



Department  
of Health

# Providing Support to Patients Diagnosed with Hypertension

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# Purpose

- Define hypertension and identify the burden if untreated
- Define undiagnosed hypertension
- Identify the modifiable/unmodifiable risk factors for hypertension
- Identify the lifestyle changes and resources that improve hypertension control
- Discuss the role home BP monitoring plays in improving hypertension control
- Review the role Health Home Care Manager can play with assisting patients
- Provide guidance on special consideration for women of reproductive age (up to 55 years old)

# Blood Pressure Stages

- Blood pressure is the force that moves blood through our arteries.
- High Blood Pressure (BP) occurs when the force of the blood is consistently greater than 140/90 mm Hg.
- Hypertension diagnosis occurs when two separate readings at two separate visits is greater than or equal to 140/90 mmHg
- Uncontrolled hypertension is defined as BP readings greater than or equal to 140 and or 90 mm Hg

## Blood Pressure Stages

Blood Pressure Category	Systolic mm Hg (upper #)		Diastolic mm Hg (lower #)
Low blood pressure (Hypotension)	less than 80	or	less than 60
Normal	80-120	and	60-80
Prehypertension	120-139	or	80-89
High Blood Pressure (Hypertension Stage 1)	140-159	or	90-99
High Blood Pressure (Hypertension Stage 2)	160 or higher	or	100 or higher
High Blood Pressure Crisis (Seek Emergency Care)	higher than 180	or	higher than 110

Source: American Heart Association

# Burden of Hypertension

## United States

- 75 million adults (30.9%)
- 1 of every 3 adults
- Only half (54%) are controlled
- Cost: 46 billion each yr.  
(health care services, meds,  
missed work days)

## New York State

- 4.8 Million adults (31.5%)
- 1 of every 3 adults
- Only 63% have their BP  
controlled

# Burden of Hypertension

## Age and Gender

Age	Men (%)	Women (%)
20-34	11.1	6.8
35-44	25.1	19.0
45-54	37.1	35.2
55-64	54.0	53.3
65-74	64.0	69.3
75 and older	66.7	78.5
All	34.1	32.7

## Race and Ethnicity

Race of Ethnic Group	Men (%)	Women (%)
African Americans	43.0	45.7
Mexican Americans	27.8	28.9
Whites	33.9	31.3
All	34.1	32.7

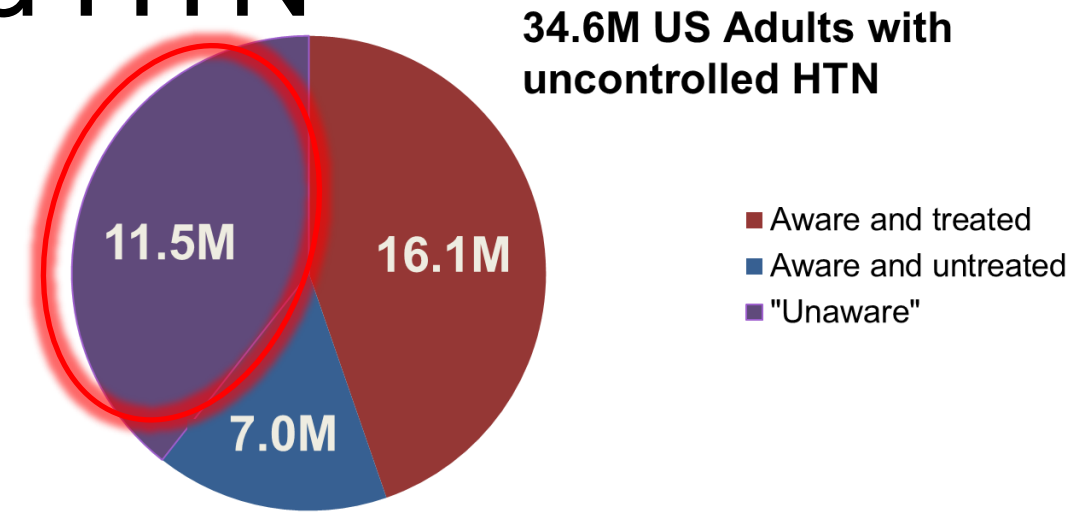
# Undiagnosed HTN

**What is it?** There are about 11.5 million people in the U.S. who don't realize they have hypertension. This person has BP readings above 140/90 mmHg but have never been told they have hypertension.

**How is it identified:** Any patient with two or more readings above 140 and or 90 mmHg during two separate office visits during the past year.

**Next steps:** Identify these patients through the use of patient registries and follow-up for reevaluation and possible diagnosis.

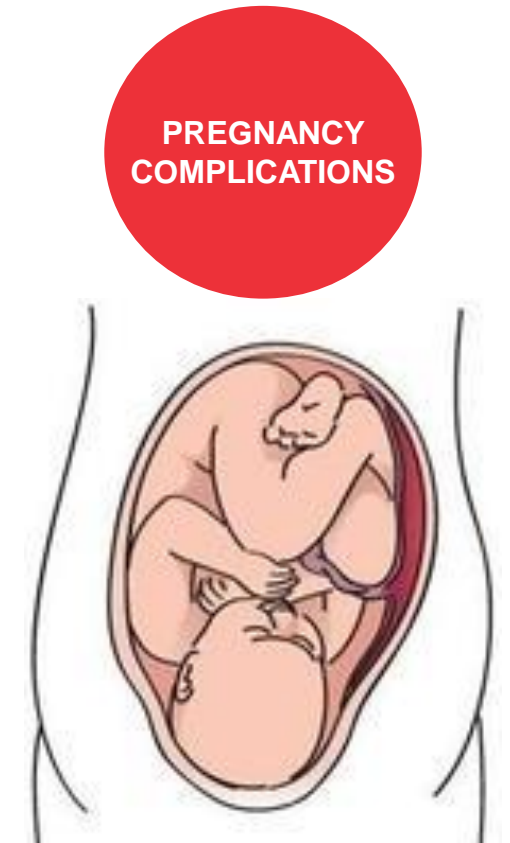
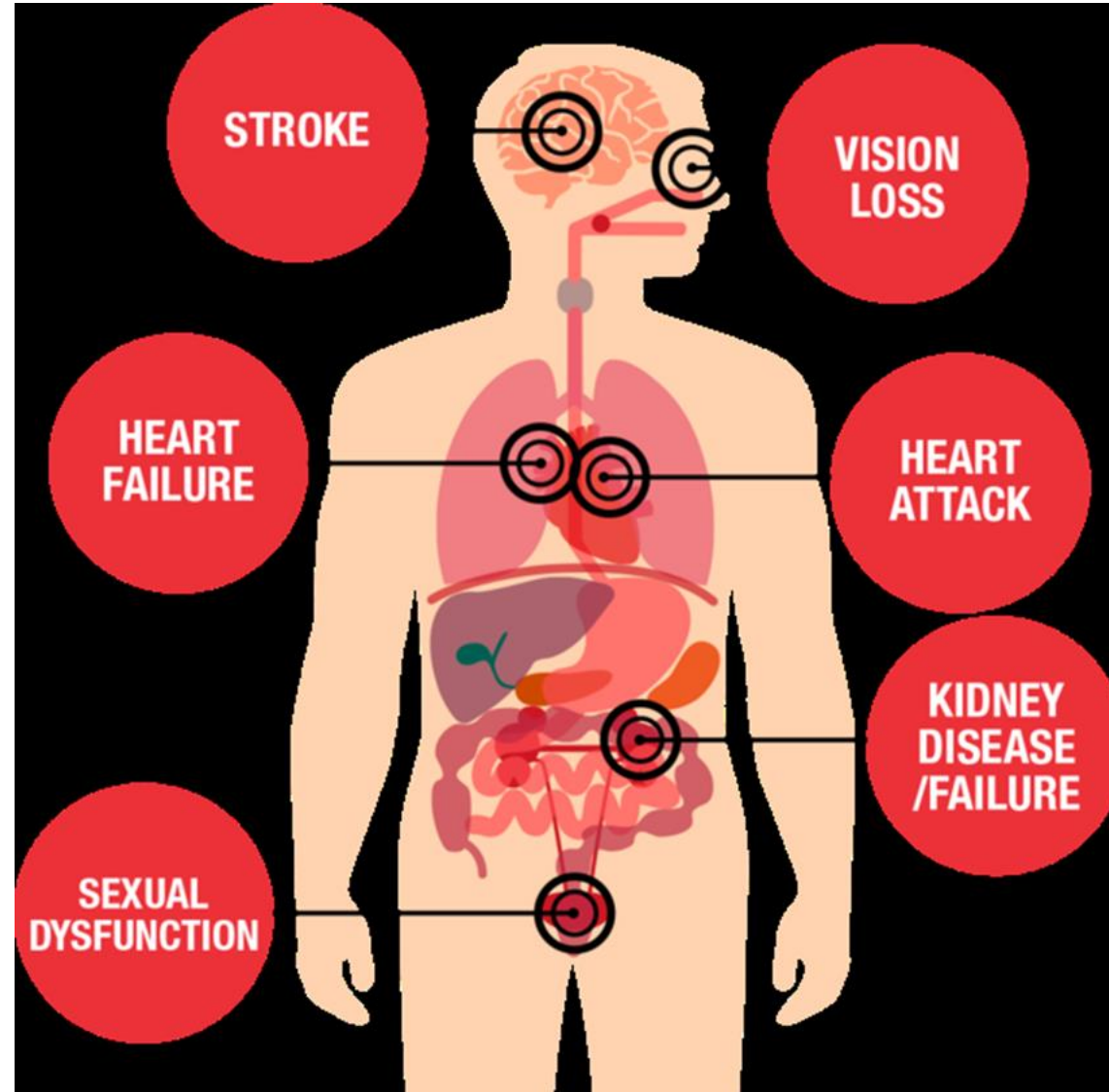
- ✓ HH Care Managers should ask about the patient's BP readings and can assist to determine if there is a concern



- ❑ 80.9% have health insurance
- ❑ 82.7% report having a usual source of care
- ❑ 63.3% have received care two or more times in the past year

# Burden if left untreated

- High BP often has no symptoms/silent condition
- Major risk factors for heart attacks and stroke







# Lifestyle Modifications that Lower BP

<b>*Lifestyle Modifications<sup>1</sup> (LM)</b>		
<b>Modification</b>	<b>Recommendation</b>	<b>Approximate SBP<sup>**</sup> Reduction (Range)<sup>††</sup></b>
Weight reduction	Maintain normal body weight (body mass index 18.5–24.9 kg/m <sup>2</sup> )	5–20 mm Hg/10kg
Adopt DASH <sup>†††</sup> eating plan	Consume a diet rich in fruits, vegetables, and lowfat dairy products with a reduced content of saturated and total fat	8–14 mm Hg
Dietary sodium reduction	Reduce dietary sodium intake to no more than 100 mmol per day (2.4 g sodium or 6 g sodium chloride)	2–8 mm Hg
Physical activity	Engage in regular aerobic physical activity such as brisk walking (at least 30 min per day, most days of the week which may be broken into shorter time intervals such as 10 minutes each of moderate or vigorous effort)	4–9 mm Hg
Moderation of alcohol consumption	Limit consumption to no more than 2 drinks (e.g. 24 oz. beer, 10 oz. wine, or 3 oz. 80-proof whiskey) per day in most men, and to no more than 1 drink per day in women and lighter weight persons	2–4 mm Hg
<p><sup>**</sup>SBP – systolic blood pressure</p> <p><sup>††</sup> The effects of implementing these modifications are dose and time dependent, and could be greater for some individuals</p> <p><sup>†††</sup>DASH – Dietary Approaches to Stop Hypertension</p>		

# Lifestyle Modification Guidance and Resources

Healthy Weight: USDA Choose My Plate ([www.choosemyplate.gov](http://www.choosemyplate.gov))



- [Home](#) / [Online Tools](#) / [MyPlate Daily Checklist](#)
- [DAILY CHECKLIST](#)
- [SUPERTRACKER](#)
- [WHAT'S COOKING?](#)
- [BMI CALCULATOR](#)
- [QUIZZES](#)
- [PORTION DISTORTION](#)
- [PREGNANCY WEIGHT GAIN CALCULATOR](#)
- [PRESCHOOLER GROWTH CHARTS](#)

The MyPlate Daily Checklist (formerly Daily Food Plan) shows your food group targets – what and how much to eat within your calorie allowance. Your food plan is personalized, based on your age, sex, height, weight, and physical activity level.

For a more advanced experience, you can create a personal daily food plan using the SuperTracker's MyPlan. You will be asked to create a profile, and you can register to save it if you want. You can then use some or all of the SuperTracker's other features.

**Do you already know which Checklist you are looking for?**

For professional reference, all of the MyPlate Daily Checklists are available below. You should use this table only if you already know which MyPlate Daily Checklist you are looking for. If not, calculate your own MyPlate Daily Checklist. Note: If you are on a mobile device, you may need to rotate your phone to see the full table.

AGE GROUP	CALORIE LEVEL									
Ages 2-3	1,000	1,200	1,400							
Ages 4-8	1,200	1,400	1,600	1,800	2,000					
Ages 9-13	1,600	1,800	2,000	2,200	2,400	2,600	2,800	3,000	3,200	
Ages 14+	1,600	1,800	2,000	2,200	2,400	2,600	2,800	3,000	3,200	



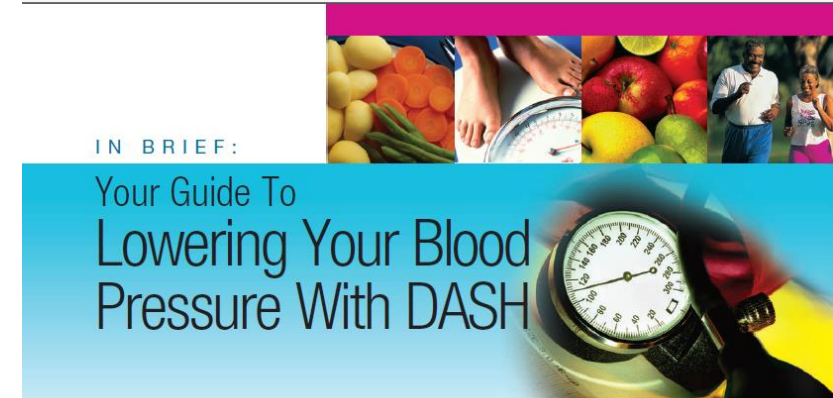
# Lifestyle Modification Guidance and Resources

DASH Diet: [https://www.nhlbi.nih.gov/files/docs/public/heart/dash\\_brief.pdf](https://www.nhlbi.nih.gov/files/docs/public/heart/dash_brief.pdf)

- Diet that emphasizes fruits, vegetables, fat free or low fat milk and milk products, whole grains, fish poultry, beans, seeds, and nuts. Also contains less sodium, sweets added sugars and beverages containing sugars, fats, and red meats.

## Sodium Reduction

- Most of the sodium we consume comes from prepared foods such as deli meats; pizza; salad dressings; taco or package seasonings; soups; packaged rice or pasta dishes; sauces and gravies
- Lower the amount of sodium by;
  - Reading nutrition fact labels
  - Buy low sodium or reduced sodium or no-salt-added products
  - Look for fresh, frozen or canned veg. without added sauces or seasonings
  - Choose fresh or frozen poultry and leans meats
  - Cook more often at home
  - Use herbs and spices instead of salt to your recipes and dishes



What you eat affects your chances of developing high blood pressure (hypertension). Research shows that high blood pressure can be prevented—and lowered—by following the Dietary Approaches to Stop Hypertension (DASH) eating plan, which includes eating less sodium.

High blood pressure is blood pressure higher than 140/90 mmHg\*, and prehypertension is blood pressure between 120/80 and 139/89 mmHg. High blood pressure is dangerous because it makes your heart work too hard, hardens the walls of your arteries, and can cause the brain to hemorrhage or the kidneys to function poorly or not at all. If not controlled, high blood pressure can lead to heart and kidney disease, stroke, and blindness.

But high blood pressure can be prevented—and lowered—if you take these steps:

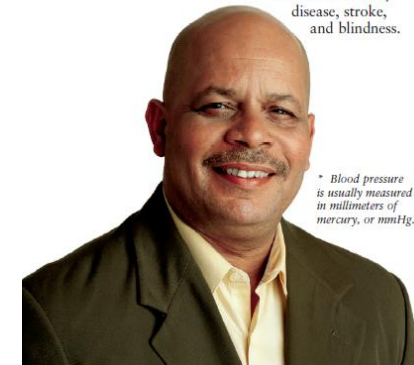
- Follow a healthy eating plan, such as DASH, that includes foods lower in sodium.
- Maintain a healthy weight.
- Be moderately physically active for at least 2 hours and 30 minutes per week.
- If you drink alcoholic beverages, do so in moderation.

If you already have high blood pressure and your doctor has prescribed medicine, take your medicine, as directed, and follow these steps.

### The DASH Eating Plan

The DASH eating plan is rich in fruits, vegetables, fat-free or low-fat milk and milk products, whole grains, fish, poultry, beans, seeds, and nuts. It also contains less sodium; sweets, added sugars, and beverages containing sugar; fats; and red meats than the typical American diet. This heart-healthy way of eating is also lower in saturated fat, *trans* fat, and cholesterol and rich in nutrients that are associated with lowering blood pressure—mainly potassium, magnesium, calcium, protein, and fiber.

\* Blood pressure is usually measured in millimeters of mercury, or mmHg.



# Lifestyle Modification Guidance and Resources

- Moderate drinking : 1 drink per day for women and up to 2 drinks per day for men.
- Heavy drinking is defined as 8 drinks or more for women and 15 or more for men per week.
- Standard Drink:
  - 12 ounces of beer (5% alcohol content).
  - 8 ounces of malt liquor (7% alcohol content).
  - 5 ounces of wine (12% alcohol content).
  - 1.5 ounces or a “shot” of 80-proof (40% alcohol content) distilled spirits or liquor (e.g., gin, rum, vodka, whiskey).
- There is no known safe amount of alcohol use during pregnancy or while trying to get pregnant.



# Lifestyle Modification Guidance and Resources

Physical Activity: 2008 guidelines (<https://health.gov/paguidelines/pdf/paguide.pdf>)

- Adults need at least:

Min /week	Intensity	Example
150 min (2hr /30min)	Moderate	Brisk Walk; Bike Flat; Mowing the Lawn
Muscle Strengthening 2 or more days per week	Working all major muscle groups	Legs, Hips, Back, Abdomen, Chest, Shoulders, and Arms
75 min (1hr/15 min)	Vigorous	Running/ Jogging, Bike Hills

- For extensive health benefits: 300 minutes (5 hours) a week of moderate-intensity aerobic physical activity
- Healthy women should get at least 150 minutes (2 hours and 30 minutes) per week of moderate-intensity aerobic activity, such as brisk walking, during and after their pregnancy. It is best to spread this activity throughout the week
- Healthy women who already do vigorous-intensity aerobic activity, such as running, or large amounts of activity can continue doing so during and after their pregnancy provided they stay healthy and discuss with their health care provider how and when activity should be adjusted over time



# Lifestyle Modification Guidance and Resources

Help | Contact Us | Print Page | Share | Follow MyPlate On Twitter | OMB Approved No. 0584-0635 - Expiration Date: 9/30/2018

Food-A-Pedia | My Plan | Track Food & Activity | My Reports | My Features | Tiana | Groups

## My Coach Center

Activate My Coach Center now by setting up your personal goals.

### Food-A-Pedia >

Look up nutrition info for over 8,000 foods and compare foods side-by-side.

Type in your food here

All Foods



### Food Tracker >

Track the foods you eat and compare to your nutrition targets.

Type in your food here

All Foods



### Physical Activity Tracker >

Enter your activities and track progress as you move.

Type in your activity here

All Activities



### My Weight Manager >

Get weight management guidance; enter your weight and track progress over time.



### My Top 5 Goals >

Choose up to 5 personal goals; sign up for tips and support from your virtual coach.



### Group Challenges >

NEW: Group Leaders can create a healthy eating and/or physical activity challenge.



## Welcome, Tiana

Find out what and how much to eat. Edit your profile to keep your plan current.

View your plan OR the general plan.



ChooseMyPlate.gov | USDA.gov | CNPP | USDA Policies & Links  
 Non-Discrimination Statement | USA.gov | White House | COPPA  
 Mobile Friendly Site

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# Role of a HH Care Manager - Lifestyle Modification Guidance and Resources

- Health Home Care Managers have an opportunity to assist patients
- Knowing and understanding the risk factors and the lifestyle of patients you serve
- Connecting patients to resources and solution focus services
- Ability to connect patient's lifestyle with wellness and well-being outcomes
- Focus on risk avoidance can lead to avoidable hospitalization and other life threatening issues i.e. strokes



# Clinical Protocol for Controlling HTN

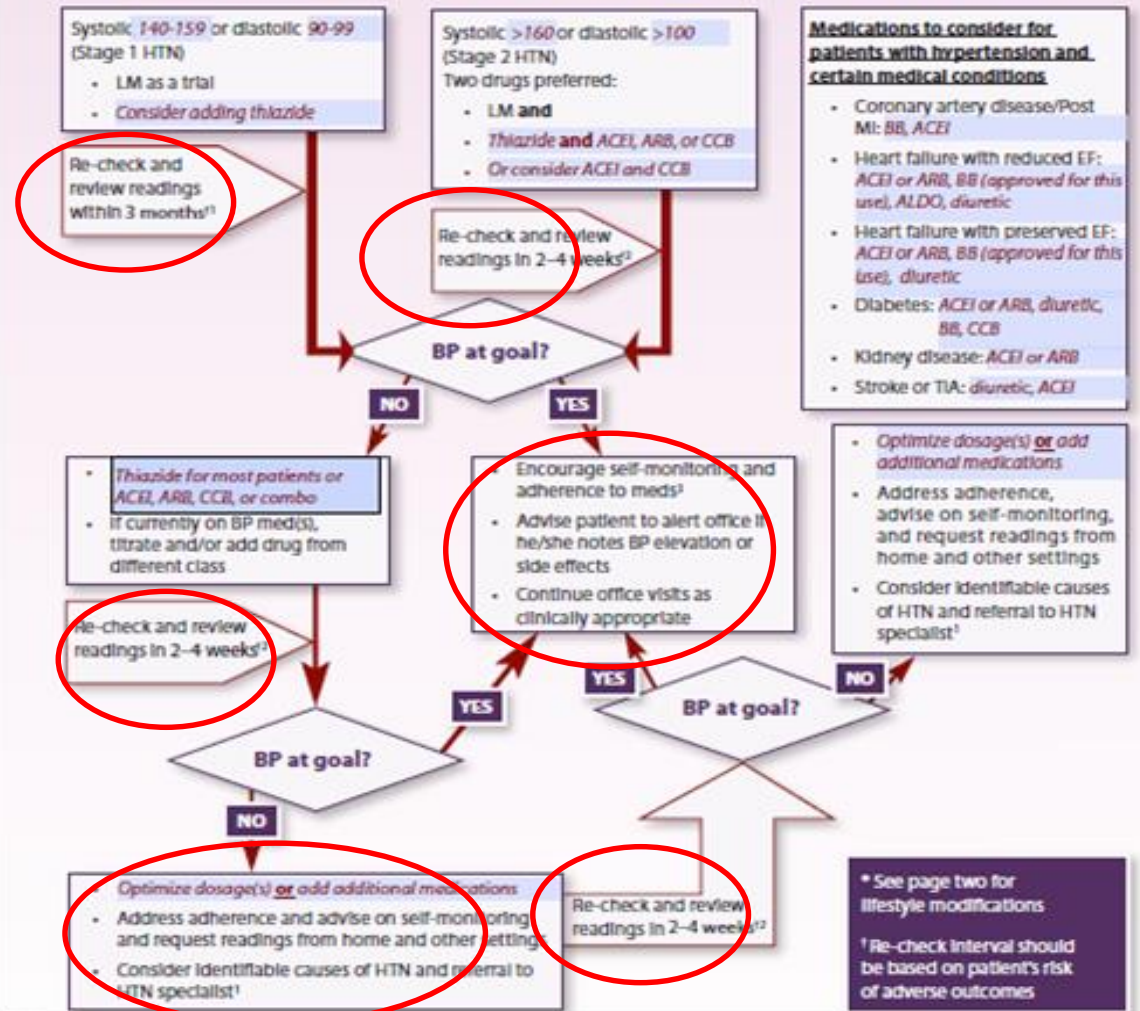
The red, italicized text may be modified by the user to provide specific drug names.

Reset Form

## Name of Practice

### Protocol for Controlling Hypertension in Adults<sup>1</sup>

The blood pressure (BP) goal is set by a combination of factors including scientific evidence, clinical judgment, and patient tolerance. For most people, the goal is <140 and <90; however some individuals may be better served by other BP goals. Lifestyle modifications (LM)\* should be initiated in all patients with hypertension (HTN) and patients should be assessed for target organ damage and existing cardiovascular disease. Self-monitoring is encouraged for most patients throughout their care and requesting and reviewing readings from home and community settings can help in achieving and maintaining good control. For patients with hypertension and certain medical conditions, specific medications should be considered, as listed in the box on the right below.





# Best Practices to Improve HTN Control

- Adopt a HTN treatment protocol
- Promote self-management and lifestyle modification
- Create HTN Registry with reporting functionality
- Assess for medication adherence
  - Morisky Scale 4 part question
- Adopt a team based approach to care
- Train staff on accuracy in BP measurement
- Refer patients to HBPM with provider F/U
  - Train patients on how to take an accurate BP

TABLE 1

## MORISKY ADHERENCE TEST<sup>19</sup>

1. Have you ever forgotten to take your medicine?
2. At times are you not careful about taking your medicine?
3. When you feel better, do you sometimes stop taking your medicine?
4. At times, if you feel worse when you take your medicine, do you stop taking them?

An affirmative answer to any question suggests the presence of an adherence problem.

Basco MR, Smith J. *Primary Psychiatry*. Vol 16, No 8. 2009.

# Blood Pressure Self-Monitoring

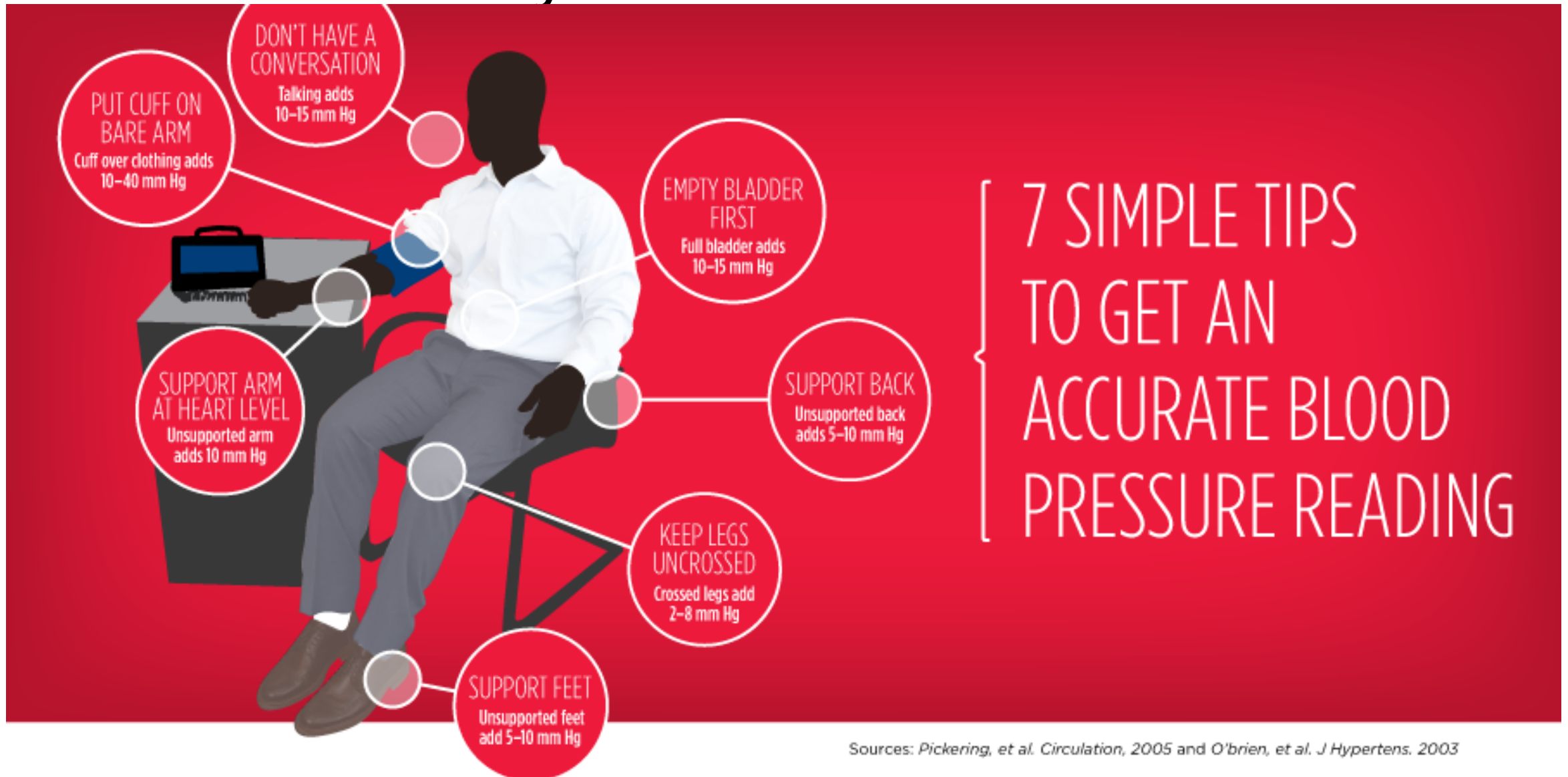
- Self-measured BP monitoring sometimes called home BP monitoring is a patient performed measurement of their own BP outside of the clinical setting.
- Its different from the ambulatory BP 24 hour monitoring
- Should always be used with additional support from a health care professional
- Is proven to improve BP control when a patient/clinician feedback loop is used



# Patient/Clinician Feedback Loop



# Accuracy in BP Measurement



# BP Loaner Program



AMA  
AMERICAN MEDICAL  
ASSOCIATION

JOHNS HOPKINS  
MEDICINE

SELF-MEASURED BLOOD PRESSURE MONITORING PROGRAM:  
ENGAGING PATIENTS IN  
SELF-MEASUREMENT



# BP Loaner Program

## Self-measured blood pressure monitoring program: Engaging patients in self-measurement

Page	Name of document	Audience			
		Practice staff	Patient	Blood pressure monitor loaner program	Patient-owned blood pressure monitor
4	Measuring accurately: Self-measured blood pressure monitoring	X		X	X
6	Clinical competency: Patient self-measured blood pressure at home	X		X	X
8	Measure accurately: A guide for blood pressure measurement	X		X	X
9	How to check a home blood pressure monitor for accuracy	X		X	X
10	Patient selection criteria for a blood pressure monitor loaner program	X		X	
11	Patient enrollment process for a blood pressure device loaner program	X		X	
12	Patient participation and blood pressure device loaner agreement	X		X	
13	Diagnosis, communication, documentation and management	X		X	X
15	Recommended infection prevention process for blood pressure monitors loaned to patients	X		X	
16	BP monitor loaner log	X		X	
17	High blood pressure (hypertension) overview		X	X	X
19	Self-measured blood pressure at home		X	X	X
21	Self-measured blood pressure technique: How to take your own blood pressure		X	X	X
22	Self-measured blood pressure monitoring at home – flow sheet		X	X	X
23	Self-measured blood pressure patient log (wallet card)		X	X	X

# Special Considerations for Women of Reproductive Age

- **Approximately 45% of births nationally are unintended** (mistimed, unplanned or unwanted at the time of conception)
- Unintended pregnancies minimize the ability to prepare for a healthy pregnancy and have proactive conversations with health care providers
- It is important to start a **universal focus on the importance of preconception care** to begin to reduce maternal mortality and morbidity
- Ask about pregnancy intention at each health care visit
- Preconception care is important for all, but crucial for those with chronic conditions, such as hypertension

# Unintended Pregnancy

## Mistimed

- Woman did not want to become pregnant at the time pregnancy occurred but **did want to become pregnant at some point in the future**
- 27% of all pregnancies

## Unwanted

- Woman **did not want to become pregnant then or at any time in the future**
- 18% of pregnancies

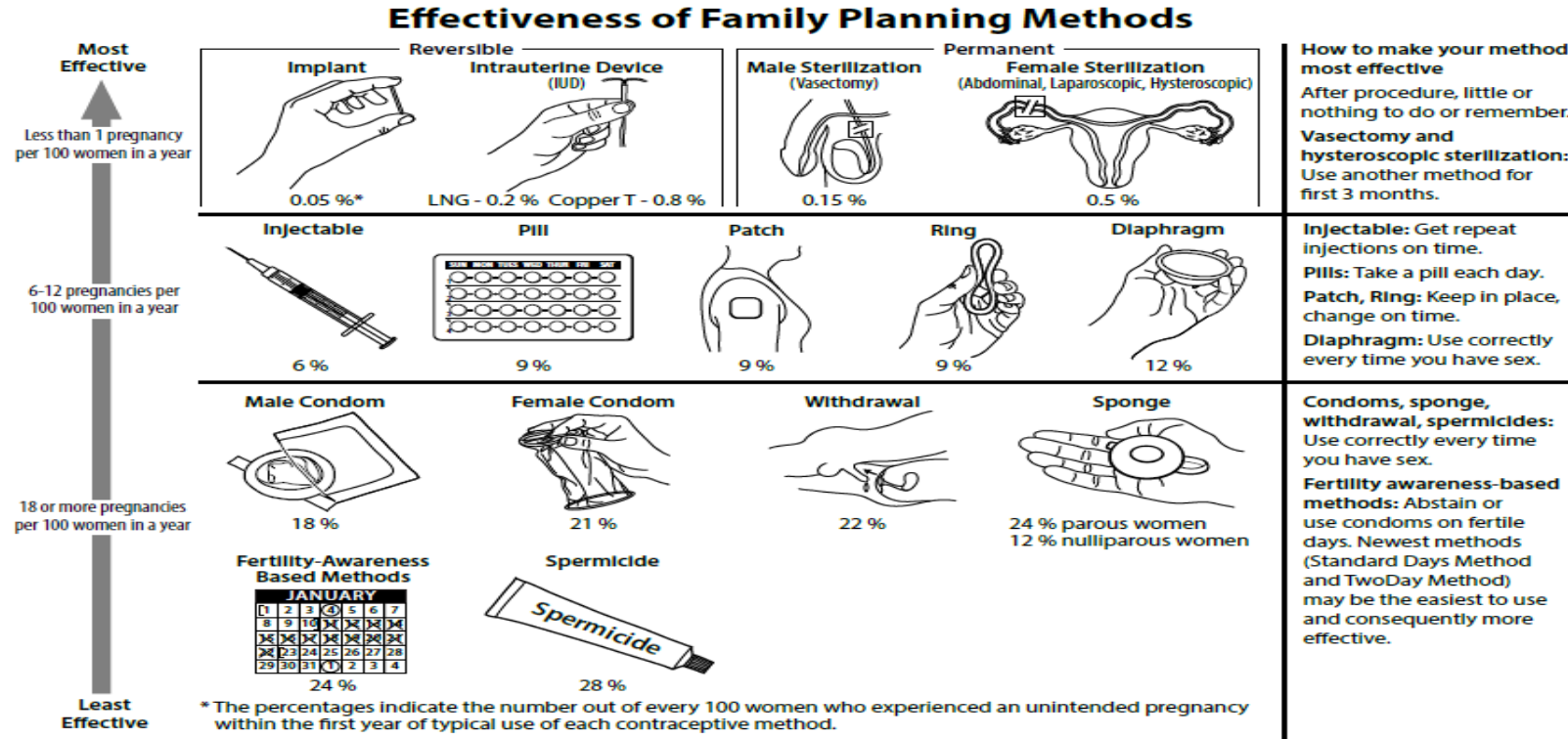
Potential Health Impacts of Chronic Disease



# Preconception/Prepregnancy Counseling

- Desires pregnancy:
  - Discuss with primary health care provider
  - May refer to maternal-fetal medicine specialist
  - Blood pressure under stable control
  - On medication that is safe for use with pregnancy
- Does not desire pregnancy:
  - Refer to primary health care provider or women's health care provider for contraceptive counseling
  - Discuss availability of effective and highly effective contraception

# Contraceptive Methods



**How to make your method most effective**  
 After procedure, little or nothing to do or remember.  
**Vasectomy and hysteroscopic sterilization:**  
 Use another method for first 3 months.

**Injectable:** Get repeat injections on time.  
**Pills:** Take a pill each day.  
**Patch, Ring:** Keep in place, change on time.  
**Diaphragm:** Use correctly every time you have sex.

**Condoms, sponge, withdrawal, spermicides:**  
 Use correctly every time you have sex.  
**Fertility awareness-based methods:** Abstain or use condoms on fertile days. Newest methods (Standard Days Method and TwoDay Method) may be the easiest to use and consequently more effective.

CS 242797



U.S. Department of Health and Human Services  
 Centers for Disease Control and Prevention

**CONDOMS SHOULD ALWAYS BE USED TO REDUCE THE RISK OF SEXUALLY TRANSMITTED INFECTIONS.**

Other Methods of Contraception

**Lactational Amenorrhea Method:** LAM is a highly effective, temporary method of contraception.

**Emergency Contraception:** Emergency contraceptive pills or a copper IUD after unprotected intercourse substantially reduces risk of pregnancy.

Adapted from World Health Organization (WHO) Department of Reproductive Health and Research, Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs (CCP). Knowledge for health project. Family planning: a global handbook for providers (2011 update). Baltimore, MD; Geneva, Switzerland: CCP and WHO; 2011; and Trussell J. Contraceptive failure in the United States. Contraception 2011;83:397-404.



Department of Health

# Importance of Preconception Care

- Important opportunities to improve outcomes for mother and baby
- Requires active patient participation and individualized management plans
- Topics addressed include: diet, weight, exercise, smoking, use of alcohol and drugs, environmental risks, vaccination status
- ***Management of medical conditions***

# HH Care Manager's Role - Women of Reproductive Age

- HH Care Managers should discuss with women of reproductive age their pregnancy considerations
  - Especially since the patients served by HHs have chronic conditions
- Ask about pregnancy intention
- Connect the patient or ensure involved providers are discussing preconception care with the patient
  - How will the patient's chronic condition be impacted by a pregnancy?
- If the patient is or becomes pregnant, ensure connection to providers that can work with the patient to address chronic condition and the pregnancy
  - Ensure prenatal services are in place



# Characteristics Associated with Maternal Deaths: Provider-Identified Risk Factors

	2006-2008 (n=125)	2012-2013 (n=60)*
At least one risk factor identified	64%	85%
Hematologic	19% (n=29)	<b>25% (n=15)</b>
Hypertension	17% (n=26)	<b>17% (n=10)</b>
Cardiac	13% (n=20)	<b>18% (n=11)</b>
Pulmonary	9% (n=13)	<b>18% (n=11)</b>
Endocrine	8% (n=12)	<b>17% (n=10)</b>
Psychiatric disorders	5% (n=8)	<b>12% (n=7)</b>

\*Preliminary 2012-2013 data

# Best Practices for Pregnancy

## *Before Pregnancy*

- Lifestyle Changes: limit salt intake, get regular physical activity, lose weight if overweight/obese
- Take prescribed medications

## *While Pregnant*

- Obtain prenatal health care on regular basis
- Avoid alcohol and tobacco
- Avoid OTC medications without medical care provider's consent

# Best Practice Resources

## Professional Resources

- AMA/Johns Hopkins SMBP Monitoring Program
- Million Hearts
- Accuracy in BP Measurement-training module (Contact Tiana Wyrick for information)
- CHW online training module
  - HTN
  - Asthma
  - Diabetes
  - PreDiabetes
  - Self-Management
- [CVD Health and Risk Reduction Guidelines & HTN Guidelines for Children and Adolescents](#)

## Patients Community Based Resources

- YMCA- BPSM, Health Heart Ambassadors
  - Westchester, Yonkers, Syracuse
  - Albany and Yates County (coming soon)
- Chronic Disease Self-Management Programs: Contact Celest Harp at: [managemyhealth@health.ny.gov](mailto:managemyhealth@health.ny.gov)
  - January 2018 Webinar
- Home BP Monitoring



# Resources for Contraception and Hypertension During Pregnancy

## Contraceptive Counseling and Resources:

- <https://www.acog.org/-/media/Departments/LARC/ContraceptiveCounselingReplaceable.pdf>
- <https://www.cdc.gov/mmwr/volumes/65/rr/rr6503a1.htm>
- [https://www.cdc.gov/reproductivehealth/contraception/pdf/summary-chart-us-medical-eligibility-criteria\\_508tagged.pdf](https://www.cdc.gov/reproductivehealth/contraception/pdf/summary-chart-us-medical-eligibility-criteria_508tagged.pdf)
- <https://www.cdc.gov/reproductivehealth/contraception/index.htm>

## Hypertension During Pregnancy:

- [https://www.health.ny.gov/professionals/protocols\\_and\\_guidelines/hypertensive\\_disorders/2013\\_hdp\\_executive\\_summary.pdf](https://www.health.ny.gov/professionals/protocols_and_guidelines/hypertensive_disorders/2013_hdp_executive_summary.pdf)
- <https://www.nhlbi.nih.gov/health/resources/heart/hbp-pregnancy>
- <http://www.marchofdimes.org/complications/high-blood-pressure-during-pregnancy.aspx#>





# Additional Patient Educational Resources

- Million Hearts Tools: <https://millionhearts.hhs.gov/tools-protocols/tools.html>
- AHA: [http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/KnowYourNumbers/Monitoring-Your-Blood-Pressure-at-Home\\_UCM\\_301874\\_Article.jsp#.WawkBOSWyUk](http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/KnowYourNumbers/Monitoring-Your-Blood-Pressure-at-Home_UCM_301874_Article.jsp#.WawkBOSWyUk)
- YMCA: Blood Pressure Self-Monitoring Program: <http://www.ymca.net/blood-pressure-self-monitoring/>
- Physical Activity <https://www.cdc.gov/physicalactivity/index.html>
- Birth Control: <https://www.bedsider.org/>
- Planning for Pregnancy: <https://www.cdc.gov/preconception/planning.html>

# Thank You!



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