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# CardioMetabolic Health in Women 2020





# Cardiovascular Disease in Women

- ▶ Overall decline in CVD mortality past 40 years
- ▶ But mortality in younger women has **plateaued** since 2000!
- ▶ Incidence of MI (myocardial infarction or “heart attack”) dramatically increases following menopause?? due to age or other? unclear
- ▶ CVD leading cause of death in women

# Cardiac Risks Factors in Women

- ▶ Risks include history of a prior event, age over 55, family hx of premature CVD
- ▶ Dyslipidemia-low HDL or high LDL
- ▶ Smoking may account for 50% of all coronary events in women!!
- ▶ Hypertension (high BP)
- ▶ Chronic kidney disease
- ▶ Inflammatory/rheumatic diseases

# Metabolic Risks for CVD in Women

- ▶ Diabetes
- ▶ Metabolic syndrome: obesity, HTN, glu intol, hi triglyc, low HDL
- ▶ Post menopausal status and HRT neither prevents nor treats it
- ▶ Pregnancy related: eclampsia, preeclampsia, Gestational HTN, GESTATIONAL DIABETES
- ▶ Psychological stresses, depression, anxiety, PTSD
- ▶ Central obesity, obesity
- ▶ Glucose intolerance, prediabetes
- ▶ Sedentary lifestyle
- ▶ Estrogen-progestin contraceptives in high risk women (?2-3 x increased risk CVD)
- ▶ ?early menarche?, early menopause?
- ▶ Premenstrual syndrome
- ▶ Polycystic Ovarian Syndrome



# Metabolic-Cardiac Health in Women 2020

ONE WOMAN ENDOCRINOLOGIST'S VIEW  
AND WHAT WE CAN AND SHOULD DO



What do the terms  
CardioMetabolic  
(MetabolicCardiac) really  
mean???

Where do these terms come from?

Why do we care?



▶ CardioMetabolic refers to the overlap of Heart/vascular disease and diseases related to Diabetes Obesity and precursor syndromes

Together these diseases and their complications currently account for over 50% of deaths in women. The term does not describe one particular disease but a continuum of disease risk and outcomes

# What Are some of the Stats?

- ▶ Heart disease is the leading cause of death for 1 in 3 American women
- ▶ Certain factors can help identify patients at highest risk such as
  - ▶ hypertension (high blood pressure)
  - ▶ smoking
  - ▶ high cholesterol
  - ▶ family history
  - ▶ obesity
  - ▶ physical inactivity
  - ▶ stress
  - ▶ **Diabetes!!!!**



Diabetes is equal in risk for developing a heart attack as already having had one!

▶ So how common is diabetes?

Pre diabetes and Diabetes are now estimated to affect nearly half the adult population in the US and as many as a quarter of the children and adolescents!!!!

▶ But what about women???



Women have additional specific risk factors for development of glucose intolerance at an early age including:

- ▶ Gestational diabetes-most common endocrine disorder of pregnancy
- ▶ Polycystic ovarian syndrome which can be associated with obesity, hyperlipidemia and insulin resistance syndromes including prediabetes and diabetes
- ▶ Obesity
- ▶ Preeclampsia

# Gestational Diabetes

- ▶ Causes materno fetal risks but can be treated if diagnosed
- ▶ Increases the lifetime risk of developing early prediabetes and type 2 diabetes that requires lifelong monitoring
- ▶ Can be prevented in subsequent pregnancies and post partum with lifestyle modification and sometimes medication

# Polycystic Ovarian Syndrome

- ▶ Can (but not always) have a myriad of presentations as early as preteen including acne, hirsutism, irregular menstrual cycles, infertility, weight gain and central obesity
- ▶ Can be associated with lab abnormalities of glucose intolerance and dyslipidemias
- ▶ Again is treatable if diagnosed and treated especially to prevent insulin resistance and obesity. CV risks can be reversed by preventing diabetes and treating high lipids

# Premenstrual Syndrome

- ▶ Refers to constitutional symptoms causing significant life interruption
- ▶ Associated with physical and emotional stresses
- ▶ Physical and emotional symptoms the days prior to onset of menses
- ▶ Associated with future risk hypertension

# How else might Women be exposed to additional Cardiometabolic Risk?



- ▶ Contraceptives ?
- ▶ Hormonal manipulations to become pregnant
- ▶ Pregnancy related weight gain
- ▶ Clotting risks associated with some pregnancies
- ▶ Preeclampsia
- ▶ Peri and Postmenopausal Hormone Replacement Therapy

# HRT is known to increase risk of breast cancer but also HRT

- ▶ Doubles the risks of clotting disorders such as Thrombophlebitis in some women
- ▶ Increase risk of stroke in susceptibles
- ▶ May increase certain lipids such as triglycerides and certain other lipids subgroup that could predispose to atherosclerosis (blood vessel blockage)
- ▶ May affect BP and in some may increase weight and elevate BP

# Yet...every woman has to deal with hormonal transitions:

- ▶ Puberty/PMS syndromes
- ▶ Contraceptive needs
- ▶ Pregnancy
- ▶ Postpartum/lactation
- ▶ Hormone related mood dysrhythmias
- ▶ Hormonally caused weight fluctuations
- ▶ Perimenopause and Menopause
- ▶ Hormonal and older age related bone and muscle loss leading to frailty

# Obesity

- ▶ Women experience a myriad of hormonal fluctuations that can trigger physiologic weight gain and fat accumulation ie puberty, menarche, pregnancy, lactation, menopause and aging. All of these can also cause stress
- ▶ Obesity causes resistance to the action of insulin, so relative insulin deficiency and eventually pre diabetes
- ▶ Diabetes affects both large and small blood vessels resulting in vascular disease, thickening of vascular walls, leakage of small proteins in the kidney, abnormalities in the liver and kidney and nerves
- ▶ Fat cells elaborate inflammatory agents

# What about Stress???

- ▶ Mounting evidence that stress can cause glucose intolerance, worsen diabetes and increase CV risk
- ▶ Also evidence that stress reduction can assist CV disease remission, improved BP, improve glucose intolerance and reduce risk of CV disease reoccurrence
- ▶ BUT WOMEN FACE MOUNTING STRESSORS AND RECEIVE INADEQUATE SUPPORT FOR STRESS REDUCTION...

# Hormonal Management House

## Rules

- ▶ Transitions need to be discussed w women in advance to prepare them optimally
- ▶ Choices should be highly individualized
- ▶ Risks and benefits of different approaches should be explained on basis of medical evidence and physician experience
- ▶ Hormonal support can be individualized and risks minimized but never eliminated.
- ▶ Monitor regularly and keep a dialogue going between doctor and patient!!!

# New Stresses for WOMEN

- ▶ Managing careers and traditional family/home roles
- ▶ Most women report they do not have time to exercise regularly, meditate or recreate
- ▶ More single parenting by young women than men resulting in work plus single parent demands
- ▶ Women in middle years assist their children, grandchildren as well as parents as caretakers often into their 70s!!!
- ▶ Many women do not have time or resources for optimal nutritional meals. Lean body mass is lost.
- ▶ More alcohol intake for stress reduction, “self medication” worsens weight gain and mood disorders

# Primary prevention of CV disease in women is poor

- ▶ Women are not taught the signs and symptoms of heart disease and diabetes that differ from men's
- ▶ There is much less data, fewer studies, less research specifically in women's cardiometabolic health. They receive less screening and treatment because their risk was traditionally thought to be lower than men's

# What Could Help?

- ▶ Education
- ▶ Rigorous screening and monitoring physical and psychological
- ▶ Evidence based lifestyles of regular exercise and healthy diets that promote normal body weights
- ▶ Avoidance of excessive alcohol, pain medication and sedatives
- ▶ Increased access to mental health services
- ▶ Changes in the workplace
- ▶ Health incentives



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# ...it takes a village

Cultural and ethnic sensitivity

Multidisciplinary

Financial security

Legal support when needed can be crucial

Awareness of abuse and neglect of women of all ages

Awareness of addiction risks, eating disorders, body dysmorphism

”



And what about ...

sex  
sex  
sex  
sex  
Sex

Sex.....SEX?



In a whirlwind of Viagra,  
Levitra, Cialis and hormones  
and clinics for men's ED...

No successful drug therapy for  
women's arousal disorders, anorgasmia  
or libido disorders exists

Local bioidentical hormones are rarely  
encouraged or even offered to  
women

More drug research needed in this area of women's metabolic health as sexual satisfaction and health may improve cardiovascular and metabolic health, motivate heart and diabetes prevention





Obesity prevention and treatment is the single most critical metabolic goal to prevent Cardiometabolic diseases in an environment that encourages diverse body types and images



Women's Cardio metabolic health will not improve in a setting of psychosocial stress, inadequate replenishment and self or external criticism.

# What Might A Community Do to Improve Womens CardioMetabolic Health?

Create a multidisciplinary comprehensive Women's Health and Resource Center dedicated to education and implementation of evidence and experience based medical, mental health, lifestyle, and social support to women of all ages