Sex & Gender Differences in Health/Women’s Health

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Agenda

• Why Sex and Gender Differences and Women’s Health?
• NIH Policies
• Resources
  – Women’s Health Resources Portal
  – HSC Library Women’s Health LibGuide
• Professional Development
Sex Differences in Health

There are significant sex differences in health!

• Examples:
  – Women are more likely to die from cardiovascular disease even though men develop it earlier, and their symptoms are ‘non-typical’ and often missed.
  – Women have a significantly higher risk of being visually impaired than men, in every region of the world, and at all ages.
  – Three out of four people suffering from autoimmune diseases, such as multiple sclerosis, rheumatoid arthritis, and lupus are women.

The Society for Women’s Health Research, http://www.swhr.org
More Examples

– Women comprise 80 percent of the population suffering from osteoporosis.

– There are marked sex differences in the diagnosis of certain major diseases, such as Parkinson’s, across all the major ethnic groups.

– Women and men metabolize drugs differently. There are sex-based variations in drug-metabolizing enzymes.
Even More Examples

— Smoking has a more negative effect on cardiovascular health in women than in men and they have more difficulty quitting. Also, they are more susceptible to smoking-caused lung cancer than men.

— Women are 2-3x more likely than men to suffer from depression; women’s brains make less serotonin.

— Women are more susceptible to becoming addicted to illegal drugs and are different from men in their addiction courses and treatment patterns.

— Women are more likely than men to contract a sexually-transmitted disease.

The Society for Women’s Health Research, http://www.swhr.org
Controversial FDA Ban on Women in Clinical Trials

Women were banned from participating in medical research by the FDA in 1977 because of the terrible consequences of the Thalidomide and DES (diethy stilbestrol) drug controversies.

• Thalidomide, used for morning sickness, was responsible for thousands of birth deformities and fetal deaths

• DES, used to prevent miscarriages, led to high rates of infertility and vaginal cancers in the daughters of DES mothers and testicular cysts in their sons
16 years later... in 1993

• The NIH Revitalization Act required the inclusion of women in all clinical research and the analysis of results by sex for Phase III clinical trials

• The FDA mandate was changed, removing the ban on women from Phase I and Phase II studies.
In 2001 the Institute of Medicine Reports...

“Sex matters. ... Being male or female is an important basic human variable that should be considered ... at all levels of biomedical and health-related research ... and from the womb to the tomb.”

From “Exploring the Biological Contributions to Human Health: Does Sex Matter?” (2001)
The NIH is now developing policies that will require applicants to report their plans for balancing male/female cells and animals in preclinical studies.

The requirement will be enforced unless sex inclusion is unwarranted (based on rigorously defined exceptions).

Policies will be rolled out in phases beginning in October 2014.
Goal of NIH Women’s Health Research

To Integrate women’s health within the biomedical research landscape by:

• Advancing understanding of sex/gender differences in health and disease

• Integrating sex/gender perspectives in emerging basic science fields in translational research and technologies

• Fostering partnerships to improve translating and disseminating health information
Women’s Health Resources Portal

- Designed to promote research that involves women
- Promotes NIH research and grant opportunities
- Promotes NIH Priorities in Women’s Health
- Includes links to NIH publications about diseases in women, clinical trials, consumer health and policy
- Includes links to pre-formulated searches in PubMed and reports of clinical trials

Health Topics
Alcohol, Tobacco and Substance Abuse
Autoimmune Diseases
Bone and Joint Health
Cancer
Complementary and Alternative Medicine (CAM)
Exercise and Fitness
Heart Disease
Menopausal Hormone Therapy
Reproductive Health
Violence and Abuse
More»

News & Events
Women's Health 2013: The 21st Annual Congress
Date: March 22-24 2013
Place: Grand Hyatt, Washington, D.C.

Vitamin D May Reduce Risk of Uterine Fibroids
National Institute of Environmental Health Sciences (NIEHS)

Highlights

NIH Priorities in Women's Health
Life Span
Early Years
Gender Identity
Caregiving
Reproductive Life
Senior Life
Health Disparities/Differences and Diversity
More»

NIH Research Funding
Data Coordinating Center for the NICHD Cooperative Multicenter Reproductive Medicine Network (U10) (RFA-HD-14-018)
Application Receipt Date(s): April 4, 2013

Women’s Mental Health During Pregnancy and the Postpartum Period (R21) (PA-12-215)
Application Receipt Date(s): Standard R21
New Findings From Yale SCOR Investigator

When it comes to addiction, sex matters

Addicts’ cravings have different roots in men and women. Read the new study on brain imaging from Yale School of Medicine. (PDF, 327 KB)
HSCL LibGuide

- http://guides.uflib.ufl.edu/sexdifferences
In collaboration with the NIH Office of Research on Women’s Health and the National Library of Medicine, the HSC Library is working on a project with two goals related to sex and gender differences research:

- to help facilitate the growth of basic research in this area
- to develop a diverse clinical workforce able to recognize these differences and to apply this knowledge in clinical care

Project personnel: Michele Tennant (PI), Mary Edwards, Hannah Norton, Nancy Schaefer

The project includes the following elements:

- **Student training**: Librarians are presenting the Women’s Health Resources Portal and other information resources at orientations and within courses across the basic and clinical sciences.
- **Faculty training and professional development**: Collection building: Some books and electronic journals (backfiles) on women’s health and sex differences research have been purchased, with more slated for 2014.
- **Open access publishing**: Limited funding is available for publishing articles in open access journals. See this tab for more information.
- **Facilitating collaboration**: Two upcoming “Collaborating with Strangers” workshops are designed to introduce researchers to colleagues with whom they might collaborate. Tentative dates: April 10 (3pm-5pm, HSC Library), September 10. Check back for more information on times/locations!

**Featured Training**

The NIH offers online courses for continuing medical education (CME) credit on the Science of Sex and Gender in Human Health. These courses are designed to benefit researchers, clinicians, health care professionals, educators, and students with an interest in this topic.

The site currently offers two courses:

- The Basic Science and the Biological Basis for Sex- and Gender-Related Differences
- Sex and Gender Differences in Health and Behavior

**CME & other educational opportunities in this field**

Cardiovascular Disease and Women’s Health Resource Center free multimedia webcast and resource center
Continuing Education/Professional Development

• The NIH offers online courses for continuing medical education (CME) credit on the *Science of Sex and Gender in Human Health*.  

• These courses are designed to benefit researchers, clinicians, health care professionals, educators, and students with an interest in this topic.
Continuing Education/Professional Development

The site currently offers three courses:

1) The Basic Science and the Biological Basis for Sex- and Gender-Related Differences
2) Sex and Gender Differences in Health and Behavior
3) The Influence of Sex and Gender on Disease Expression and Treatment
Questions