is not approved by the FDA (Federal Drug Administration) for PCOS, but it is prescribed for this condition, especially with impaired glucose tolerance (IGT).

## How do I take Metformin?

Metformin is available as a pill or liquid. It is usually taken 2–3 times a day with meals (usually breakfast and dinner). Your health care provider will tell you to begin at a very low dose and slowly increase the amount of medicine you take over a few months—"start low, go slow." Your health care provider may prescribe once a day long acting (XR—extended release) Metformin instead. It's important that you take this medication exactly as prescribed by your health care provider. Do not break, chew, or crush the pills. Be sure to swallow the whole pill(s).

## How do I store Metformin?

Keep your Metformin tightly closed, in the same bottle it came in. Do not remove the label on the bottle. Store it at room temperature away from high temperatures and any moisture. Do not store Metformin in the bathroom. Be sure to keep your medicine away from young children.



### **Are there any reasons *not* to take Metformin?**

People with kidney or liver problems should not take Metformin. Your health care provider will check your blood to make sure that you do not have blood, kidney or liver problems before you start Metformin and then usually once a year after that. If you get sick and throw up or have diarrhea, call your health care provider and stop your Metformin until you feel completely well. It's very important not to be dehydrated (not having enough fluids in your body) while taking Metformin. You should not binge drink alcohol and take Metformin. Also, if you're going to have surgery or a medical or dental procedure where you can't have anything to eat or drink, talk to your health care provider about stopping the Metformin for 48 hours before the procedure. If you're scheduled for an X-ray that includes a "contrast material" (a dye that helps the radiologist see the images better), you should talk to your health care provider about stopping your Metformin for up to 48 hours before and after the test. Getting dehydrated, having kidney problems, or having a serious infection can cause the rare condition called "lactic acidosis", so it's important to talk to your health care provider about any of these problems.

### **Does Metformin have any side effects?**

In general, healthy young people don't have many side effects. About a third of people who take Metformin have stomach upset such as nausea, diarrhea, gas, and loss of appetite. Some people may complain of a metallic taste. If the side effects are a problem for you, it's important to talk with your health care provider. You may be able to lower your dose for a few days and slowly build back up to your regular dose.

### **What if I miss a dose of my Metformin?**

When you first start taking Metformin, it's a good idea to ask your health care provider what to do if you miss a dose. Write down the answer so you will have a plan if it happens. In general, you will probably be told NOT to take the pills that you missed, especially if it's almost time for your next dose. Never double up on pills to make up for a missed dose.

### **Can I get pregnant while taking Metformin?**

Yes. If you're sexually active and you're not taking oral contraceptive pills or using another method of birth control, it's possible that you'll have menstrual cycles and ovulate (release an egg). If your egg is fertilized (sperm from a male comes together with an egg of a female), you could become pregnant. Women with PCOS are more likely to get pregnant while taking Metformin. You should talk with your health care provider about a method of birth control that's right for you.

***Important things to remember when taking Metformin:***

- If you're prescribed Metformin for PCOS, be sure to tell your health care provider and pharmacist about all the prescription medications and over-the-counter medicines that you're taking.
- If you're having surgery, including dental surgery, tell your health care provider or dentist that you're taking Metformin for PCOS. Ask when you should stop taking it before the procedure.
- Metformin can lower your body's ability to absorb certain vitamins (B12 and folate), so it's a good idea to take a multivitamin (with B vitamins).
- Alcohol can be dangerous while taking Metformin. You're more likely to get dehydrated or develop liver problems. If you usually have 3–4 drinks at a time, Metformin is not a good treatment option for your PCOS. Ask your health care provider about other treatment options or decrease your use of alcohol.
- If you're sexually active, be sure to talk with your health care provider about taking the oral contraceptive pill or about using another reliable birth control method.
- Talk to a dietitian about planning meals and snacks that are PCOS-friendly.
- Try to fit in about 60 minutes of exercise every day.
- Keep all of your medical appointments and be sure to go for any lab tests that your health care provider might order.

Talk to your health care provider about the pros and cons of taking Metformin. Choosing foods that have a low glycemic index (lower in sugar and higher in fiber and protein) and exercising at least 60 minutes every day will also help you manage your PCOS.

**PCOS TIP:** Balance carbohydrate foods with proteins and healthy fats.

# Spironolactone & PCOS

Spironolactone (pronounced: spi-ro-no-lac-tone) is a diuretic or "water pill" that's prescribed for people who have high blood pressure and for those who have swelling due to extra fluid, but it also has other benefits. Spironolactone is often prescribed for young women with PCOS who are taking oral contraceptive pills and who are "hirsute" (have extra hair in unwanted places).

## How does Spironolactone work?

Spironolactone, the generic name for Aldactone®, works by lowering androgen levels in the body. Androgens are hormones that both males and females have, but males have higher levels of them. Androgens such as testosterone are responsible for hair growth on the face, chest, and stomach that some young women with PCOS have. Androgens can also cause acne. Spironolactone works by lowering the level of androgens, which lessens hair growth and improves acne.

## How effective is Spironolactone?

Spironolactone is very effective in lessening hair growth and improving acne for young women, especially those taking oral contraceptive pills. Most young women taking this medication will see positive results; however, it can take up to 6 months to see an improvement in symptoms.

## Are there any side effects?

Most young women who take Spironolactone have few or no side effects. The side effects are only temporary and will go away when Spironolactone is stopped. Spironolactone should only be prescribed along with oral contraceptive pills to prevent pregnancy as it may be harmful to a developing baby.

*Possible side effects may include:*

- Irregular menstrual bleeding (if not taking the Pill)
- Frequent urination
- Rash

- Dry mouth, thirst
- Loose bowel movements
- Nausea
- Tiredness
- Headache

*Other things to know about Spironolactone:*

- Before taking Spironolactone, tell your health care provider if you have liver or kidney problems
- Don't take it if you're pregnant or might become pregnant
- It's best to take both Spironolactone and oral contraceptive pills together
- Don't take potassium supplements while taking Spironolactone

# My Medication List

## Why should I keep a list of my medications?

It's a good idea to keep an up-to-date list of the current medicines you take (for PCOS and for any other reason). We suggest that you make a photocopy of the *My Medication List*, fill it out, and bring it with you to your next medical appointment. You'll then be able to review your medicine with your health care provider.

## How do I use "My Medication List"?

Write down each medicine (one per box), the dosage, who prescribed it, when you started taking it, the date you stopped taking it (if applicable) and any side effects that you may have when you take the medicine, such as an upset stomach. You can also write down any questions that you want to ask your health care provider, such as: "Does it matter what time of day I take my medicine?", or "What if I miss a dose?"

**My Medication List**

Date \_\_\_\_\_

Medication \_\_\_\_\_  
Dosage \_\_\_\_\_  
Prescribed By \_\_\_\_\_  
Date Started \_\_\_\_\_ Date Stopped \_\_\_\_\_  
Side Effects \_\_\_\_\_  
Questions \_\_\_\_\_

Medication \_\_\_\_\_  
Dosage \_\_\_\_\_  
Prescribed By \_\_\_\_\_  
Date Started \_\_\_\_\_ Date Stopped \_\_\_\_\_  
Side Effects \_\_\_\_\_  
Questions \_\_\_\_\_

Medication \_\_\_\_\_  
Dosage \_\_\_\_\_  
Prescribed By \_\_\_\_\_  
Date Started \_\_\_\_\_ Date Stopped \_\_\_\_\_  
Side Effects \_\_\_\_\_  
Questions \_\_\_\_\_

Medication \_\_\_\_\_  
Dosage \_\_\_\_\_  
Prescribed By \_\_\_\_\_  
Date Started \_\_\_\_\_ Date Stopped \_\_\_\_\_  
Side Effects \_\_\_\_\_  
Questions \_\_\_\_\_

# PCOS Nutrition Basics

Diet and exercise are important parts of managing PCOS. This is because young women with PCOS often have higher levels of insulin (a hormone) in their blood, and many have trouble maintaining a healthy weight. Knowing the right foods to eat as well as the kinds of food to limit can improve the way you feel. It will also help you lose weight. Eating well, staying active, and maintaining a healthy weight (or losing even a small amount of weight if you're overweight) can improve PCOS symptoms.

## **What do I need to know about insulin and carbohydrates?**

The insulin level in your blood goes up after you eat. It goes up the most after you eat or drink something that contains carbohydrates. Carbohydrates are found in grains (such as bread, pasta, rice, and cereal), most snack foods (such as chips, cookies, and candy), sugary drinks such as soda and juice, and fruits and vegetables.

## **Are all carbohydrates the same?**

No. Even if you eat two foods that have the same amount of carbohydrate, they may have a different effect on your insulin level. This effect has a lot to do with the type of carbohydrate the food has. Carbohydrate foods with fiber such as whole grains, fruit, and vegetables are usually the best to eat if you're trying to keep your insulin level down. Carbohydrate foods that are sugary or refined (such as soda, juice, white bread, and white rice) can cause insulin levels to go up. Foods and drinks like this are also not very filling (which means you may feel hungry shortly after eating them). Try to choose high-fiber, low-sugar carbohydrate foods most of the time.

## **Do I need to buy special foods?**

No. You don't need to go out of your way to buy special foods. Just like with any healthy diet plan, your meals should include a healthy balance of vegetables, fruits, whole grains, plant-based protein, lean meats, and healthy fats. Most foods fit into a healthy diet for PCOS, but you should read food labels to help you pick out the best choices. Look for high-fiber grains such as brown rice, whole-wheat pasta, and whole-wheat bread rather than low-fiber grains such as white rice, pasta, or white bread.

## Instead Of

Sweetened juice, canned fruit in heavy syrup, or sweetened applesauce



## Choose

Fresh fruits or frozen/canned fruit without added sugar, or unsweetened applesauce

Starchy vegetables such as potatoes, corn, and peas



Non-starchy fresh vegetables or frozen/canned vegetables such as broccoli, spinach, and carrots

Refined grains made with white flour such as white bread and pasta, bagels, or white rice



Whole grains such as whole wheat pasta, brown rice, oats, and whole wheat bread

Sugared cereals such as Lucky Charms®, Fruit Loops®, or Frosted Flakes®, and other sweetened grains such as cereal bars (Nutrigrain Bars®), breakfast pastries (PopTarts®), and donuts



High fiber cereals such as Kashi®, shredded wheat, and All Bran®. (Look for cereals that have at least 5 grams of fiber per serving or sprinkle ½ cup of bran cereal or unprocessed bran on a low-fiber cereal to increase the fiber)

Sugary drinks such as soda or juice



Water or seltzer, flavored with fruit if desired, unsweetened ice tea

Sugary foods such as cookies, cakes, and candy



High fiber baked goods made from whole wheat flour and oats

Snacks such as potato chips, Fritos®, Doritos®, and tortilla chips



Crackers and snacks with fiber such as Triscuits®, Wasa®, or popcorn

Don't be fooled by fat-free treats. They usually have a lot of added sugar. Also, some sugar-free foods (such as baked goods) are made with refined grains such as white flour and can raise your insulin levels the same way sugar can. Other sugar-free foods are carbohydrate free. These foods, sweetened with artificial sweetener, may be a good alternative if they don't upset your stomach. There is currently no scientific data that suggests moderate amounts of artificial sweeteners are harmful to our health. However, these foods and drinks are processed. Try to stick to the most natural, whole form of each food (ie, lemon sliced in water instead of diet lemonade).



### **Are “carbs” unhealthy?**

No! Carbs (carbohydrates) give your body energy. Some people think that eating carbs will make them gain weight, but carbs will make you gain weight only if you eat too much. Many other important nutrients come from carbohydrate foods, so eating no carbs is not a good idea. Because high-fiber carbohydrate foods are high in nutrients and help you feel full longer than sugary low-fiber carbohydrates, it's best to choose these as often as possible.

### **What about foods that have fats and proteins in them?**

Protein foods such as beans, hummus, nuts, peanut butter, tofu, eggs, fish, chicken, meat, and vegetarian meat substitutes, and fats such as olive oil, nuts, and avocado are important parts of a PCOS-friendly diet. Combining foods that contain protein or fat with a carbohydrate will help to slow down the absorption of the carbohydrate and keep insulin levels low. For example, instead of plain rice, have rice with beans and a little avocado.

Keep in mind that some fats are much healthier than others. Healthy fats are found in olive oil, canola oil, nuts, avocados, and fish. Choose healthy fats and proteins instead of butter, margarine, mayonnaise, full-fat cheese, creamy sauces or dressings, and red meat.

### **Do I need to follow a diet that is extra high in protein?**

No. Really high protein diets (such as the Atkins diet) are not a good diet option for teens because they can be low in some important nutrients such as fiber, the B vitamins, and vitamin C. It's also important to remember that even if you limit your carbohydrate intake, overeating fat or protein can cause weight gain. You should aim for a diet that has a balance of protein, healthy carbohydrates, and some fat.

### **What does low glycemic index mean?**

Glycemic index is a term used to describe how a food affects blood sugar. The higher a food raises blood sugar, the higher the glycemic index. High-fiber carbs have a lower glycemic index than sugary or refined carbs. Combining a carbohydrate food with another food can lower the glycemic index because it allows your body to absorb the carbohydrate more slowly. For example, if you have a piece of candy immediately after a meal it will not raise your blood sugar as high as it would if you ate the candy on its own between meals.

## What fruits and vegetables have a low glycemic index?

Vegetables such as asparagus, broccoli, carrots, cauliflower, celery, cucumber, green beans, spinach, tomatoes, and zucchini and fruits such as apples, berries, grapes, oranges, peaches, and plums have a low glycemic index. Fruits and vegetables with more sugar or starch have a higher glycemic index (such as dried fruit, tropical fruit, corn, potatoes, squash, and peas.)

## Should I avoid dairy, sugar, gluten, or soy?

There is no current scientific data to support restricting or avoiding specific food groups or types of foods in order to improve PCOS symptoms. Following the dietary advice presented here, in addition to exercising, are healthy ways to manage weight and decrease symptoms.

## If I choose the right foods, do I still need to be worried about my portion sizes?

Yes! How much you eat also affects your insulin. For example, your insulin will go up much more if you have 3 cups of pasta than if you have 1 cup of pasta. This means it's usually better to have small meals and snacks during the day than it is to have a few really big meals. Having more frequent smaller meals and snacks will keep your insulin level lower throughout the day.

## Is it important for me to exercise?

Yes! It's really important that girls with PCOS exercise, because exercise brings down insulin levels, and can help with weight loss. Exercise can be especially helpful in lowering insulin after a meal. So, if possible, go for a walk after you eat a large meal. Any increase in exercise helps, so find an activity, sport, or exercise that you enjoy. If you aren't doing a lot of exercise now, start slowly, and build up to your fitness goal. If you only exercise once in a while, try to exercise more regularly. Work towards increasing your physical activity to at least 5 days a week for 60 minutes per day.

**PCOS TIP:** Limit your portions when you're eating high-carbohydrate foods (especially ones that are low in fiber), and try to eat them with foods that contain protein.

# The Nutrition Facts Label

## What is the Nutrition Facts label?

The Nutrition Facts label explains what nutrients (components of food your body needs to grow and stay healthy) and how much of those nutrients are found in one serving of the food. It's located on the outside of most food packages, but isn't on most fresh foods (such as fruits and vegetables or meats). The Nutrition Facts label can help you make choices about the food you eat.

## What will every Nutrition Facts label have on it?

Every label will have the following items listed:

Serving Size	Total Carbohydrate
Servings per Container	Dietary Fiber
% Daily Value	Sugars
Calories (total)	Protein
Calories from Fat	Vitamin A
Total Fat	Vitamin C
<i>Trans</i> Fat	Calcium
Cholesterol	Iron
Sodium	

Other nutrients, such as polyunsaturated or monounsaturated fat and other vitamins and minerals, can also be put on the Nutrition Facts label if the company that makes the food wants them listed.

### **What should I look for on the Nutrition Facts label?**

**The first thing you should look at is the serving size.** The amount of each nutrient on the label is what's found in one serving of that food, not necessarily in the whole container. If you don't know what one serving size is, you won't know the amount of each nutrient you're actually getting. For example, a large bag of microwave popcorn has three servings in it. It's okay to eat more than one serving at a time, but it's important to know that if you eat the whole bag, you'd be getting three times what's listed on the label. Portion control is an important part of healthy eating for PCOS, so keep the serving size in mind.

### **Do I need to read every Nutrition Facts label?**

No. You don't need to keep track of every nutrient you are eating. Just take a look at Nutrition Facts labels once in a while to help you make healthy choices and choose foods that will give your body the nutrition it needs. For example, if you don't drink much milk, you should read Nutrition Facts labels to help you find other foods that are high in calcium. You can also use the Nutrition Facts label to compare two different foods. For example, if you are deciding between two different kinds of breads, reading the Nutrition Facts labels can help you make a healthier choice. Consider choosing the bread that has the highest amount of fiber.

### **The food label lists a 2000 calorie diet. Should I be eating 2000 calories?**

It's possible that a 2000-calorie diet may be right for you, but many adolescents need more than 2000 calories as they grow in height, build bones, build muscles, and stay active, and some may need less. The 2000-calorie diet is just an estimate and is used to help calculate the Percent (%) Daily Value to be used as a reference that is near to accurate for the greatest amount of people.

### **What does a Nutrition Facts label look like?**

On the next page you'll find a sample Nutrition Facts label with a description of the items that you'll find listed there.

**PCOS TIP:** Eat small meals and healthy snacks during the day instead of three large meals.

### SERVING SIZE

Serving size equals one serving of the product. All the other nutrient values listed on the label are based on this amount.

### CALORIES

Calories are a unit of energy that come from carbohydrates, protein and fat. Calories give us energy so we can think and be active.

### % DAILY VALUE

This value is the percentage of the recommended daily value for a nutrient that you get in one serving. A food that has more than 20% of the Daily Value of a nutrient is an excellent source; however, for some nutrients such as fat, sodium, and cholesterol, the lower the percent, the better.

### CHOLESTEROL

Cholesterol is a substance found only in animal products. Eating too much cholesterol is not healthy for your heart.

### TOTAL CARBOHYDRATE

Carbohydrates give your muscles and brain energy. Certain types of carbohydrates are sometimes listed on the label, such as:

#### Fiber:

Helps with digestion and keeps you full between meals.

#### Sugars:

Are important for instant energy, but eating too much added sugar can be unhealthy.

<b>Nutrition Facts</b>			
Serving Size			
Servings per Container			
<b>Amount per serving</b>			
<b>Calories</b>	Calories from Fat		
<b>% Daily Value*</b>			
<b>Total Fat</b>			
Saturated Fat			
Trans Fat			
Polyunsaturated Fat			
Monounsaturated Fat			
<b>Cholesterol</b>			
<b>Sodium</b>			
<b>Total Carbohydrate</b>			
Dietary Fiber			
Sugars			
<b>Protein</b>			
Vitamin A		Vitamin C	
Calcium		Iron	
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your caloric needs:			
		Calories 2,000	2,500
Total Fat	Less than	65g	80g
Sat. Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrates		300g	375g
Dietary Fiber		25g	30g
Calories per gram:			
Fat 9 • Carbohydrate 4 • Protein 4			

### FOOTNOTE

This reminds us that all of the Daily Values come from the recommendations for a 2,000-calorie meal plan. Your needs may be higher or lower based on your height, genetics, and activity level. Keep in mind this is just an average, these Daily Value percentages (%) don't apply to everyone.

### SERVINGS PER CONTAINER

This number is how many servings you can get from one package. Some containers have a single serving, but most have more than one serving per package.

### CALORIES FROM FAT

This number is the amount of calories that come from fat. It's not the percent of fat in the food.

### TOTAL FAT

Fat is essential for our bodies. There are 4 kinds of fat. Monounsaturated and polyunsaturated fat are the kinds of fat that are healthy for the heart. Saturated fat comes mostly from animal products. *Trans* fat is unhealthy for your heart, and should be avoided.

### SODIUM

Sodium is the amount of salt in the serving of food. People with high blood pressure are often told to follow a low sodium diet.

### PROTEIN

This nutrient helps the body build muscle and fight infections.

### VITAMINS/MINERALS

This amount is the percent (%) Daily Value for vitamin A, vitamin C, calcium, and iron you are getting from a serving of this product. Other vitamins and minerals may be included in this section.



# PCOS Guide to Grocery Shopping

## How should I plan for grocery shopping?

Before you go grocery shopping, make a list of all of the types of foods and drinks you'll need such as vegetables, fruits, proteins such as meat, dairy and legumes, and whole grain sources of carbohydrates. If you have a variety of these foods, you'll be able to plan healthy meals and snacks. By paying attention to the labels on food products, you'll be able to choose foods that you like, and are healthy for young women with PCOS. See the sample list on the next page.

## How do I use the Nutrition Facts label when grocery shopping?

Nutrition Facts labels are located on most food products, and list the nutrients that are found in one serving. Reading the labels can help you figure out which of your favorite foods are the most nutritious choices, and can also help you decide which foods to buy when you are grocery shopping.

Reading Nutrition Facts labels can help you to be more intentional about your food choices. For more information on Nutrition Facts labels, see the Nutrition Facts Label and PCOS guide.

**PCOS TIP:** Load up on vegetables and fruits. They are high in fiber and packed with vitamins and minerals.

## **SAMPLE GROCERY LIST**

### **PRODUCE:**

#### **Fresh fruit**

Apples  
Bananas  
Berries  
Grapes  
Melon  
Oranges  
Peaches  
Pears

#### **Fresh vegetables**

Asparagus  
Avocado  
Broccoli  
Cabbage  
Carrots  
Corn  
Cucumber  
Eggplant  
Kale  
Lettuce  
Mushrooms  
Onion  
Peppers  
Sweet potato  
Spinach  
Tomato

### **DRIED/CANNED:**

Dried fruit  
Canned fruit (packed in water)  
Canned vegetables

### **MEAT/POULTRY/FISH:**

Chicken  
Cod  
Lean beef  
Pork  
Salmon  
Shrimp  
Tuna  
Turkey

### **NON-MEAT PROTEIN:**

Beans (black, pinto, garbanzo, white, kidney)  
Hummus  
Nuts such as almonds, walnuts or cashews  
Peanut butter  
Tofu (sometimes in the produce section)  
Veggie Burgers (freezer section)  
Eggs  
Feta cheese  
Low-fat milk  
String cheese  
Yogurt

### **OILS:**

Canola oil  
Olive oil

### **GRAINS/CEREAL:**

Brown rice  
Cereal (>5 grams of fiber and <8 grams of sugar per serving)  
Whole wheat English muffins  
Whole grain bread  
Whole wheat pasta  
Whole wheat pita



# PCOS–Friendly Foods and Snacks

You may have noticed that some meals leave you satisfied while others leave you with a growling stomach only an hour later. One way to help you feel more satisfied by meals is to have a mix of different types of nutrients at each meal. A meal with a source of protein, a whole grain carbohydrate and a fat will help you to stay full for longer. For women with PCOS, or anyone who struggles to maintain a healthy weight, fueling up on well planned meals and snacks may also help to keep you from overeating during or after meal times.

The table on the next page lists foods that are sources of protein, carbohydrates, and fat. Remember to try to choose whole grain sources of carbohydrates versus sources of carbohydrates that are "refined" (made mostly from white flour and/or sugar). This is important because whole grains, which are higher in fiber, will not impact your blood sugar levels as much as refined sources of carbohydrates.

Take a look at the Sample PCOS–Friendly Menus to get some ideas, and then plan your own menu using the foods from the table on the next page. After you've planned your menu, make a shopping list of the foods you will need to help you eat a balanced diet.

**PCOS TIP:** Don't forget to exercise! Good nutrition is important, but it isn't enough. You also need to exercise regularly. Adding exercise or increasing the exercise you already do will help you manage your PCOS.

**Fruits**

Apples

Pears

Oranges

Berries

Bananas

**Vegetables**

Broccoli

Brussel sprouts

Cauliflower

Tomato

Leafy greens such as spinach, kale and collards

**Protein**

Beans

Beef

Yogurt (try to find an option with less than 15 total grams of sugar per serving)

Cheese

Chicken

Eggs

Egg Substitute

Fish

Hummus

Milk (low-fat)

Nuts

Nut butters (such as peanut butter or almond butter)

Peanut and Nut Butters\*

Pork

Shellfish

Tofu

Veggie Burgers (try to find an option with more than 10 grams of protein)

**Carbohydrates/Starches**

Bread (whole wheat)

Brown Rice

Cereal (>5 grams fiber per serving)

Corn

English Muffin (whole wheat)

Pasta (whole wheat)

Sweet Potato

Tortilla

**Fat for food preparation/dressings**

Avocado

Guacamole

Canola or Vegetable Oil

Corn oil

Olive Oil

## What snacks should I choose?

Foods from the grain, fruit, vegetable or protein group are healthy snacks because they are packed with nutrients. Try to pick high-fiber foods and combine them with high protein foods. For example, try an apple or celery with peanut butter, whole wheat crackers and cheese, whole wheat pita or carrots and hummus, or yogurt and nuts.

### **EASY SNACK IDEAS**

- Hummus with whole grain pretzels
- Nuts
- Peanut butter and celery, apple, or whole grain crackers
- Hummus with raw vegetables
- Reduced-fat cheese and whole grain crackers (look for at least 2 grams of fiber per serving)
- Dry roasted soy beans
- Bars such as Lara bars® or Kind bars®
- String cheese and an apple
- Sunflower seeds with a banana
- Whole wheat bread or English muffin with cheese or peanut butter
- Yogurt with nuts or fruit
- Yogurt smoothies made with yogurt and frozen fruit



# Sample Menus

On pages 57-63 you'll find sample menus that will help give you some ideas for healthy meals and snacks. Keep in mind that depending on your own metabolism and activity level, your energy (calorie) needs may be higher or lower than this plan. On page 55 you will find a blank menu ("My Menu") that you can photocopy and fill in with daily menus that you enjoy. Try to include a protein, a whole grain carbohydrate, and a healthy fat in each meal and snack. Refer to the PCOS-Friendly Food Suggestions list for ideas.

In addition to filling out the menus, it's a good idea for you to meet with a registered dietitian to get more specific and customized meal planning advice.

**PCOS TIP:** Try not to get frustrated if you don't lose weight quickly or if you've tried to lose weight before and it didn't work. Learning how to choose and balance your carbohydrates and doing regular exercise will help!

## Day 1

### Breakfast

2 hard boiled eggs  
½ cup melon  
1 cup Kashi Go Lean® cereal  
1 cup 1% milk

### Snack

1 cup carrots  
3 tablespoons hummus

### Lunch

2 cups lettuce  
1 cup other vegetables  
(such as onions, peppers,  
tomatoes, carrots, celery)  
½ cup chickpeas  
¼ cup feta cheese  
1 tablespoon oil and  
vinegar dressing  
Small slice whole wheat  
pita bread

### Snack

*Yogurt parfait:*  
6 oz plain yogurt or fruited  
yogurt with less than 15  
grams of sugar per serving  
½ cup unsweetened  
frozen berries  
2 tablespoons slivered  
almonds

### Dinner

4 oz. baked salmon  
1 cup steamed  
mixed vegetables  
¾ cup brown rice  
Seltzer water

### Snack

1 banana  
2 tablespoons of peanut  
butter  
1 cup 1% milk or water

## Day 2

### Breakfast

½ cup cottage cheese  
1 sliced peach  
1 toasted whole wheat  
English muffin with 1-2  
tablespoons peanut butter  
1 cup 1% milk or water

### Snack

Cheese stick  
½ cup grapes

### Lunch

3 ounces tuna canned  
in water  
½ cup celery  
2 tablespoons  
light mayonnaise  
6 whole wheat crackers  
1 pear  
1 cup 1% milk

### Snack

1 apple  
2 tablespoons peanut butter

### Dinner

*Steak salad:*  
2 cups mixed greens  
1 tomato  
2 oz grilled steak tips  
¾ oz blue cheese  
2 tablespoon vinaigrette  
dressing  
1/2 whole wheat pita  
water

### Snack

*Smoothie:*  
1 cup milk  
½ frozen banana  
1 tablespoon peanut butter

## Day 3

### Breakfast

*Western Omelet:*  
2 whole eggs  
½ ounce shredded cheese  
¼ cup red and  
green peppers  
¼ cup onions  
2 tablespoons salsa  
Orange  
1 cup 1% milk

### Snack

1 cup celery  
3 tablespoons of hummus

### Lunch

*English Muffin Pizza:*  
1 whole wheat English muffin  
¼ cup of tomato sauce  
2 ounces cheese  
Fruit salad  
1 cup 1% milk

### Snack

*Trail mix:*  
½ cup cereal  
2 tablespoons nuts or  
soy nuts  
2 tablespoons dried fruit

### Dinner

*Broccoli Pasta:*  
1 cup whole wheat pasta  
3 ounces chicken breast  
1 cup steamed broccoli  
1 tablespoon olive oil  
2 tablespoons grated  
parmesan cheese  
Water

### Snack

1/4 cup almonds  
1 apple

# My Menu

Date \_\_\_\_\_

Try to include a protein, a high-fiber carb, and a healthy fat in each meal and snack. Refer to the food suggestions list on page 50 for ideas.

Breakfast	
Snack	
Lunch	
Snack	
Dinner	
Snack	





# PCOS–Friendly Recipes

## Easy Hummus

### Ingredients:

- 1 can chickpeas, drained and rinsed
- 2/3 cup water
- 3 tablespoons tahini
- 1 large clove garlic
- 1/2 teaspoon salt
- 2 tablespoons oil (olive, canola, or vegetable)
- 2 tablespoons lemon juice

### Preparation:

Place all ingredients in blender. Blend until creamy.

*Makes about 8 servings*

**Tip:** Serve with raw vegetables, whole wheat crackers, or whole wheat pita wedges.

**Food Fact:** Tahini is a paste made out of sesame seeds. It's available at large supermarkets and specialty food stores.

## Nutrition Facts

Servings Per Recipe 8

### Amount per serving

Calories 129      Calories from Fat 60

### % Daily value

**Total Fat** 7g      11%

Saturated Fat 1g      5%

Trans Fat 0g

**Cholesterol** 0mg      0%

**Sodium** 314mg      13%

**Total Carbohydrate** 14g      5%

Dietary Fiber 3g      12%

Sugars 0g

### Protein 4g

Vitamin A 0%

Vitamin C 7%

Calcium 4%

Iron 7%

## Tuna Melt

### Ingredients:

- 1 (6 ounce) can tuna in water, drained and mashed up
- 2 whole wheat English muffins, split and toasted
- 1/3 cup light canola mayonnaise
- 4 tomato slices
- 1 1/2 tablespoons sweet pickle relish
- 4 slices reduced-fat cheddar cheese
- 1/2 tablespoon mustard
- 2 teaspoons Tabasco sauce

### Preparation:

In a medium bowl combine tuna, mayonnaise, sweet pickle relish, mustard, and Tabasco sauce. Mix well. Spread 1/4 of the tuna mixture on each muffin half. Top each serving with a piece of tomato and a slice of cheddar. Broil 4 to 5 minutes or until cheese melts.

*Makes 4 servings*

<b>Nutrition Facts</b>	
Servings Per Recipe 4	
<b>Amount per serving</b>	
<b>Calories</b> 228	Calories from Fat 76
<b>% Daily value</b>	
<b>Total Fat</b> 8g	13%
Saturated Fat 4g	19%
Trans Fat 0g	
<b>Cholesterol</b> 27mg	9%
<b>Sodium</b> 494mg	21%
<b>Total Carbohydrate</b> 20g	7%
Dietary Fiber 1g	5%
Sugars 2g	
<b>Protein</b> 18g	
Vitamin A 9%	Vitamin C 6%
Calcium 32%	Iron 9%

## Tomato & Mozzarella Pockets

### Ingredients:

- 2 whole wheat or soy pita bread rounds, cut in half to make 4 pockets
- 2 ripe tomatoes, chopped
- 4 tablespoons of olive oil
- 4 (1 ounce) pieces of part-skim mozzarella cheese
- 1 garlic clove, minced
- 1 cup of fresh basil leaves, chopped
- Salt and pepper

### Preparation:

Warm up the pita pockets in toaster or microwave. Place tomato, mozzarella, garlic, and basil in a bowl, sprinkle with salt and pepper to taste, and drizzle with olive oil. Place all ingredients in warmed pita pockets.

*Makes 4 servings*

<b>Nutrition Facts</b>	
Servings Per Recipe 4	
<b>Amount per serving</b>	
<b>Calories</b> 299	Calories from Fat 168
<b>% Daily value</b>	
<b>Total Fat</b> 19g	29%
Saturated Fat 5g	24%
Trans Fat 0g	
<b>Cholesterol</b> 18mg	6%
<b>Sodium</b> 350mg	15%
<b>Total Carbohydrate</b> 23g	8%
Dietary Fiber 4g	15%
Sugars 4g	
<b>Protein</b> 11g	
Vitamin A 23%	Vitamin C 26%
Calcium 24%	Iron 8%

## Vegetable Lentil Soup

### Ingredients:

- 2 medium carrots
- 2 medium celery sticks
- 1 medium onion
- ¾ pound small red potatoes
- 1 garlic clove
- 2 tablespoons oil (olive, canola or vegetable)
- 1 cup dry lentils
- 1 small head escarole (about 1 pound)
- 2 (14½ ounce) cans chicken broth (low-sodium or regular)
- 1 (14½ to 16 ounce) can Italian-style stewed tomatoes
- 3 cups water

### Preparation:

Dice carrots, celery, and onion; cut potatoes into ½-inch pieces; mince garlic. Set aside. Heat oil in a 5-quart Dutch oven or a large, heavy pot over medium-high heat, then add the carrots, celery, and onion and cook until tender, stirring occasionally. Add garlic and cook, stirring, just until garlic begins to brown. Stir in stewed tomatoes with their liquid, dry lentils, chicken broth, potatoes, and 3 cups water; stir with spoon to break up tomatoes. Bring to a boil and then reduce heat to low. Cover and simmer until lentils are tender, about 50 minutes. While soup is simmering, thinly slice escarole. Bring to a boil and then reduce heat to low. Just before serving, stir escarole into soup and cook, stirring occasionally, until escarole wilts.

*Makes 5 servings*

**Tip:** Serve this dish with a whole grain roll or bread stick.

## Nutrition Facts

Servings Per Recipe 5

### Amount per serving

Calories 318      Calories from Fat 65

### % Daily value

**Total Fat** 7g      11%

Saturated Fat 1g      6%

Trans Fat 0g

**Cholesterol** 0mg      0%

**Sodium** 294mg      12%

**Total Carbohydrate** 49g      16%

Dietary Fiber 18g      73%

Sugars 8g

**Protein** 17g

Vitamin A 131%      Vitamin C 41%

Calcium 14%      Iron 33%

## Tofu Bean Salad

### Ingredients:

- 1 package extra firm tofu, cubed
- 2 cans kidney beans or chick peas, rinsed and drained
- 1 small can sliced olives
- ½ cup fresh parsley, chopped
- 2 tablespoons oil (olive, canola, or other)
- 1 tablespoon lemon juice or cider vinegar

### Preparation:

Put all ingredients into a bowl and mix well. Chill for a few hours and serve.

*Makes 4 servings*

**Add–In:** Toss in ¾ cup sliced almonds for extra calcium and fiber.

## Scrambled Egg & Tomato Sandwich

### Ingredients:

- 4 slices of whole grain bread
- 1 teaspoon butter
- 2 cloves garlic, peeled and finely chopped (optional)
- 2 tablespoons dried parsley
- 1 cup egg substitute (or 4 eggs), lightly beaten
- 2 large tomatoes, cored and finely diced
- ¼ teaspoon salt
- 1/8 teaspoon pepper
- 12 fresh basil leaves or 1½ tablespoons dried basil
- ½ cup low–fat cheddar cheese

### Preparation:

Place butter into a medium–sized pan over low heat. When the butter melts, add garlic, parsley and cook for 2–3 minutes. Add the eggs and stir slowly over low heat until set. Add salt and pepper. Lightly toast bread in toaster. Arrange and divide the egg mixture onto the 4 slices of toasted bread. Top each with basil leaves and sprinkle with cheese. Serve open–faced sandwiches immediately, with a fork and knife.

*Makes 4 servings*

## Nutrition Facts

Servings Per Recipe 4

### Amount per serving

Calories 378      Calories from Fat 141

### % Daily value

**Total Fat** 17g      35%

Saturated Fat 2g      12%

Trans Fat 0g

**Cholesterol** 0mg      0%

**Sodium** 911mg      38%

**Total Carbohydrate** 38g      13%

Dietary Fiber 16g      64%

Sugars 1g

**Protein** 24g

Vitamin A 4%      Vitamin C 7%

Calcium 62%      Iron 31%

## Nutrition Facts

Servings Per Recipe 4

### Amount per serving

Calories 188      Calories from Fat 49

### % Daily value

**Total Fat** 6g      9%

Saturated Fat 2g      10%

Trans Fat 0g

**Cholesterol** 6mg      2%

**Sodium** 369mg      15%

**Total Carbohydrate** 20g      7%

Dietary Fiber 3g      13%

Sugars 6g

**Protein** 16g

Vitamin A 30%      Vitamin C 29%

Calcium 15%      Iron 17%

## Black & Blue Berry Smoothie

### Ingredients:

- 2 cups blackberries
- 2 cups blueberries
- 1 cup plain Greek yogurt
- 1 cup 1% milk
- 1 teaspoon vanilla extract
- 2 cups ice

### Preparation:

Place all ingredients into a blender. Blend until smooth and foamy. Serve immediately.

*Makes 4 servings*

## Nutrition Facts

Servings Per Recipe 4

### Amount per serving

**Calories** 130      Calories from Fat 15

**% Daily value**

**Total Fat** 1.5g      2%

Saturated Fat 0g      0%

Trans Fat 0g

**Cholesterol** 5mg      2%

**Sodium** 50mg      2%

**Total Carbohydrate** 23g      8%

Dietary Fiber 5g      20%

Sugars 16g

**Protein** 9g

Vitamin A 4%

Vitamin C 35%

Calcium 15%

Iron 4%

## Ants on a Log

### Ingredients:

- 1 tablespoon peanut butter or soy nut butter
- 1 stalk celery
- Raisins

### Preparation:

Wash and cut off ends of celery. Dry with paper towel. Spread peanut butter or soy nut butter on each stick of celery. Top with a few raisins.

*Makes 1 serving*

## Nutrition Facts

Servings Per Recipe 1

### Amount per serving

**Calories** 146      Calories from Fat 68

**% Daily value**

**Total Fat** 8g      12%

Saturated Fat 2g      8%

Trans Fat 0g

**Cholesterol** 0mg      0%

**Sodium** 129mg      5%

**Total Carbohydrate** 17g      6%

Dietary Fiber 2g      10%

Sugars 10g

**Protein** 4g

Vitamin A 6%

Vitamin C 4%

Calcium 4%

Iron 4%

## Grilled Salmon with Basil

### Ingredients:

- 4 salmon steaks (about 6 to 8 ounces each)
- 2 tablespoons lemon juice
- 2 tablespoons olive oil
- 1 tablespoon fresh basil, chopped (or 1 teaspoon dried and crushed)
- 4 lemon wedges

### Preparation:

In a small bowl, combine lemon juice, olive oil, and basil; brush on both sides of salmon. Grill at medium temperature 10 minutes per inch of thickness, or until fish flakes when tested with a fork and reaches an internal temperature of 145°F. Serve with lemon wedges.

*Makes 4 servings*

**Tip:** Salmon is an excellent source of Omega-3 Fatty Acids, which have many health benefits.

## Nutrition Facts

Servings Per Recipe 4

### Amount per serving

Calories 303      Calories from Fat 157

### % Daily value

**Total Fat** 18g      27%

Saturated Fat 3g      13%

Trans Fat 0g

**Cholesterol** 94mg      31%

**Sodium** 75mg      3%

**Total Carbohydrate** 1g      0%

Dietary Fiber 0g      0%

Sugars 0g

**Protein** 34g

Vitamin A 2%      Vitamin C 6%

Calcium 2%      Iron 8%

## Fruit Salad

### Ingredients:

- ½ cup strawberries
- ½ cup blueberries
- ½ cantaloupe
- ½ honeydew melon
- 1 cup seedless watermelon, cubed
- 1 banana, peeled and sliced
- 1 kiwi, peeled and sliced

### Preparation:

Wash and drain the blueberries and strawberries. Carefully remove the green tops of the strawberries and cut them in half. Cut the melons in half and scoop out the seeds. Cut the seeded melon into cubes, or use a melon baller. Peel and slice the banana. Toss the melons, berries, and banana together. Top with sliced kiwi for garnish.

*Makes 4 servings*

## Nutrition Facts

Servings Per Recipe 4

### Amount per serving

Calories 147      Calories from Fat 6

### % Daily value

**Total Fat** 1g      1%

Saturated Fat 0g      0%

Trans Fat 0g

**Cholesterol** 0mg      0%

**Sodium** 41mg      2%

**Total Carbohydrate** 37g      12%

Dietary Fiber 4g      17%

Sugars 29g

**Protein** 2g

Vitamin A 54%      Vitamin C 151%

Calcium 3%      Iron 4%

## Chicken Stir-Fry

### Ingredients:

- 6 skinless, boneless chicken breasts, cut into bite-sized pieces
- 2 large onions, chopped
- 2 large bell peppers, diced
- 1 cup broccoli florets
- 1 carrot, sliced into thin half-moons
- 2 cloves garlic, minced
- Salt and pepper
- 1 tablespoon canola oil
- 3 cups cooked brown rice

### Preparation:

Cook rice according to box directions. While rice is cooking, heat the oil in a large skillet and fry the chicken; when cooked through, set chicken aside. Sauté garlic, onions, and bell pepper for about 5 minutes, then add the carrots and broccoli and sauté a few minutes more (until the broccoli is hot but not wilted). Add chicken back to the skillet, season with salt and pepper to taste. Serve ½ cup of warm brown rice topped with the chicken mixture.

*Makes 6 servings*

## Nutrition Facts

Servings Per Recipe 6

### Amount per serving

Calories 302      Calories from Fat 57

### % Daily value

**Total Fat** 6g      10%

Saturated Fat 1g      6%

Trans Fat 0g

**Cholesterol** 73mg      24%

**Sodium** 72mg      3%

**Total Carbohydrate** 30g      10%

Dietary Fiber 4g      14%

Sugars 4g

**Protein** 30g

Vitamin A 4%      Vitamin C 79%

Calcium 4%      Iron 9%

**PCOS TIP:** Stay positive! It can be very difficult to achieve visible results. Doing what's right for your body IS doing something good, even if you don't see a big change in your weight right away.





# Meal Assessment Worksheet

## Healthy eating for PCOS includes the following guidelines:

- Eating small meals and snacks every few hours instead of eating large meals.
- Including a balance of carbohydrates, protein, and fat with meals and snacks.
- Choosing high fiber carbohydrates including whole grains (instead of refined grains), fruits, and vegetables.
- Choosing healthy fats (instead of saturated or *trans* fats).
- Limiting sugar–sweetened drinks, refined grains, and sugary treats.

You can photocopy and use the Meal Assessment Worksheet located on the following page to help you follow these guidelines. Write down everything you eat on the worksheet, and review it at the end of the day. Look at the boxes that are checked "No". What could you eat next time to make it a "Yes"? Make a shopping list of foods that will help you stick to your healthy eating plan. If you're eating large portions, try eating smaller portions every few hours and brainstorm about healthy snack ideas for in between meals. The more you practice PCOS–friendly eating, the easier it will become.

### Meal Assessment Worksheet

Time of meal or snack	Foods eaten	Amount eaten	Did I eat healthy portions?	Did I include some carbs, protein, & fat?	Did I choose mostly high fiber carbs?	Did I include healthy fats?	Did I limit my intake of sugary foods & drinks?
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

# Fitness Plan Worksheets

Exercise is good for you in many different ways. It can help you maintain a healthy weight and boost your overall energy level. Regular exercise lowers stress and anxiety and helps improve your mood.

Exercise can and should be fun. Knowing the health benefits of exercise will help you get started. The worksheets in this section will help you figure out what motivates you (or gets you to exercise), which types of activities you'll enjoy most, and how to fit them into your life.

**PCOS TIP:** Talk to your health care provider about managing your PCOS. Most young women with PCOS need to take medication, even when following a PCOS-friendly diet and working out regularly. If you have more questions about PCOS and nutrition, ask your health care provider about talking to a registered dietitian who has experience in working with teens with PCOS.

## Worksheet 1: Focus On Fitness

### MY FITNESS MOTIVATORS AND HEALTH BENEFITS

What makes you want to be physically active? Use the boxes on the right to check off what motivates you. Use the extra lines at the bottom to write down other reasons why you want to make fitness a part of your life.

- Have more energy
- Release stress
- Keep my heart healthy
- Improve my overall health
- Manage my weight
- Improve my self-esteem
- \_\_\_\_\_
- \_\_\_\_\_

### MY PHYSICAL ACTIVITIES

Activities such as playing sports, exercising, or dancing are fun ways to get moderate to vigorous exercise. What activities do you like to do? Check off some other physical activities you enjoy, or write them in.

- Riding my bike
- Playing a team sport
- Taking a dance class
- \_\_\_\_\_
- \_\_\_\_\_

### MY EVERYDAY ACTIVITIES

You can move your body more by changing your daily routine, such as walking instead of getting a ride. Check off some of the things that you could change, and write in a few of your own ideas, too.

- Walking instead of driving or taking the bus
- Taking the stairs instead of the elevator
- Walking around while talking on the phone
- \_\_\_\_\_
- \_\_\_\_\_

### MY TIME TO GET FIT

You need to make room in your busy schedule for fitness. Think about ways to work in a workout. Check off or add some strategies that will help you make time for fitness.

- Cut TV, internet, & gaming time in half
- Go for a walk with a friend or a group of friends
- Schedule work-out time in my planner
- \_\_\_\_\_
- \_\_\_\_\_

### MY FITNESS GOALS

Having clear goals can help motivate you and keep you focused. Check off or write in your top three fitness goals for the next month.

- Join a sports team, or learn a new sport
- Try a new dance or aerobics class
- Try an exercise DVD
- Run a mile
- Start a walking club with friends
- \_\_\_\_\_
- \_\_\_\_\_

## Intro To Worksheet 2

A good fitness plan should include a balance of stretching, toning, and aerobic activities.

- The **Stretch It** section lists stretching exercises that will keep you flexible, help you relax, and help prevent injuries such as pulling a muscle from reaching too far.
- The **Tone It** section lists strengthening exercises that will help you build strong muscles and boost your metabolism.
- The **Move It** section lists aerobic activities that will help keep your heart healthy and strong.

Worksheet 2 lists exercises from each of the Fun Fitness sections. Check off the ones you want to try, and use the extra lines to fill in related exercises you'd like to try. You can include exercises you've learned from a sports team, in gym class, or from a certified personal trainer. Be sure to choose items from each column for a balanced workout.

You can learn the proper way to do each of the Stretch It and Tone It exercises by checking out the **Nutrition and Fitness section** of our website [youngwomenshealth.org](http://youngwomenshealth.org).

## Worksheet 2: Fun Fitness

### STRETCH IT

#### UPPER BODY

- Bicep
- Tricep
- Chest
- Upper Back
- Cross Shoulder

#### MIDDLE BODY

- Back
- Abdominal
- Waist Reach

#### LOWER BODY

- Hamstring
- Inner Thigh
- Outer Thigh
- Quadricep
- Lunge

#### RELATED ACTIVITIES

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### TONE IT

#### UPPER BODY

- Overhead Shoulder Press
- Chest Press
- Bent Knee Push Up
- Bicep Curl
- Tricep Extension

#### MIDDLE BODY

- Sit Up
- Isometric Sit Up
- Side Twist Sit Up
- Front Arm Raise

#### LOWER BODY

- Inner Thigh Lift
- Outer Thigh Lift
- Power Lift Kick
- Squat
- Calf Lift

#### RELATED ACTIVITIES

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### MOVE IT

- Aerobics
- Basketball
- Biking
- Dancing
- Field Hockey
- Hiking
- Ice Hockey
- Ice Skating
- Jumping Rope
- Kickball
- Kickboxing
- Power Walking
- Running
- Skiing
- Soccer
- Tennis
- Track
- Volleyball

#### RELATED ACTIVITIES

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Great! You've selected the exercises you'd like to try. Next, you can learn how to do the Stretch It and Tone It exercises online at: [www.youngwomenshealth.org/fitness](http://www.youngwomenshealth.org/fitness). The last step toward getting your fitness program going is to add these activities into your weekly routine. Worksheet 3 will help you with planning and scheduling.

## Intro to Worksheet 3

Make sure to set aside time to do the activities that you've chosen from Worksheet 2. This will help you plan your fitness schedule so that exercising becomes part of your daily routine.

The American Academy of Pediatrics recommends that children 6 and older engage in at least 60 minutes of physical activity each day. The level of activity should be moderate to vigorous so you breathe hard and sweat. Activities such as running, biking, dancing, playing a sport are examples of moderate to vigorous exercise. The physical activities can be different and you can break it up throughout the day. For example: 20/20/20=60 minutes.

Look back at your completed **Fun Fitness Worksheets** and fill in the weekly calendar on the next page (**My Fitness Plan**) with the activities that you've chosen. Think about what activities will work best on which days and what time of day would be best to do them. Remember to balance stretching, toning, and aerobic activities. You don't have to do all three in one day, but remember to also schedule your week so that you're not doing only one type of exercise.

After you've created your fitness schedule on Worksheet 3, it's a good idea to mark the days that you plan to exercise on your phone or calendar. Put this worksheet someplace where you'll see it as a reminder.

### Worksheet 3: My Fitness Plan

DAY, DATE, TIME	ACTIVITY AND LOCATION
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

Congratulations! You thought about what motivates you. You've selected different Fun Fitness activities and you've planned your exercise goals. By completing these 3 worksheets, you've taken a big step towards becoming healthier and fit. Be proud of yourself and keep up the good work!



# Glossary

**A1C:** A common blood test that measures your average blood sugar level for the past 2-3 months. A high A1C level means that your blood sugar is poorly controlled and you have a higher risk for diabetes. This test is also called Hemoglobin A1C.

**ACANTHOSIS NIGRICANS:**

Thickening and darkening of the skin (caused from higher levels of insulin) that can sometimes appear on the back of the neck, under the arms, and the inner thighs of girls with PCOS.

**ADOLESCENT MEDICINE SPECIALIST:**

A doctor who specializes in young adult health.

**AMENORRHEA:** No menstrual periods.

**ANEMIA:** Anemia is a condition that occurs when you don't have enough healthy red blood cells. The most common causes include not getting enough iron or losing too much iron from heavy menstrual periods.

**ANDROGENS:** A group of hormones made by the glands of both boys and girls. In girls, androgens can cause excess facial hair and acne.

**ANOVULATION:** No ovulation. The ovaries are not making eggs.

**BLOOD SUGAR:** The level of glucose in the blood.

**BMI (BODY MASS INDEX):** A way to estimate a person's body fat by using a mathematical calculation of weight and height. Too much body fat can put a person at risk for high blood pressure and diabetes.

**CYST:** A fluid-filled sac that develops in the ovary. In PCOS, the cysts are tiny and don't cause problems.

**DIABETES:** An illness that develops when your body does not make enough insulin, or when your body has trouble using the insulin that it does make. The result is high blood sugar.

**DYSMENORRHEA:** Pain with periods, menstrual cramps.

**ENDOCRINE SYSTEM:** The parts of the body (glands) that make all the different hormones.

**ENDOCRINOLOGIST:** A doctor who specializes in studying the endocrine system.

**ESTROGEN:** A female sex hormone.

**FERTILIZATION:** When sperm from a male comes together with an egg of a female (usually through sexual intercourse but can also be via in vitro fertilization). This leads to the development of an embryo and, later, a fetus and a baby.

**FOLLICLE-STIMULATING HORMONE (FSH):** A hormone that is made in the pituitary gland. FSH signals the ovaries to make eggs and estrogen.

**GLUCOSE:** A type of sugar that the body uses as a source of energy. When food is eaten, carbohydrates are converted to glucose.

**GYNECOLOGIST:** A doctor with additional surgical and medical training in the area of women's health.

**HIRSUTISM:** Extra hair on a part of a female's body, such as the upper lip, chin, stomach, back, or chest.

**HORMONE:** A chemical messenger that is released by an organ or gland and then sent through the bloodstream to another part of the body.

**INSULIN:** A hormone made by an organ called the pancreas. It controls how the body uses energy. Insulin is important for blood sugar (glucose) becoming glycogen, and is stored in the liver and muscles.

**INSULIN RESISTANCE:** A condition that occurs when a person needs high levels of insulin in their body to keep their blood sugar in the normal range.

**LUTEINIZING HORMONE (LH):** A hormone that is made in the pituitary gland. When a big surge of LH occurs at mid cycle, it causes ovulation.

**MENSTRUATION:** The release of blood from the uterus.

**METFORMIN:** A medicine which helps to lower insulin levels.

**NAUSEA:** Feeling like you are going to throw up.

**ORAL GLUCOSE TOLERANCE TEST (OGTT):** A test used to measure the body's ability to use glucose.

**OVARIES:** Two tiny organs (or glands) that are located inside the lower belly area of a female. The ovaries make the female hormones estrogen and progesterone.

**PANCREAS:** The organ in the body that makes the hormone insulin.

**PELVIC ULTRASOUND:** A test that uses sound waves to make a picture of the reproductive organs (ovaries and uterus) and bladder (where urine is stored).

**PITUITARY GLAND:** An organ (located at the base of the brain) which makes the female hormones that control the menstrual cycle.

**POLYCYSTIC OVARY SYNDROME (PCOS):** A hormone imbalance that can cause irregular periods, unwanted hair growth, and acne.

**PROGESTERONE:** A female sex hormone that is made by the ovary after ovulation. It changes the lining of the uterus and allows for more regular, normal periods.

**SYNDROME:** A special condition that has a group of symptoms. PCOS is considered a "syndrome" because most females who have it have similar symptoms.

**TESTOSTERONE:** A hormone made in high levels by boys and lower levels by girls. Girls with PCOS usually have a slightly higher level of testosterone than girls who don't have PCOS.

**THYROID STIMULATING HORMONE (TSH):** A hormone that is made by the thyroid gland and controls the body's metabolism.

**UTERUS:** A female organ (also called a "womb") that sheds blood every month (a period), and also holds a baby while it is developing inside its mother.



# Additional PCOS Resources

## ONLINE CHATS

The Center for Young Women’s Health  
[www.youngwomenshealth.org/chat.html](http://www.youngwomenshealth.org/chat.html)

Chats are held monthly for teen girls with PCOS. The chats are moderated by an MD, nurse, and registered dietitian. Check the schedule and register to participate in a free online chat with other girls with PCOS.

Every effort has been made to ensure that the URL's listed in the Helpful Websites section are as accurate and up-to-date as possible. We realize that the internet is constantly changing, and we can only guarantee that the links are accurate as of the date this book was printed.

## HELPFUL WEBSITES

**youngwomenshealth.org**  
[www.youngwomenshealth.org](http://www.youngwomenshealth.org)

Youngwomenshealth.org is an award winning website featuring health guides, quizzes, and online chats for girls with PCOS. The mission of the website is to help teen girls, their parents, teachers, and health care providers improve their understanding of normal health and development, as well as specific diseases and conditions.

**GirlsHealth.gov**  
[www.girlshealth.gov/body/reproductive/pcos.html](http://www.girlshealth.gov/body/reproductive/pcos.html)

This website offers basic information about health conditions affecting girls. The PCOS information is written for girls and younger adolescents.

### **The Nemours Foundation: Teens Health**

<http://kidshealth.org/en/teens/pcos.html>

This website offers information about many health concerns for teens. The PCOS information is written for adolescents, and explains the condition, tests, and treatments in easy-to-understand language.

### **The Polycystic Ovarian Syndrome Association (PCOSA)**

[www.pcosupport.org/index.php](http://www.pcosupport.org/index.php)

The PCOSA is a nonprofit organization run by women with PCOS. The website offers general information about PCOS, a newsletter: "PCOSA Today", and details some of the organization's activities. There is also a discussion forum with a section specifically for teens with PCOS.

## **HELPFUL BOOKS**

Best-Boss, Angela; Weidman, Evelina Sterling; and Richard Legro. **Living with PCOS: Polycystic Ovary Syndrome**. Addicus Books, 2001.

This book has easy to read information about PCOS. It is informative and not too heavy with medical terms.

Bussell, Gaynor. **Managing PCOS For Dummies**. John Wiley & Sons, Ltd, 2011.

Packed with realistic advice from a nutritionist, this book takes the reader through everything from picking which treatments to try—and which to avoid—and finding resources and support to help you stay positive and maintain your focus.

Dotson, Angela Kay. **Polycystic Ovary Syndrome: Fighting Back!** Sparhawk Health Publications, 2012.

Described as a "lifestyle manual", this book offers a fresh perspective on self-help techniques and positive lifestyle changes for young adults and women with PCOS.

Grassi, Angela MS, RD, LDN and Stephanie B. Mattei, Psy.D, Troiano, Leah.

**The PCOS Workbook: Your Guide to Complete Physical and Emotional Health**. Luca Publishing, 2009.

The PCOS Workbook is a guide that includes step-by-step guidelines, questionnaires, and exercises that will help you learn skills and empower you to make positive changes in your life that might not get rid of PCOS, but will help you live with it.



