

## IMPLICATIONS OF CHRONIC HYPERTENSION

### Hypertension Severity and Risk of Developing Atrial Fibrillation

**Study Population**  
~9500 participants from REGARDS

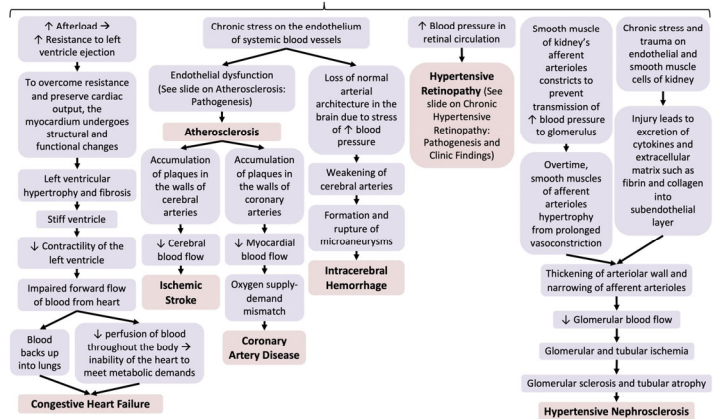
**Follow-up**  
9.3 years

**BP categories**

- (1) **Normotension:** SBP<120 and DBP<80 without meds
- (2) **Prehypertension:** SBP 120–129 and DBP<80 without meds
- (3) **Controlled HTN:** SBP<130 and DBP<80 on  $\leq 3$  anti-HTN meds
- (4) **Uncontrolled HTN:** SBP $\geq 130$  and/or DBP $\geq 80$  on  $< 3$  anti-HTN meds
- (5) **Controlled aTRH:** SBP<130 and DBP<80 on  $\geq 4$  anti-HTN meds
- (6) **Uncontrolled aTRH:** as SBP $\geq 130$  and/or DBP $\geq 80$  mmHg on  $\geq 3$  anti-HTN meds

	OR for incident AF (95% CI)
Normotension	Reference
Prehypertension	1.25 (0.86, 1.82)
Controlled HTN	1.72 (1.30, 2.29)
Uncontrolled HTN	1.48 (1.13, 1.94)
Controlled aTRH	2.95 (1.60, 5.43)
Uncontrolled aTRH	2.47 (1.76, 3.48)

The population attributable risk of hypertension for dementia is 15.8%

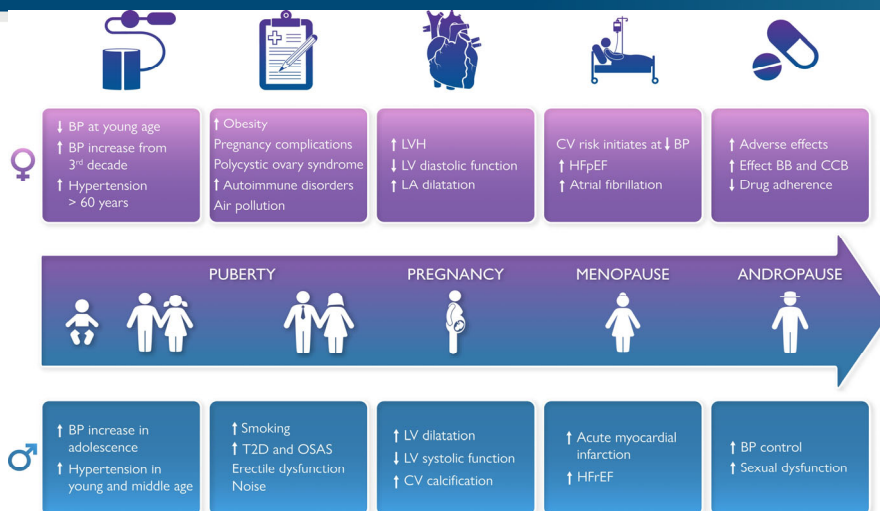


Legend: Pathophysiology Mechanism Sign/Symptom/Lab Finding Complications Published December 4, 2021 on [www.thecaligaryguide.com](http://www.thecaligaryguide.com)

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SEX DIFFERENCES IN HYPERTENSION. BP, BLOOD PRESSURE; CV, CARDIOVASCULAR; T2D, TYPE 2 DIABETES; OSAS, ...

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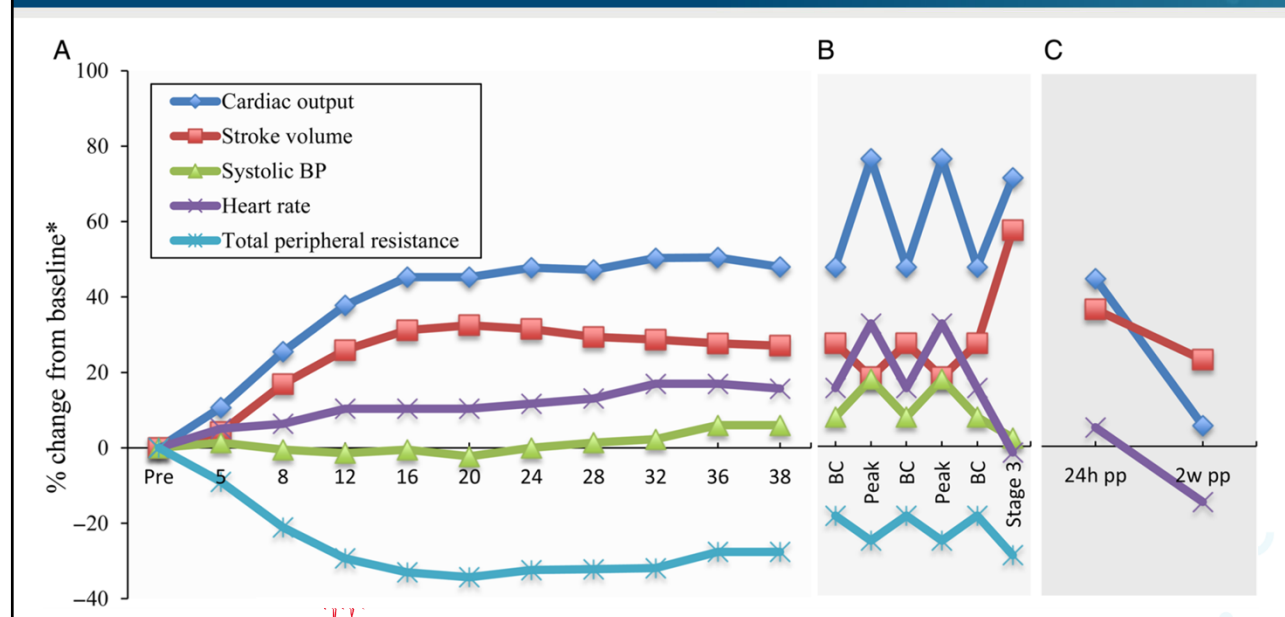
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## FIRST PREGNANCIES SHOULD BE UTILIZED AS AN EARLY LIFE STRESS TEST TO IDENTIFY WOMEN WHO MAY HAVE CVD RISK

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## PREGNANCY – A STRESS TEST



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## GESTATIONAL HYPERTENSIVE DISORDERS

### Preeclampsia-Eclampsia

New onset hypertension ( $\geq 140/90$ ) after 20 weeks of gestation AND is associated with significant proteinuria OR other end-organ dysfunction

### Gestational Hypertension

New onset hypertension ( $\geq 140/90$ ) after 20 weeks of gestation without proteinuria or other preeclampsia findings

### Hypertensive Disorders of Pregnancy

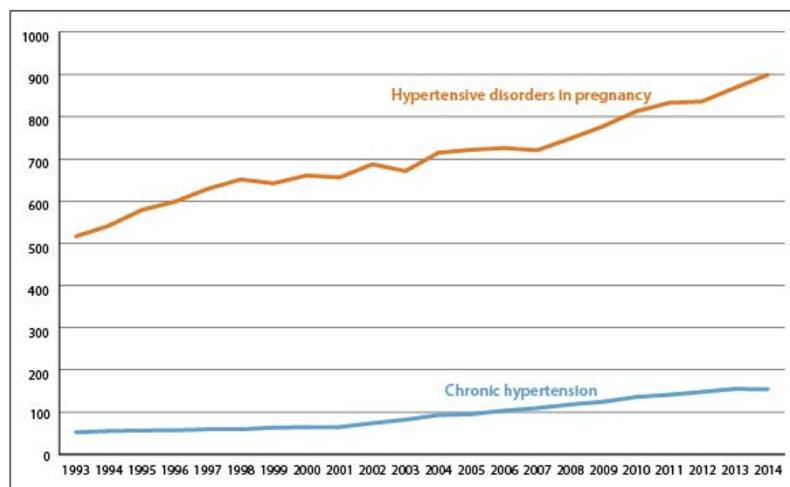
### Chronic Hypertension

Hypertension ( $\geq 140/90$ ) that precedes pregnancy or develops before 20 weeks of gestation

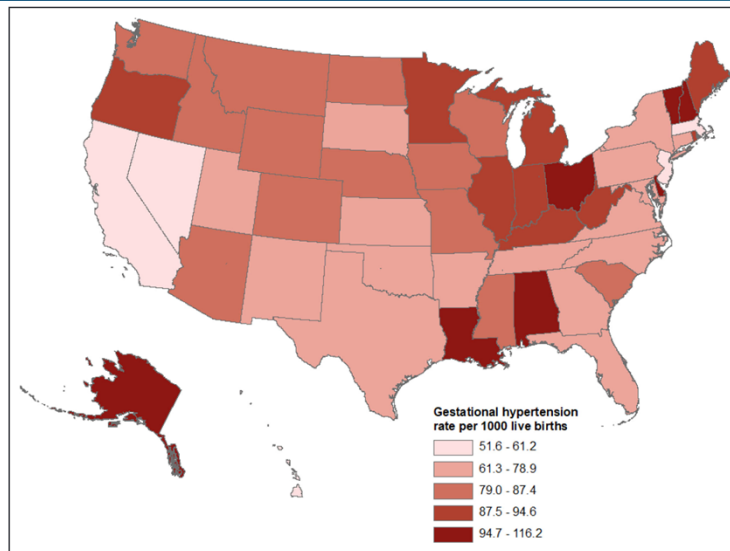
### Chronic Hypertension with Superimposed Preeclampsia

Chronic hypertension with preeclampsia features (new-onset proteinuria or other end-organ dysfunction)

## TRENDS IN HYPERTENSIVE DISORDERS OF PREGNANCY PER 10 000 DELIVERY HOSPITALIZATIONS



## STATE-LEVEL RATES OF DE NOVO HYPERTENSION IN PREGNANCY PER 1000 LIVE BIRTHS, UNITED STATES, 2019



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## PREGNANCY AND HYPERTENSION

### American College of Obstetricians and Gynecologists definitions for Hypertensive Disorders of Pregnancy

<b>Hypertension in pregnancy</b>	Systolic BP $\geq 140$ , or diastolic BP $\geq 90$ mm Hg, or both measured on 2 occasions at least 4 hours apart
<b>Severe-range hypertension</b>	Systolic BP $\geq 160$ , or diastolic BP $\geq 110$ mm Hg, or both measured on 2 occasions at least 4 hours apart (unless antihypertensive therapy initiated before this time)
<b>Chronic hypertension</b>	Hypertension diagnosed or present before pregnancy, or before 20 weeks of gestation; or hypertension that is diagnosed for the first-time during pregnancy and that does not resolve in the postpartum period
<b>Gestational hypertension</b>	Hypertension diagnosed after 20 weeks of gestation and a previously normal BP
<b>Chronic hypertension with superimposed preeclampsia</b>	Preeclampsia in a woman with a history of hypertension before pregnancy, or before 20 weeks of gestation
<b>Preeclampsia</b>	Hypertension in pregnancy $>20$ weeks of gestation and previously normal BP or severe range hypertension, in addition to at least 1 of the following: <ul style="list-style-type: none"> <li>Proteinuria (<math>\geq 300</math> mg/24-hour urine, or PCR <math>\geq 0.3</math>, or dipstick 2+ only if other quantitative methods not available)</li> <li>Renal insufficiency (creatinine <math>&gt; 1.1</math> mg/dL or doubling of the serum creatinine concentration in the absence of other renal disease)</li> <li>Thrombocytopenia (<math>&lt;100 \times 10^9/L</math>)</li> <li>Impaired liver function (ALT/AST <math>\geq 2 \times</math> upper limit of normal)</li> <li>Pulmonary edema</li> <li>New-onset headache or visual disturbances (not due to alternative diagnoses)</li> </ul>
<b>Preeclampsia with severe features</b>	<ul style="list-style-type: none"> <li>Severe range hypertension (Systolic BP <math>\geq 160</math>, or diastolic BP <math>\geq 110</math> mm Hg, or both)</li> <li>Renal insufficiency (creatinine <math>&gt; 1.1</math> mg/dL or doubling of the serum creatinine concentration in the absence of other renal disease)</li> <li>Thrombocytopenia (<math>&lt;100 \times 10^9/L</math>)</li> <li>Impaired liver function (ALT/AST <math>\geq 2 \times</math> upper limit of normal)</li> <li>Severe persistent right upper quadrant or epigastric pain unresponsive to medications</li> <li>Pulmonary edema</li> <li>New-onset headache or visual disturbances (not due to alternative diagnoses)</li> </ul>

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