



SEX AND GENDER

Curricular Assessment and Revision (SG-CAR)

— **Faculty Development Toolkit** —

Five Steps for Faculty
Educational
Content Review



SEX AND GENDER

Curricular Assessment and Revision (SG-CAR)

— Faculty Development Toolkit —

Welcome to the Sex and Gender Curricular Assessment and Revision (SG-CAR) validated Faculty Development Toolkit. We are glad you would like to integrate the newest sex and gender content into your curricular materials and teaching. For those new to the field, we hope this toolkit will provide you with an easy way to get started. For those who are more experienced, we hope this toolkit will provide you with a new tool for updating your curricular content.



School of Medicine
Greenville

UNIVERSITY OF SOUTH CAROLINA

Funded by: **National Institutes of Health: R25 Grant NIH/ORWH, 1 R25 LM014335-01**

Galvanizing Health Equity Through Novel and Diverse Educational Resources (GENDER) Research Education Grant

Project: Sex and Gender Curricular Assessment and Revision (SG-CAR)

The 5 Steps for Faculty Content Review



Step 1 Use the Assessment Scale

Review your materials for sex and gender content by using the assessment scale.



Step 2 Use the Checklists

Use the two checklists to identify what is inaccurate, what is missing, and what could be improved.



Step 3 Use the Resources

Use the available resources to learn more about sex and/or gender as it relates to your topic. Website: SexandGenderHealth.org, PubMed® Search Tool, Textbook: *How Sex and Gender Impact Clinical Practice*



Step 4 Edit the Content

Make any image or text changes needed to bring your materials up-to-date.



Step 5 Reassess with the Assessment Scale and Checklists

Use the assessment scale and appropriate checklist to reassess your materials.



Step 1

Use this Scale to Assess Sex and/or Gender Content in Your Current Educational Materials

Review your materials for sex and gender content by using the assessment scale. Consider if your content is:

1. BIASED

Stigmatizing, reinforcing stereotypes, wrong use of language

2. BLIND

Ignores sex and/or gender differences, similarities, or lack of evidence.

3. AWARE

Acknowledges the differences, similarities, or lack of evidence without mentioning the mechanism or contributing factors related to sex and/or gender.

4. EXPLANATORY

Acknowledges the differences, similarities, or lack of evidence related to sex and/or gender, discusses the reasons, contributing factors, or mechanisms, (If available evidence doesn't exist, then addresses the knowledge gaps). Doesn't discuss how this information could be applied to a clinical setting.

5. TRANSLATIONAL

Includes knowledge translation strategies to improve care for patients with regard to their sex and gender. Integrates sex and gender specific content as noted above. Considers gender norms, roles, behaviors, expectations, and relations for people of all genders.

Adapted from : Canadian Institutes of Health Research (CIHR). Sex/Gender-responsive assessment scale for health research. Government of Canada. Accessed February 24, 2025. <https://cihr-irsc.gc.ca/e/49335.html> and World Health Organization (WHO). Gender mainstreaming for health managers: a practical approach. Geneva: World Health Organization; 2011.



Assess: Slide Example from a Possible Teaching Deck

Aware: Acknowledges there are differences in Epidemiology without providing further information.

Biased: Reinforces the stereotype presentation as male with chest pain radiating to left arm.

Blind: Ignores varying etiologies more common in women.

Blind: Ignores sex-specific risk factors for women.

Blind: No acknowledgment of alternative options to manage causes of MI more common in women. No discussion of the variability in outcome based on sex of the patient.

Myocardial Infarction

Epidemiology

Men > Women
Major contributor to mortality

Etiology

Rupture of atherosclerotic plaque with thrombosis

Risk Factors

Genetic Disposition
Metabolic Syndrome: Htn, DM, Hchol
Smoking

Cold sweat
Radiating chest pain
Nausea, vomiting
Dyspnea
Epigastric pain

Diagnosis

ECG: STEMI vs NSTEMI
Labs: Troponin
Echo
Coronary Angiography

Management

STEMI:
-Emergent Coronary Artery Catheterization with PCI
-Thrombolytics
NSTEMI
-Risk assessment for PCI
-Medical Mgt



Step 2

Use the Checklists

Use this checklist to identify what is inaccurate, what is missing, and what could be improved in your educational content (e.g., lectures, simulation cases, or other teaching materials).

Does your educational content address differences, similarities, or lack of evidence related to sex and/or gender for the following?

Checklist for Educational Materials	Yes	No	NA
Terminology (correct use of sex and gender)			
Epidemiology (Incidence, prevalence, burden, mortality)			
Clinical presentation and history			
Physical exam			
Laboratory/imaging			
Etiology			
Risk factors			
Screening/Prevention/Diagnosis			
Treatment (pharmacological, nonpharmacologic, surgical)			
Management (lifestyle changes, risk factor modification, pharmacological management)			
Pregnancy			
Prognosis, sequelae, comorbidities			
Influence of sex hormones/genetics			
Socio-cultural influence (gender roles, norms, identities)			
Access to healthcare			
Example clinical case			
Knowledge gap in the literature			

Adapted from : Jenkins MR, Newman CB, eds. *How Sex and Gender Impact Clinical Practice : An Evidence-Based Guide to Patient Care*. Academic Press, an imprint of Elsevier; 2021.



Checklist for Educational Materials	Yes	No	NA
Terminology (correct use of sex and gender)		✓	
Epidemiology (Incidence, prevalence, burden, mortality)	✓		
Clinical presentation and history		✓	
Physical exam		✓	
Laboratory/imaging		✓	
Etiology		✓	
Risk factors		✓	
Screening/Prevention/Diagnosis		✓	
Treatment (pharmacological, nonpharmacologic, surgical)		✓	
Management (lifestyle changes, risk factor modification, pharmacological management)		✓	
Pregnancy		✓	
Prognosis, sequelae, comorbidities		✓	
Influence of sex hormones/genetics		✓	
Socio-cultural influence (gender roles, norms, identities)		✓	
Access to healthcare		✓	
Example clinical case		✓	
Knowledge gap in the literature		✓	

TIP:

Only Yes or No for the first round on the checklist should be checked, as you haven't utilized the resources yet to know if something is NA.

Corresponding
initial slide

Myocardial Infarction

Epidemiology

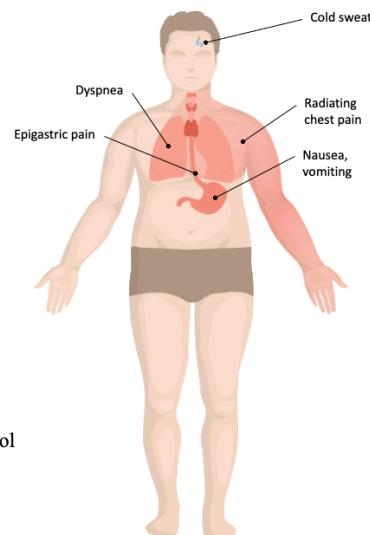
Men > Women
Major contributor to mortality

Etiology

Rupture of atherosclerotic plaque with thrombosis

Risk Factors

Genetic Disposition
Metabolic Syndrome: Htn, DM, Hchol
Smoking



Diagnosis

ECG: STEMI vs NSTEMI
Labs: Troponin
Echo
Coronary Angiography

Management

STEMI:
-Emergent Coronary Artery Catheterization with PCI
-Thrombolytics
NSTEMI
-Risk assessment for PCI
-Medical Mgt

Use this checklist for bedside clinical teaching discussions.

Does your educational content address differences, similarities, or lack of evidence related to sex and/or gender for the following?

Checklist for Clinical Settings	Yes	No	NA
Communication			
Communication of patient's preferred pronouns			
Recognizing patient and provider communication styles and incorporating a gendered approach to patient-provider communication			
Patient history			
Sex and gender focused questions when applicable to the chief complaint			
Organ inventory check			
Use of sex hormones			
Asking about LMP for chief complaints other than OB/Gyn			
Physical examination			
Approaching a patient based on gendered assumptions			
Attention to the differences in normal findings for men and women			
Diagnostics			
Sex differences in interpretation and/or limitations of the diagnostic tests			
Treatment plan / management plan			
Prognosis and outcome			
Knowledge gaps			

Adapted from : Jenkins MR, Newman CB, eds. *How Sex and Gender Impact Clinical Practice : An Evidence-Based Guide to Patient Care*. Academic Press, an imprint of Elsevier; 2021.

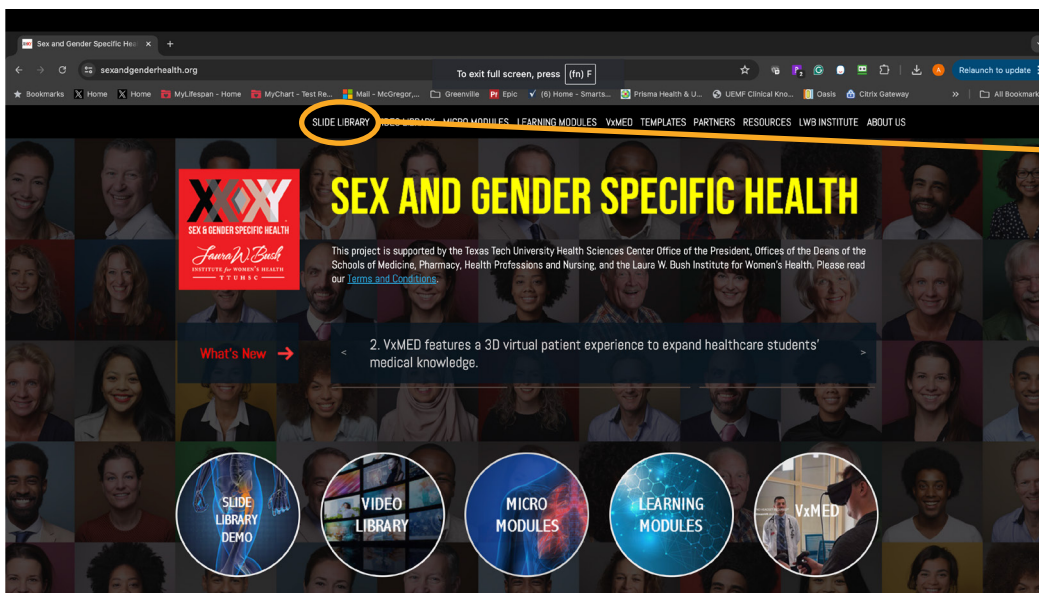


Step 3

Use the Resources

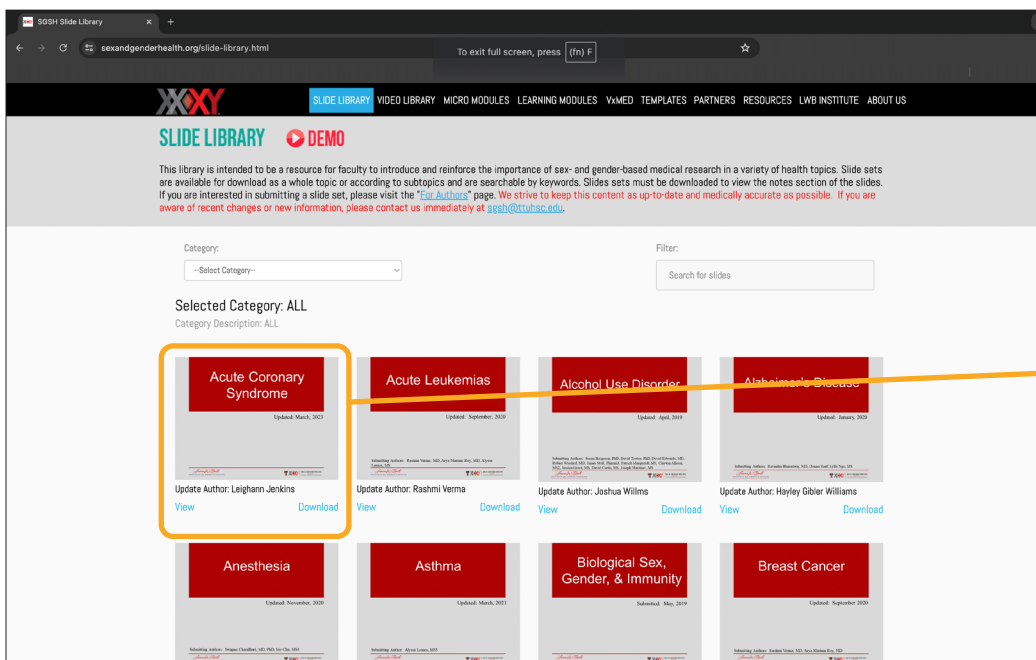
Use **SexandGenderHealth.org** to access the latest in *free* sex and gender medical curricular materials (slide library, PubMed® search tool, recommended textbooks).

TIP: Choose the resource you want to use based on the time you have available to edit your content, the level of your learners, and your own knowledge and experience.



To access slide decks focused on sex and gender specific health:

Select **Slide Library**



Free slide decks for downloading and use



Resource: SexandGenderHealth.org

TOPIC	SLIDE
Epidemiology	4
Anatomy	11-12
Risk Factors	14-18
Microvascular Disease	20-21
Presentation	23-26
Presentation	28
Treatment	32
Treatment	34-36
Treatment	39
Other Considerations	42-47
Social Considerations	49-50

When in presentation mode, click this button to advance to each sex and gender difference slide.

Sex & Gender Difference Slides

Jane W. Bush
INSTITUTE for WOMEN'S HEALTH

T X O Y SEX & GENDER SPECIFIC
TEACH, LEARN, AND ADVOCATE FOR WOMEN'S HEALTH

Table 1: Risk Factors for Ischemic Heart Disease of Sex

Traditional Risk Factors (TRFs)	Female Specific Factors	Female Predominant Factors
Hypertension	PCOS	Autoimmune Disorders
Smoking	Oral Contraceptives	Anemia
Dyslipidemia	Hormone Replacement Therapy	Psychosocial Factors (depression, anxiety, PTSD)
Age	Adverse Pregnancy Outcomes	
Diabetes Mellitus	Hypoestrogen	

Risk Factors



Jane W. Bush
INSTITUTE for WOMEN'S HEALTH

ACS **without** chest pain

- Chest pain \neq disease severity¹
- More commonly young **women**, elderly & diabetics²
- \uparrow Morbidity & Mortality³
- Independently associated with being **female**

Presentation Without Chest Pain



Jane W. Bush
INSTITUTE for WOMEN'S HEALTH

T X O Y SEX & GENDER SPECIFIC
TEACH, LEARN, AND ADVOCATE FOR WOMEN'S HEALTH

Social Considerations

Acute Coronary Syndrome

Jane W. Bush
INSTITUTE for WOMEN'S HEALTH

T X O Y SEX & GENDER SPECIFIC
TEACH, LEARN, AND ADVOCATE FOR WOMEN'S HEALTH

TIP:

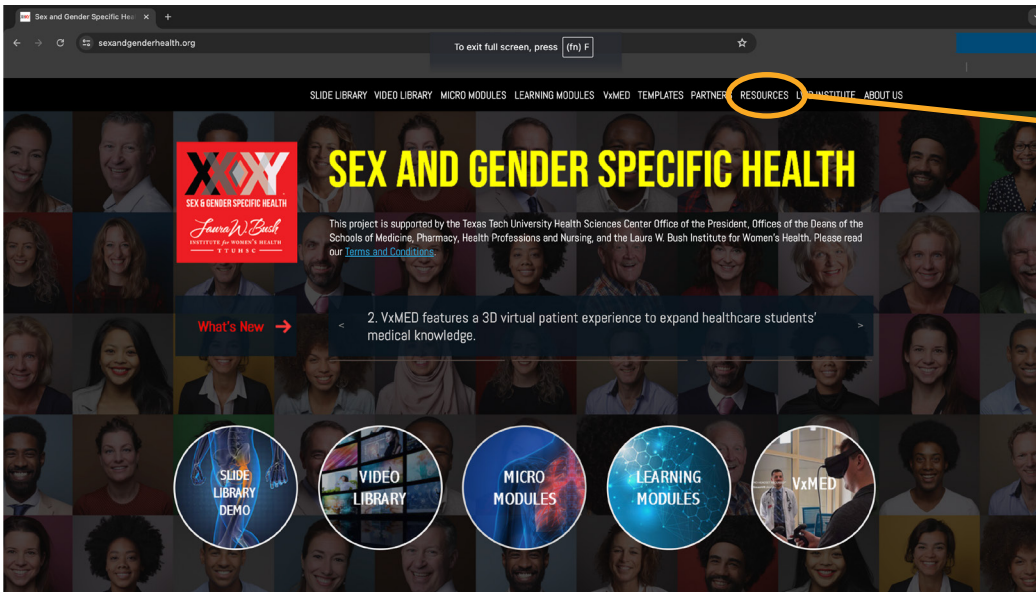
Select the appropriate slides, and either copy them directly into your deck, or incorporate the slide contents.



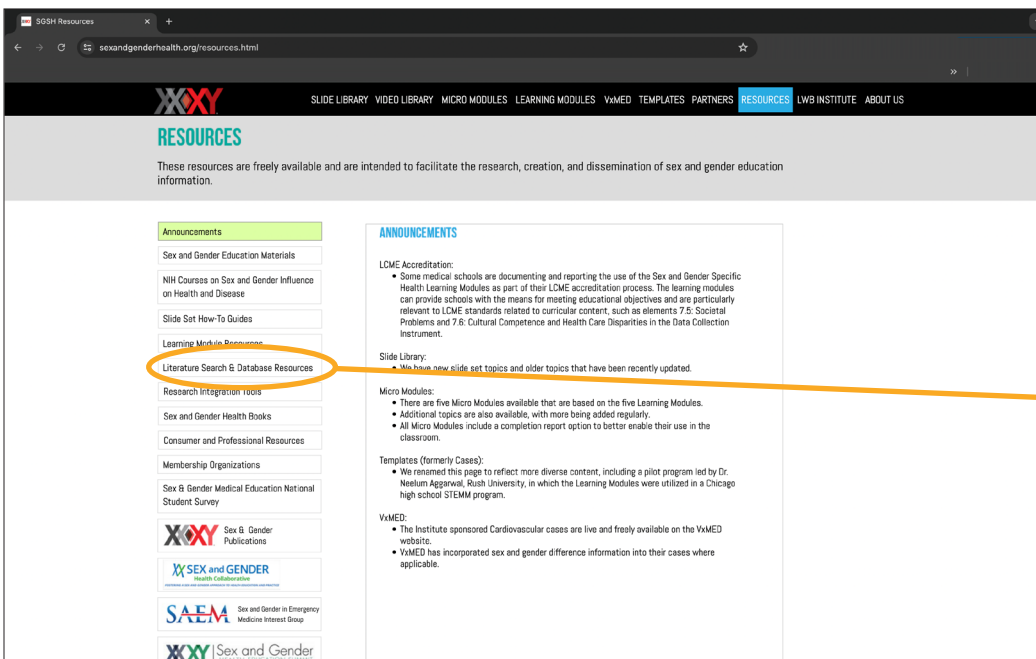
Step 3

Use the Resources

Use **SexandGenderHealth.org** to access the latest in sex and gender information in PubMed®.

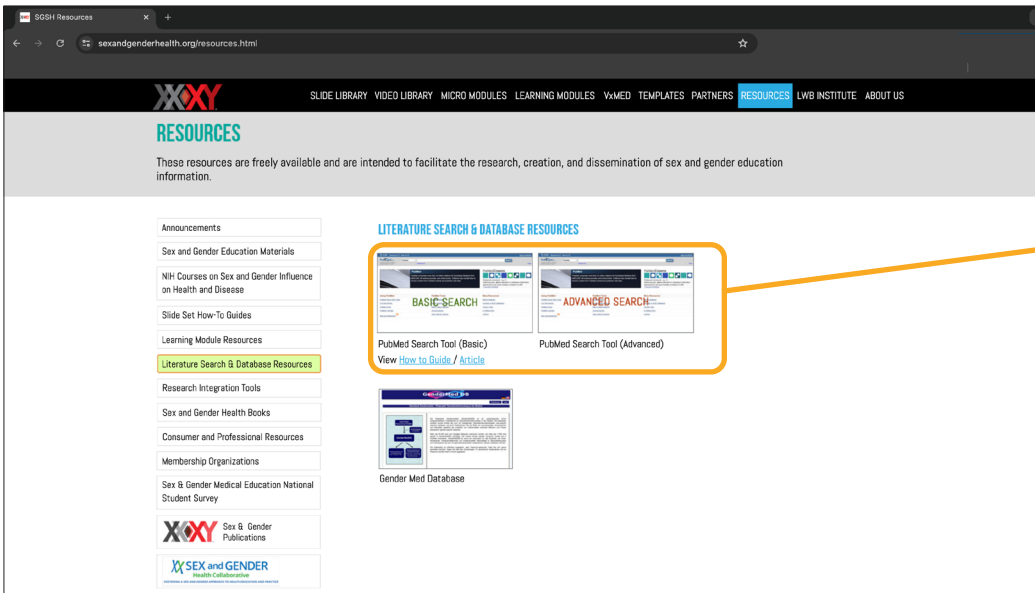


Select **Resources**.



Select **Literature Search & Database Resources**.

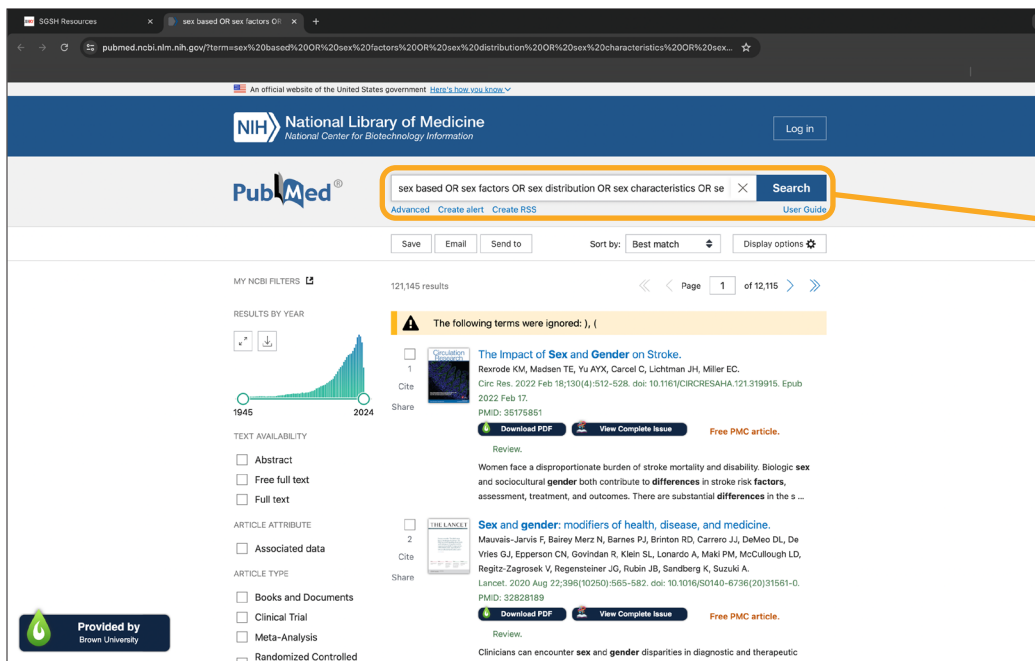
Resource: SexandGenderHealth.org - PubMed® Search Tool



Choose either:

Basic Search for all sex and gender specific terms.

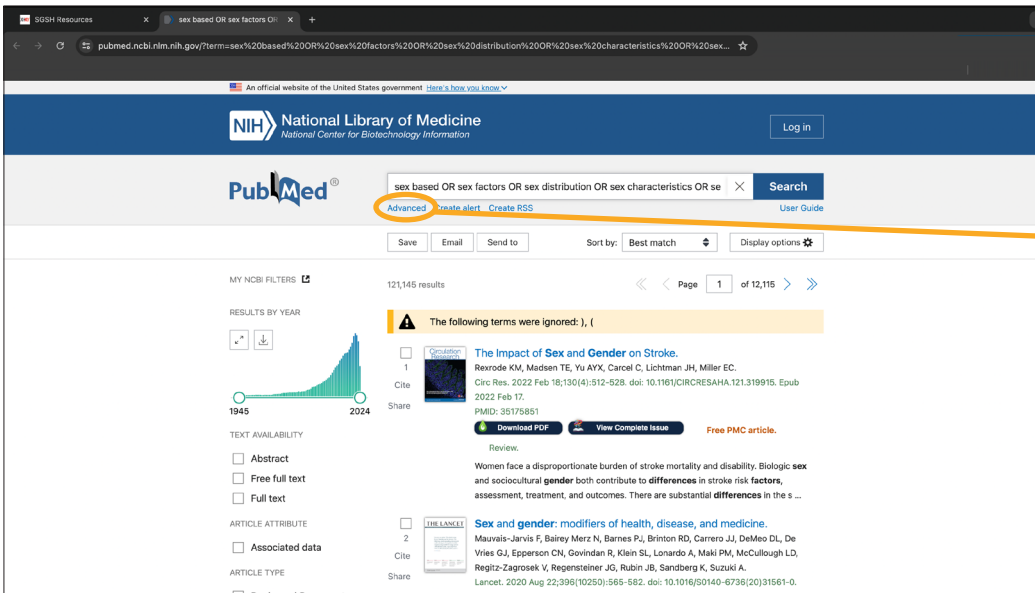
Advanced Search for all sex and gender specific terms plus women's health.



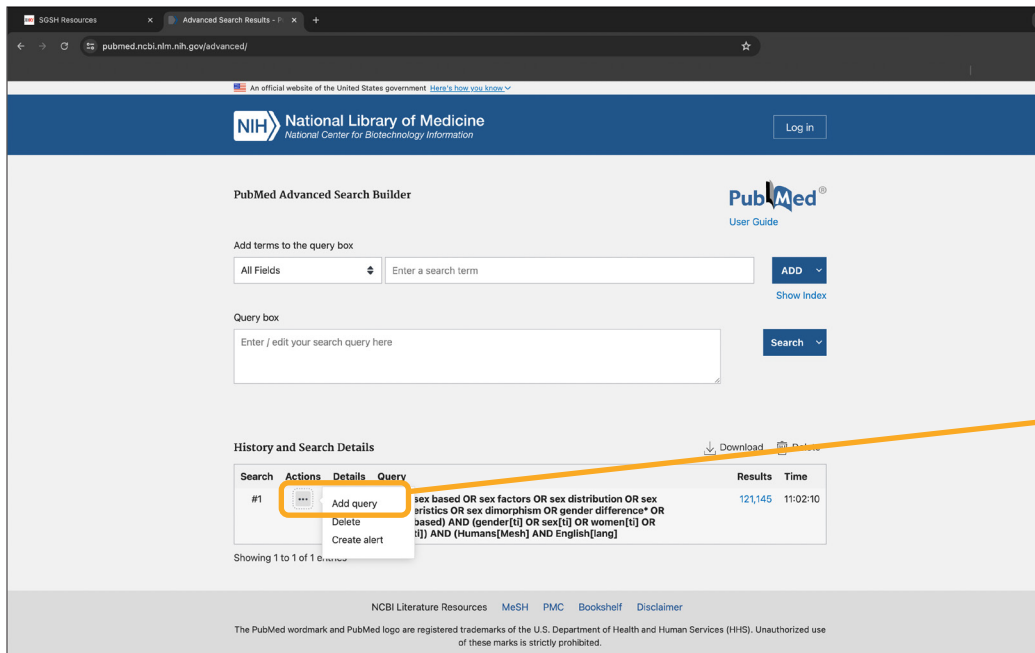
From either **Basic** or **Advanced** search, the search terms are automatically populated into the search bar of PubMed®.

This will search the entire PubMed® database for sex and gender terms.

Resource: SexandGenderHealth.org - PubMed® Search Tool

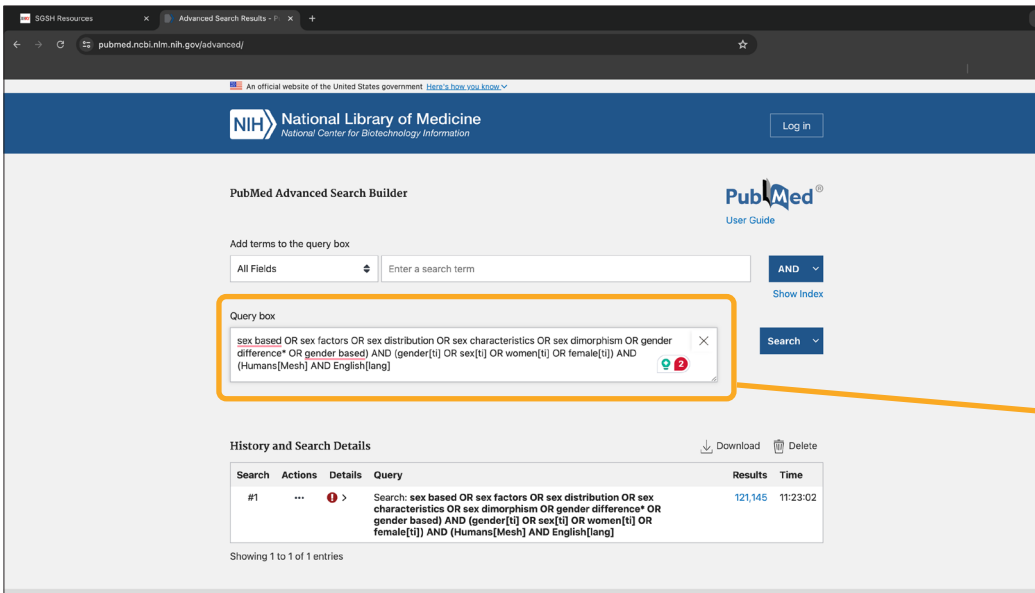


Select **Advanced** to add a specific qualifier, (the term/topic you are interested in searching).

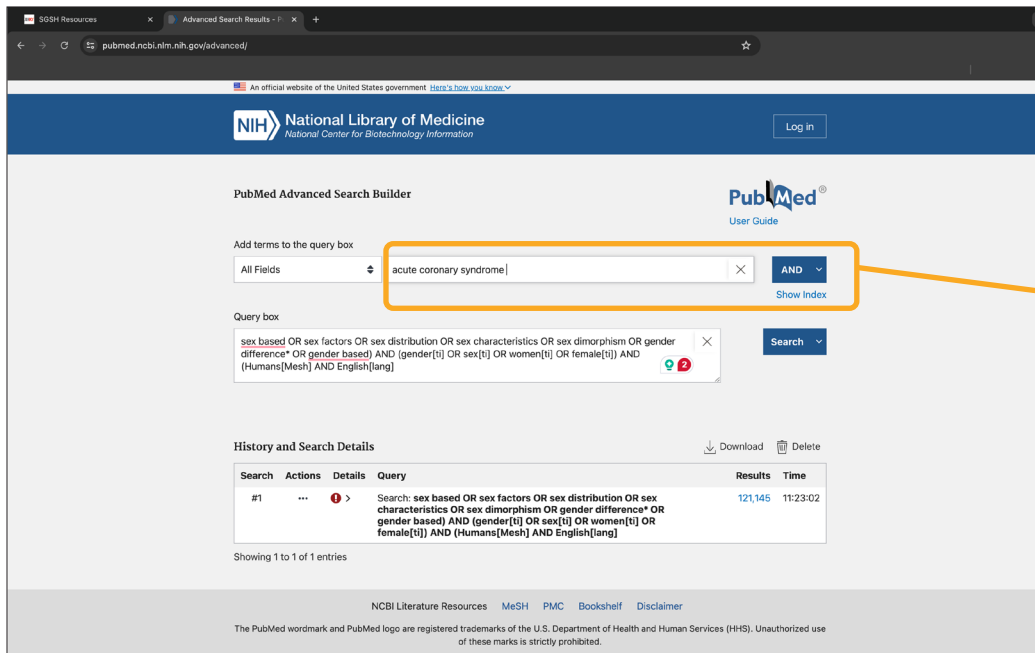


Below **Actions** select ... then **Add query**.

Resource: SexandGenderHealth.org - PubMed® Search Tool

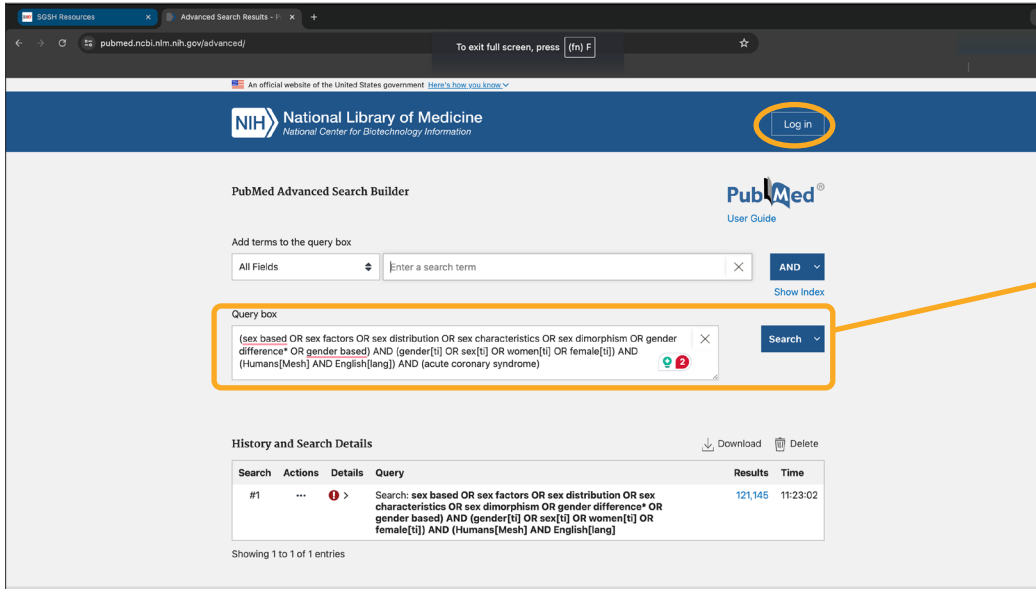


The sex and gender search terms are added to the **Query box**.



Add your topic of interest into the search box and select **AND**.

Resource: SexandGenderHealth.org - PubMed® Search Tool



NIH National Library of Medicine
National Center for Biotechnology Information

PubMed Advanced Search Builder

Add terms to the query box

All Fields Enter a search term

Query box

(sex based OR sex factors OR sex distribution OR sex characteristics OR sex dimorphism OR gender difference* OR gender based) AND (gender[t] OR sex[t] OR women[t] OR female[t]) AND (Humans[Mesh] AND English[lang]) AND (acute coronary syndrome)

Search

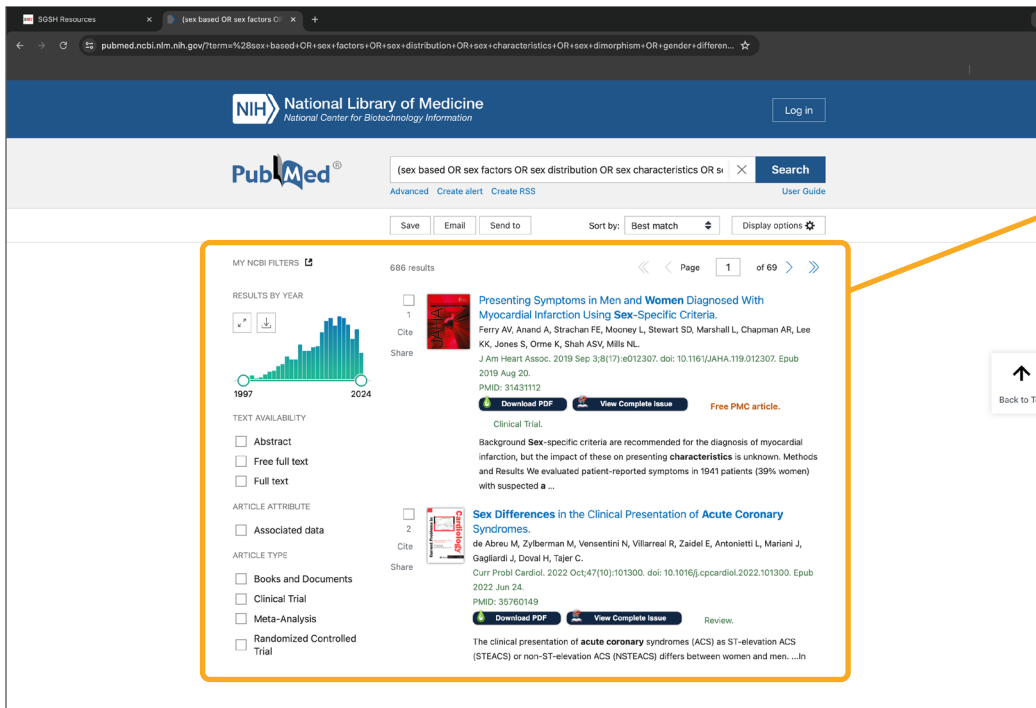
History and Search Details

Search	Actions	Details	Query	Results	Time
#1			Search: sex based OR sex factors OR sex distribution OR sex characteristics OR sex dimorphism OR gender difference* OR gender based) AND (gender[t] OR sex[t] OR women[t] OR female[t]) AND (Humans[Mesh] AND English[lang])	121,145	11:23:02

Showing 1 to 1 of 1 entries

The topic will be added to the **Query box**.

Select **Search**.



NIH National Library of Medicine
National Center for Biotechnology Information

PubMed

(sex based OR sex factors OR sex distribution OR sex characteristics OR sex dimorphism OR gender difference* OR gender based) AND (gender[t] OR sex[t] OR women[t] OR female[t]) AND (Humans[Mesh] AND English[lang]) AND (acute coronary syndrome)

Search

Advanced Create alert Create RSS

Save Email Send to Sort by: Best match Display options

686 results

Page 1 of 69

RESULTS BY YEAR

1997 2024

TEXT AVAILABILITY

☐ Abstract

☐ Free full text

☐ Full text

ARTICLE ATTRIBUTE

☐ Associated data

ARTICLE TYPE

☐ Books and Documents

☐ Clinical Trial

☐ Meta-Analysis

☐ Randomized Controlled Trial

Presenting Symptoms in Men and Women Diagnosed With Myocardial Infarction Using Sex-Specific Criteria.

Ferry AV, Anand A, Strachan FE, Mooney L, Stewart SD, Marshall L, Chapman AR, Lee KK, Jones S, Orme K, Shah ASV, Mills NL.

J Am Heart Assoc. 2019 Sep 3;8(17):e012307. doi: 10.1161/JAHA.119.012307. Epub 2019 Aug 20. PMID: 31431112

Download PDF View Complete Issue Free PMC article.

Clinical Trial.

Background Sex-specific criteria are recommended for the diagnosis of myocardial infarction, but the impact of these on presenting characteristics is unknown. Methods and Results We evaluated patient-reported symptoms in 1941 patients (39% women) with suspected a...

Sex Differences in the Clinical Presentation of Acute Coronary Syndromes.

de Abreu M, Zylberman M, Vensentini N, Villarreal R, Zaidel E, Antonietti L, Mariani J, Gagliardi J, Doval H, Tijer C.

Curr Probl Cardiol. 2022 Oct;47(10):101300. doi: 10.1016/j.cpcardiol.2022.101300. Epub 2022 Jun 24. PMID: 35760149

Download PDF View Complete Issue Review.

The clinical presentation of acute coronary syndromes (ACS) as ST-elevation ACS (STEACS) or non-ST-elevation ACS (NSTEMACS) differs between women and men. ...in

The search results for the query of **sex and gender-based terms** and **acute coronary syndrome** are displayed.

These steps are critical to mastering and repeating the process to access the most up-to-date information.



Resource: SexandgenderHealth.org - PubMed® Search Tool

View PDF

7 **Mortality of Myocardial Infarction by Sex, Age, and Obstructive Coronary Artery Disease Status in the ACTION Registry-GWTG (Acute Coronary Treatment and Intervention Outcomes Network Registry-Get With the Guidelines).**
Cite Smitowitz NR, Mahajan AM, Roe MT, Hallkamp AS, Chawell K, Gulati M, Reynolds HR.
Share Circ Cardiovasc Qual Outcomes. 2017 Dec 10;11(12):e003443. doi: 10.1161/CIRCOUTCOMES.116.003443. PMID: 29246504
BACKGROUND: **Sex differences** in early mortality after myocardial infarction (MI) vary by age. MI with nonobstructive coronary arteries (MINOCA (<50% stenosis)) is more common among younger patients and women, and MINOCA has a better prognosis than MI with o...

View PDF

8 **Sex-Specific Thresholds of High-Sensitivity Troponin in Patients With Suspected Acute Coronary Syndrome.**
Cite Lee KK, Ferry AV, Alnand A, Strachan FE, Chapman AR, Kimenal DM, Meeks SR, Berry C, Findlay I, Reid A, Cruickshank A, Gray A, Collinson PG, Apple FS, McAllister DA, Maguire D, Fox KAA, Newby DE, Tuck C, Keerie C, Weir CJ, Shah ASV, Mills NL; High-STEACS Investigators.
Share J Am Coll Cardiol. 2019 Oct 22;74(16):2032-2043. doi: 10.1016/j.jacc.2019.07.082. PMID: 31623760 Free PMC article. Clinical Trial.
BACKGROUND: Major disparities between women and men in the diagnosis, **management**, and outcomes of **acute coronary syndrome** are well recognized. Despite this increase, women received approximately one-half the number of treatments for **coronary** ...

Search Library

9 **Contemporary differences between men and women with acute coronary syndromes: CIAM multicenter registry.**
Cite Plaza-Martin M, Sanmartin-Fernandez M, Alvarez-Alvarez B, Andrea R, Secane-Garcia T, González-Díaz J, Hernández-Belancor I, Rozado J, Carrasco-Avalos F, Del Mar Alameda-Ortiz M, Gómez-Talavera S, Sánchez J, Angula Sánchez M, Peral-Guadix V, Ibañez B, Del Prado Díaz S, Zamorano Gómez JL.
Share J Cardiovasc Med (Hagerstown). 2019 Aug;20(8):525-530. doi: 10.2459/JCM.0000000000000012. PMID: 31260420
AIM: **Differences** exist in the diagnosis and treatment of **acute coronary syndrome** (ACS) between men and women. ...CONCLUSION: ACS presenting with atypical symptoms and without significant **coronary** artery stenosis is more frequent in women. Select ...

Search Library

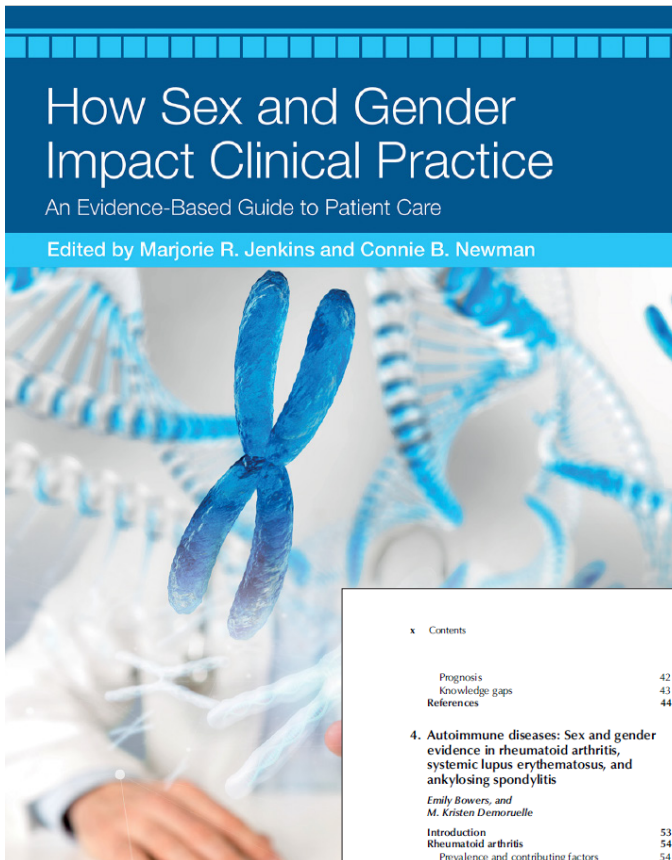
Scroll down to see the latest sex and gender based evidence related to your topic.



Step 3

Use the Resources

Use ***How Sex and Gender Impact Clinical Practice*** to access sex and gender evidence-based information.



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TIP:

Some digital copies are available online and at institutional libraries.

For this example, review the Cardiovascular disease chapter.



Step 4

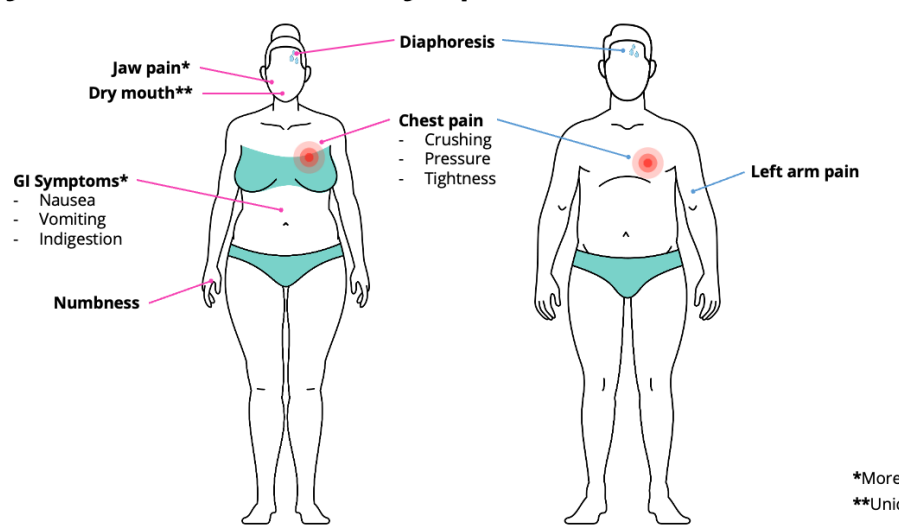
Edit the Content

Make any image or text changes needed to bring your materials up-to-date.

NOTE: This was converted into two slides to incorporate the additional material.

TIP: Remember that this process can be iterative. You can start by making small changes to your existing materials. The most important thing is to be aware of the knowledge gaps!

Myocardial Infarction - Symptoms



Women's Symptoms:

- Jaw pain*
- Dry mouth**
- GI Symptoms*
 - Nausea
 - Vomiting
 - Indigestion
- Numbness
- Chest pain
 - Crushing
 - Pressure
 - Tightness

Men's Symptoms:

- Diaphoresis
- Chest pain
 - Crushing
 - Pressure
 - Tightness
- Left arm pain

*More common
**Unique finding

Myocardial Infarction

Management	Therapies	Sex-specific nuances
Antiplatelet therapy	Aspirin (162–325 mg) in all patients unless contraindicated.	Women undergoing PCI are less likely to receive aspirin than men although it is equally beneficial.
Beta blockers	Initiate beta-blocker therapy within 24 h of AMI.	Well documented and equal benefit in both sexes. Atenolol is not recommended during pregnancy because of adverse impact on fetal growth.
Blood pressure control	For patients with ASCVD, diabetes, systolic heart failure, or chronic kidney disease, the blood pressure goal is <130/80 mm Hg.	
Statin therapy	Patients with ASCVD should be initiated on high-intensity statins, that is, those lowering LDL cholesterol on average by at least 50%. The LDL goal is <70 mg/dL. Ezetimibe may be added if LDL goal is not met with maximum tolerable dose (atorvastatin 80 mg daily or rosuvastatin 40 mg). Proprotein convertase subtilisin/kexin 9 (PCSK-9) inhibitors (evolocumab) may be prescribed for patients that still remain above LDL goal after above therapy, in consultation with cardiology.	Statins are contraindicated in women who are pregnant (with exceptions), and should be avoided when breastfeeding, or planning to become pregnant. ¹⁷
ACE inhibitors	Start lisinopril 5–10 mg daily in patients with reduced ejection fraction post-AMI.	Equal benefit in men and women; women more likely suffer dry cough as a side effect due to increased levels of bradykinin. ACE-I, ARB, aldosterone receptor antagonists, and renin inhibitors are not recommended due to their teratogenic effects of blocking the renin-angiotensin system.
Hormone therapy		Hormone replacement therapy in postmenopausal women is not recommended for the purpose of cardiac protection.
Lifestyle modifications	<ul style="list-style-type: none"> Physical activity: Moderate-intensity aerobic activity for 10–60 min a day for at least 5 days and preferably 7 days a week. Smoking and alcohol cessation 	Smoking cessation intervention may need to be tailored differently for males and females.
Cardiac rehabilitation		Women are less likely to be referred to cardiac rehabilitation although a clear survival benefit is seen in secondary prevention for AMI.

ACE-I, Angiotensin-converting enzyme inhibitor; AMI, acute myocardial infarction; ARB, angiotensin receptor blocker; ASCVD, atherosclerotic cardiovascular disease; LDL, low-density lipoprotein; MI/CAD, myocardial infarction due to coronary artery disease; PCI, percutaneous intervention. *In cases of severe hyperlipidemia or familial hyperlipidemia where pregnant patient needs to be treated with medications, bile acid sequestrants (which lack systemic circulation) may be started.

Coronary Microvascular Dysfunction:

- Signs & symptoms of cardiac chest pain.

Angiographically = normal

- Non-obstructed arteries.
- Present in up to 50% of women with angina.

Although men are at higher risk for MI-CAD, women with MI-CAD have higher major adverse cardiac events, including annual mortality, higher risk of recurrent AMI, recurrent angina, higher readmission rates...

Use of Sex-Specific Thresholds identified 5 times more women than men with myocardial injury.

Female Specific Factors:

- Oral Contraceptives
- Hormone Replacement Therapy
- Adverse Pregnancy Outcomes
- Hypoestrogen status

Female Predominant Factors:

- Autoimmune Disorders
- Anemia
- Psychosocial Factors (depression, anxiety, PTSD)

Knowledge gap:

- Are there sex- and gender-based therapies that would improve rates of recurrent symptoms in addition to MACES post-AMI? More information is needed.
- Data on genetic interactions with environmental factors are lacking for young men and women.

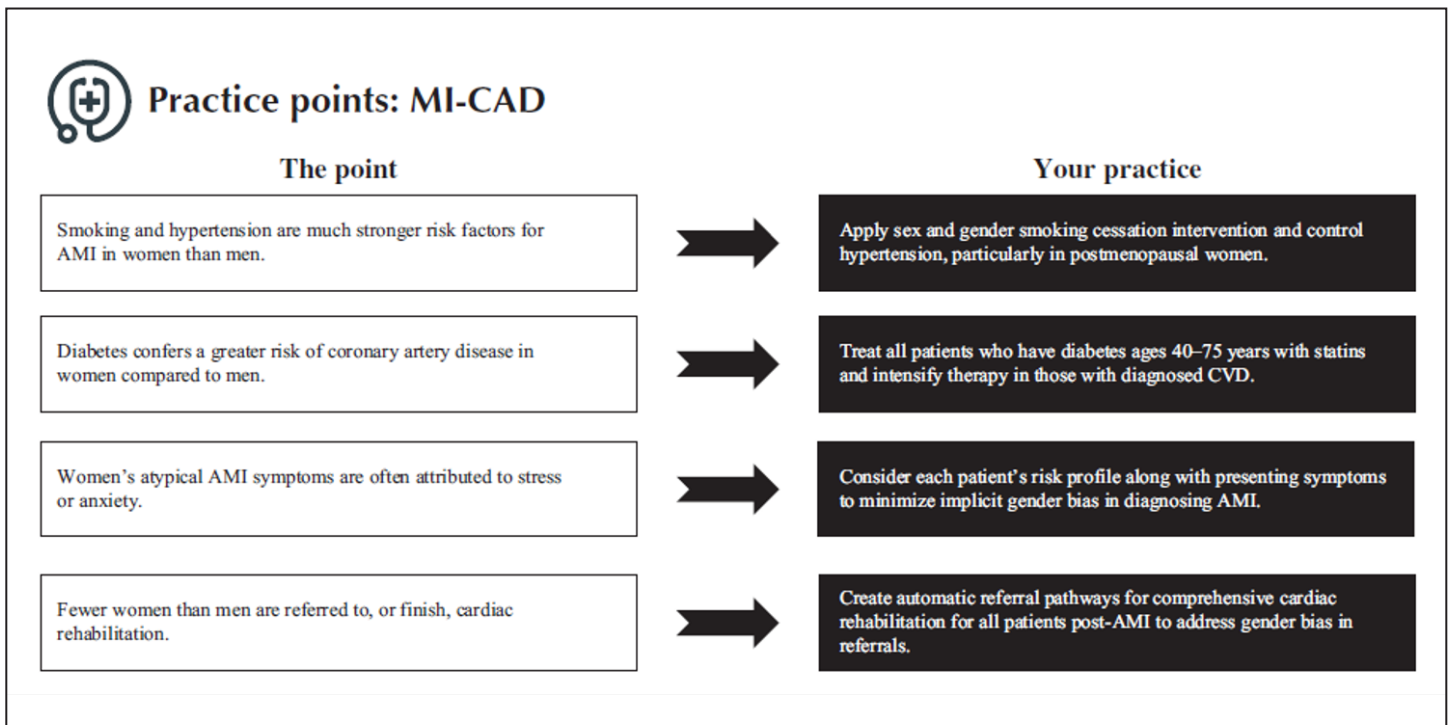
Practice Points: MI-CAD

Translational educational content includes implementation strategies when caring for patients.

5. TRANSLATIONAL

Includes knowledge translation strategies to improve care for patients with regard to their sex and gender. Integrates sex and gender specific content as noted above. Considers gender norms, roles, behaviors, expectations, and relations for people of all genders.

TIP: The end of each chapter in the textbook has tables for clinical application.



Adapted from : Jenkins MR, Newman CB, eds. *How Sex and Gender Impact Clinical Practice : An Evidence-Based Guide to Patient Care*. Academic Press, an imprint of Elsevier; 2021.



Step 5

Reassess with the Assessment Scale and Checklists

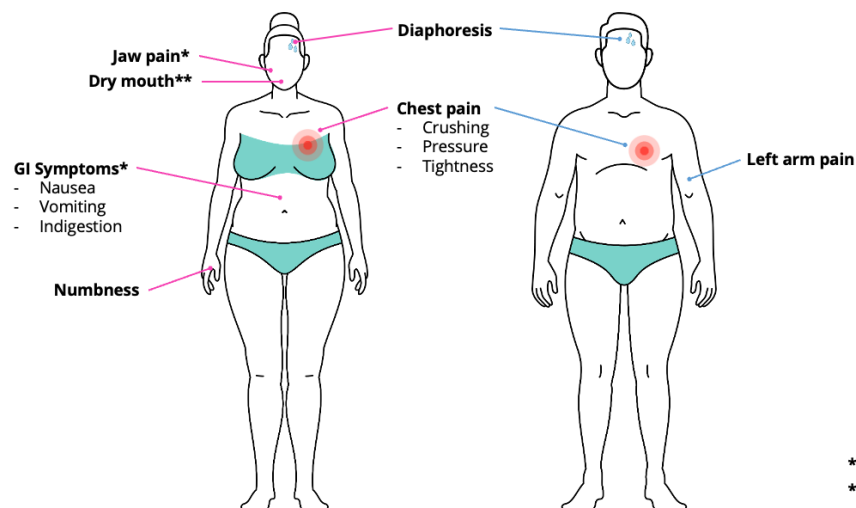
Use the Assessment Scale

1. BIASED
2. BLIND
3. AWARE
4. EXPLANATORY
5. TRANSLATIONAL

Aware

Acknowledges the differences

Myocardial Infarction - Symptoms



Use the Assessment Scale

Myocardial Infarction

TABLE 6.3 Management of MI-CAD.

Management	Therapies	Sex-specific nuances
Antiplatelet therapy	Aspirin (162–325 mg) in all patients unless contraindicated.	Women undergoing PCI are less likely to receive aspirin than men although it is equally beneficial.
Beta blockers	Initiate beta-blocker therapy within 24 h of AMI.	Well documented and equal benefit in both sexes. Atorvastatin is not recommended during pregnancy because of adverse impact on fetal growth.
Blood pressure control	For patients with ASCVD, diabetes, systolic heart failure, or chronic kidney disease, the blood pressure goal is <130/80 mm Hg.	
Statin therapy	Patients with ASCVD should be initiated on high-intensity statins, that is, those lowering LDL cholesterol on average by at least 50%. The LDL goal is <70 mg/dL. Ezetimibe may be added if LDL goal is not met with maximum titratable dose (atorvastatin 80 mg daily or rosuvastatin 40 mg). Proprotein convertase subtilisin/kexin-9 (PCSK-9) inhibitors (evolocumab) may be prescribed for patients that still remain above LDL goal after above therapy, in consultation with cardiology.	Statins are contraindicated in women who are pregnant (with exceptions ²), and should be avoided when breast-feeding, or planning to become pregnant. ²³
ACE inhibitors	Start lisinopril 5–10 mg daily in patients with reduced ejection fraction post-AMI.	Equal benefit in men and women; women more likely suffer dry cough as a side effect due to increased levels of bradykinin. ACE-I, ARBs, aldosterone receptor antagonists, and renin inhibitors are not recommended due to their teratogenic effects of blocking the renin-angiotensin system.
Hormone therapy		Hormone replacement therapy in postmenopausal women is not recommended for the purpose of cardiac protection.
Lifestyle modifications	<ul style="list-style-type: none"> Physical activity: Moderate-intensity aerobic activity for 30–60 min a day for at least 5 days and preferably 7 days a week Smoking and alcohol cessation 	Smoking cessation intervention may need to be tailored differently for males and females.
Cardiac rehabilitation		Women are less likely to be referred to cardiac rehabilitation although a clear survival benefit is seen in secondary prevention for AMI.

ACE-I, Angiotensin-converting enzyme inhibitor; AMI, acute myocardial infarction; ARB, angiotensin receptor blocker; ASCVD, atherosclerotic cardiovascular disease; LDL, low-density lipoprotein; MI-CAD, myocardial infarction due to coronary artery disease; PCI, percutaneous intervention. In case of women hypertensive or initial hypertension where pregnant patient needs to be treated with medications, low acid equivalent (which lack systemic circulation) may be started.

Coronary Microvascular Dysfunction:

- Signs & symptoms of cardiac chest pain.

Angiographically = normal

- Non-obstructed arteries.
- Present in up to 50% of women with angina.

Although men are at higher risk for MI-CAD, women with MI-CAD have higher major adverse cardiac events, including annual mortality, higher risk of recurrent AMI, recurrent angina, higher readmission rates...

Use of Sex-Specific Thresholds identified 5 times more women than men with myocardial injury.

Female Specific Factors:

- Oral Contraceptives
- Hormone Replacement Therapy
- Adverse Pregnancy Outcomes
- Hypostrogen status

Female Predominant Factors:

- Autoimmune Disorders
- Anemia
- Psychosocial Factors (depression, anxiety, PTSD)

Knowledge gap:

- Are there sex- and gender-based therapies that would improve rates of recurrent symptoms in addition to MACEs post-AMI? More information is needed.
- Data on genetic interactions with environmental factors are lacking for young men and women.

Aware

Acknowledges the differences


Explanatory

Explains the differences

TIP: The assessment scale reminds you to reassess clinical application.

5. TRANSLATIONAL

Includes knowledge translation strategies to improve care for patients with regard to their sex and gender. Integrates sex and gender specific content as noted above. Considers gender norms, roles, behaviors, expectations, and relations for people of all genders.

 **Practice points: MI-CAD**

The point	Your practice
Smoking and hypertension are much stronger risk factors for AMI in women than men.	Apply sex and gender smoking cessation intervention and control hypertension, particularly in postmenopausal women.
Diabetes confers a greater risk of coronary artery disease in women compared to men.	Treat all patients who have diabetes ages 40–75 years with statins and intensify therapy in those with diagnosed CVD.
Women's atypical AMI symptoms are often attributed to stress or anxiety.	Consider each patient's risk profile along with presenting symptoms to minimize implicit gender bias in diagnosing AMI.
Fewer women than men are referred to, or finish, cardiac rehabilitation.	Create automatic referral pathways for comprehensive cardiac rehabilitation for all patients post-AMI to address gender bias in referrals.



Jaw pain*

Dry mouth**

GI Symptoms*

- Nausea
- Vomiting
- Indigestion

Numbness

Diaphoresis

Chest pain

- Crushing
- Pressure
- Tightness

Left arm pain

TABLE 6-2 Management	
Aspirin/Aspirin therapy	
Beta Blockers	
Blood pressure control	
Statin therapy	

[illegible]

- Data on genetic interactions with environmental factors are lacking for young men and women.

However, keep looking!
Return to the PubMed® tool
for new resources, which are
constantly evolving.

Glossary

Sex is a multidimensional biological construct. Although sex is often categorized as a binary, substantial variation in sex-related variables of anatomy, physiology, genetics (XX XY), and hormones, as well as differences of sex development and intersex conditions, demonstrate that sex is better presented on a spectrum. Commonly used terms are male and female.

Gender is a multidimensional sociocultural and structural construct that encompasses gender identity, gender roles and norms, gendered behavior and expression, gendered relations, and gendered distribution of power. Commonly used terms are man and woman which denote a whole person beyond biology.

Barr E, Chin EL, Newman CB, Rojek MK, Sleeper R, Temkin SM, Clayton JA, Kantarci K, Kling JM, McGregor AJ, Schiebinger L, Templeton K, Viggiano TR, Wood SF, Werbinski J. 2024. Reflecting on Progress in and Establishing Benchmarks for Sex and Gender Health Education. Acad Med. Jan 1;99(1):16-21. doi: 10.1097/ACM.0000000000005444. Epub 2023

Thank you for learning how to update your materials to incorporate the latest in sex and gender scientific information.

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Project: Sex and Gender Curricular Assessment and Revision (SG-CAR)



SEX AND GENDER

Curricular Assessment and Revision (SG-CAR)

— Faculty Development Toolkit —

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