

# Laura W. Bush

**INSTITUTE for WOMEN'S HEALTH**  
TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER

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Research

Education

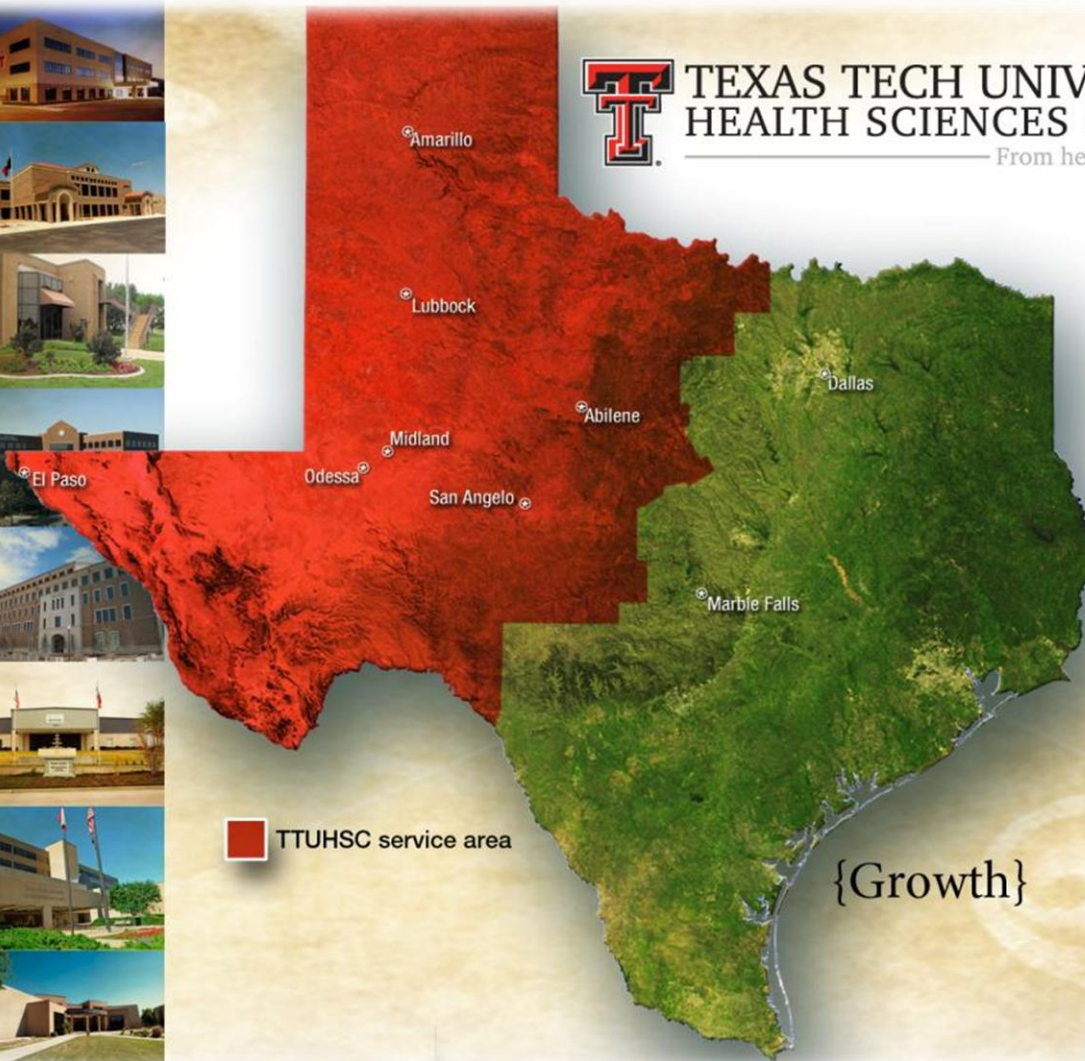
Outreach





# TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER.™

From here, it's possible.



■ TTUHSC service area

{Growth}



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# What's on the Shelf and Your Health



# Dietary Supplements versus Herbs

**Dietary supplement is a product that contains one or more of the following ingredients:**

- a vitamin
- a mineral
- an *herb* or other botanical
- an amino acid
- a concentrate, metabolite, constituent, extract, or combination of any of the aforementioned ingredients

**An herbal product is by definition a dietary supplement**



# What Are Herbal Products?



- Anything from a plant or plant structure:
  - Leaf, flower, stem, seed, root, fruit, bark, etc.
- Naturally occurring chemicals
- Each product may contain a single herb or a combination of several
- May or may not have beneficial medicinal properties



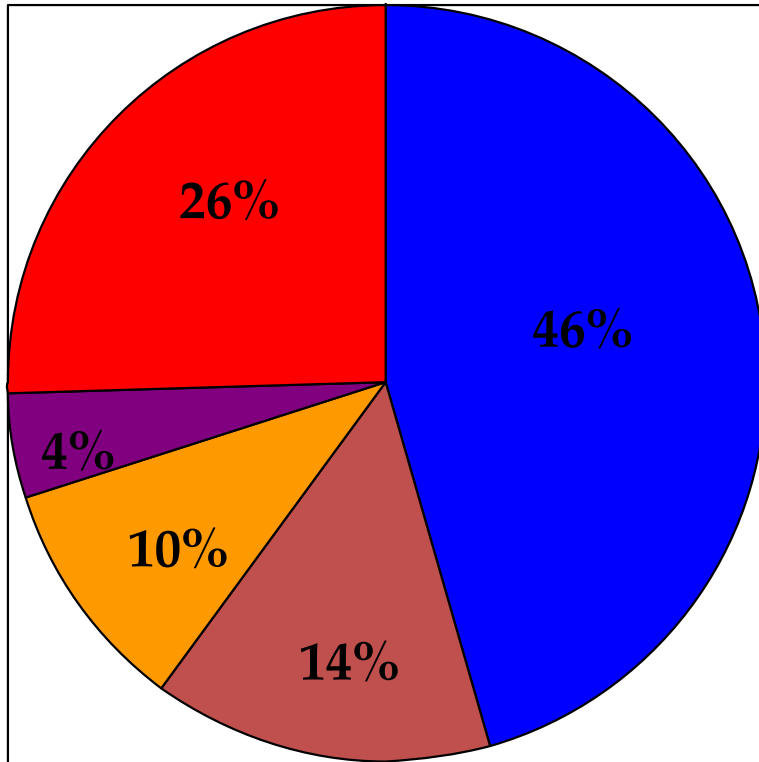
# Who Uses Herbs?

- Estimated that 61-71% of the US population use herbal products to treat a disease or improve health
- Herbs are fastest growing segment of dietary supplements
- Sold Everywhere
  - Health food stores, grocery stores, convenience stores, internet, etc.





# Where Do We Get Our Herbal Information?



- Family and Friends
- Health Food Store Clerk
- Physicians
- Pharmacists
- Other



# What is IT About Herbs and Supplements?

They are NOT Rx medicine  
BUT....



# How Herbals Differ From Prescription Drugs

1. Companies are **NOT** required to prove claims about safety or effectiveness
2. Products are **NOT** regulated to ensure quality control
3. Active ingredients vary greatly from product to product
4. Products usually do **NOT** undergo strict clinical trials



# Herbals vs. Medications

<u>Requirement</u>	<u>Medications</u>	<u>Dietary Supplements</u>
Pre-approval of human studies	Yes	<b>No</b>
Proof of efficacy	Yes	<b>No</b>
Proof of safety	Yes	<b>No</b>
Premarketing approval	Yes	<b>Not generally</b>
Post marketing surveillance	Yes	<b>No</b>
Compliance with CGMPs or GMPs	Yes	<b><u>Yes (2005)</u></b>



# The Role of the Federal Drug Agency in the Herbal Market

- Manufacturers must only provide information showing the supplement is “*reasonably safe*”
- The FDA must prove it is unsafe before removing a product from the market (Ephedra)
- The FDA only requires that the label:
  - state the product is a supplement
  - provide the name & address of the manufacturer or distributor
  - list all the ingredients and net contents



# Common Issues Causing Women to Seek Herbals

1. Weight loss
2. Insomnia
3. Stress/Depressed
4. Fatigue/Low Energy
5. Arthritis
6. Hot Flashes
7. Prevention of  
Heart Disease  
Osteoporosis  
Memory Loss  
Aging



# Common Herbals & Dietary Supplements

- 
1. Soy
  2. Cranberry
  3. Garlic
  4. Ginkgo
  5. Saw Palmetto
  6. Echinacea
  7. Black Cohosh
  8. Melatonin
  9. Ginseng
  10. St. John's Wort



# UTI: Cranberry



- Common use:
  - Prevention and treatment of Urinary Tract Infections (UTI)
- Adverse Effects: None
- Potential Drug Interactions: Coumadin<sup>®</sup>
- Does it work? **Yes**



# Circulation: Garlic



- Common use:
  - Lowering Cholesterol
  - Lowering Blood Pressure
- Adverse Effects: sweating, dizziness, allergic reactions, bleeding, bad breath and body odor
- Potential Drug Interactions: Warfarin, antiplatelets, antihypertensives and hypoglycemic drugs
- Does it work at decreasing blood pressure?

**Yes**



# Memory: Ginkgo



- Common use:
  - improvement of blood circulation
  - improvement of symptoms of old age
  - improvement of memory
- Adverse Effects: Nausea and bleeding
- Potential Drug Interactions: Coumadin<sup>®</sup>
- Does it work? **Insufficient studies**
- Safety and Quality lacking



# Inflammation: Saw Palmetto



- Common use:
  - anti-inflammatory
  - Bladder irritation
  - bronchitis
- Adverse Effects: Complicates hemophilia, stomach ulcers or Crohn's disease
- Potential Drug Interactions: Coumadin<sup>®</sup>
- Does it work? **Insufficient evidence**



# Cold: Echinacea



- Common use:
  - Symptoms of the common cold
- Adverse Effects: Nausea, abdominal pain, diarrhea, vomiting, and rash
- Potential Drug Interactions: HIV medications, blood thinners or birth control pills
- Does it work? **Yes**



# Insomnia: Melatonin



- Common use:
  - Sleep aid
- Adverse Effects: Changes in blood vessels that may affect blood flow, lower body temperature, stomach problems, headache, morning grogginess, vivid dreams
- Potential Drug Interactions:
- Does it work? **Yes**



# Energy: Ginseng



- Common use:  
Considered the “ultimate herb” used as a cure-all, especially as an energy booster
- Adverse Effects: Nervousness and excitation, palpitations, high blood pressure
- Potential Drug Interactions: Phenezine and Coumadin<sup>®</sup>
- Does it work? **No Evidence**



# Mood: St. John's Wort



- Common use:
  - depression
  - anxiety
  - insomnia
- Adverse Effects: Gastrointestinal symptoms, dizziness, confusion, tiredness and sedation
- Potential Drug Interactions: Implanon<sup>®</sup>, antidepressants, blood thinners, cholesterol medications
- Does it work? **Yes**



# Arthritis: Glucosamine Chondroitin

- Common use:
  - osteoarthritis
- Adverse Effects: Gas, abdominal bloating, and cramps
- Potential Drug Interactions: may interact with DM medications
- Does it work? Large trials indicate **NO**



# Weight Loss: Hoodia



- Common Use:
  - Appetite suppressant, weight loss
- Adverse Effects: None reported
  - Not enough information to determine
  - Avoid in pregnancy
- Potential Drug Interactions: None reported
- Does it work? **No**



# Prevention



# Heart Health: Omega-3

- Lowers Triglycerides
- Prevents
  - Heart Attacks
  - Second Heart Attacks
  - Sudden Death
  - All Cause Mortality
- Risks
  - Halitosis, heartburn, dyspepsia, nausea, loose stools, and rash
  - >3 gm/day - bleeding
- Daily intake -1gm-3gm/day DHA/EPA



# Osteoporosis

- Calcium: 1200 mg/day
- Vitamin D: 400-800 IU/day
- Exercise
  - Aerobic
  - Resistance
- Green tea: 150mg per day
  - polyphenols



# The Benefits of Green Tea



- More than two million bones are broken in the United States each year due to osteoporosis
- Women are more prone to osteoporosis or losing bone density as they age
- Many women will never return home or to their previous lives once a fracture occurs

Green tea polyphenols help slow bone loss



“Doctor,

please tell me”



**THEY ARE NOT HOT FLASHES...  
THEY ARE POWER SURGES**



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# Hot Flashes Are NO Fun!



Hot flashes, hot flushes and nocturnal hot flashes (i.e. night sweats) are also known as vasomotor symptoms (VMS) and these terms are used interchangeably.



# Hot Flash Remedies

1. Evening Primrose Oil
2. Black Cohosh
3. Red Clover
4. St. John's Wort
5. Acupuncture
6. Physical Activity
7. Omega-3 Fatty Acids

Carol found her own way of coping with hot flashes!



# Menopause and PMS: Evening Primrose



- Common Use:
  - PMS and menopausal complaints
  - inflammation
- Adverse Effects:
  - Nausea, soft stools, stomach distress
- Potential Drug Interactions:
  - Seizure medications
  - Medications that increase risk of bleeding (Coumadin<sup>®</sup>, Aspirin, Plavix<sup>®</sup>, etc.)
  - Diabetic medications
- Does it Work – **Probably Not**



# Hot Flashes: Black Cohosh



- Common Use:
  - Symptoms of menopause
  - Hot flashes (breast cancer history)
- Adverse Effects:
  - Stomach upset, headache, rash & weight gain
- Potential Drug Interactions:
  - Estrogen replacement therapy (Premarin®)
- Does it Work? Newer Studies Suggest - **No**



# Menopause: Soy



- Common use:
  - lower number of hot flashes
  - lowering risks of osteoporosis
  - lowering risk of breast cancer
- Adverse Effects: Minimal
- Potential Drug Interactions: Depression medicines, some antibiotics and estrogens
- Does it work? Mixed reviews but overall favorable for risk of breast cancer and osteoporosis



# What else



# Vitamin D

## Too Much or Too Little



# Vitamin D in the News

- Rickets and Vitamin D deficiency may lurk in breastfed babies
- Is there such a thing as a healthy tan?
- Vaginal infections tied to low Vitamin D
- Shortage of Vitamin D may weaken the elderly
- Doubling of Vitamin D for children is urged
- Vitamin D may prevent fractures in older adults
- Vitamin D levels tied to dementia risk
- Vitamin D def and risk of cardiovascular disease
- Benefit of Vitamin D in diabetes and other chronic diseases
- Daily doses of Vitamin D could cut cancer risk world wide



# Diseases/Conditions Associated With Low Vitamin D Status

- Osteomalacia/Osteoporosis
- Muscle function and falls
- Cancer
- Multiple sclerosis
- Hypertension
- Diabetes
- Inflammatory bowel disease
- Rheumatoid arthritis
- TB
- Macular degeneration
- Cognitive impairment
- Cardiovascular events
- Peripheral vascular disease
- Polymyalgia rheumatica
- Chronic pain
- Autism
- Infection
- Athletic performance
- Depression
- Seasonal affective disorder
- Pulmonary function
- Incontinence
- Aging
- Overall mortality



# WHAT ARE SOME FOODS THAT CONTAIN VITAMIN D ?

- Cod liver oil, 1 tablespoon (1,360 IU)
- 1 cup of milk (100 IU)
- 1 whole egg (20 IU)
- 3.5 ounces of cooked beef (15 IU)
- 1 ounce of cheese (12 IU)
- 3 ounces of tuna fish (345 IU)



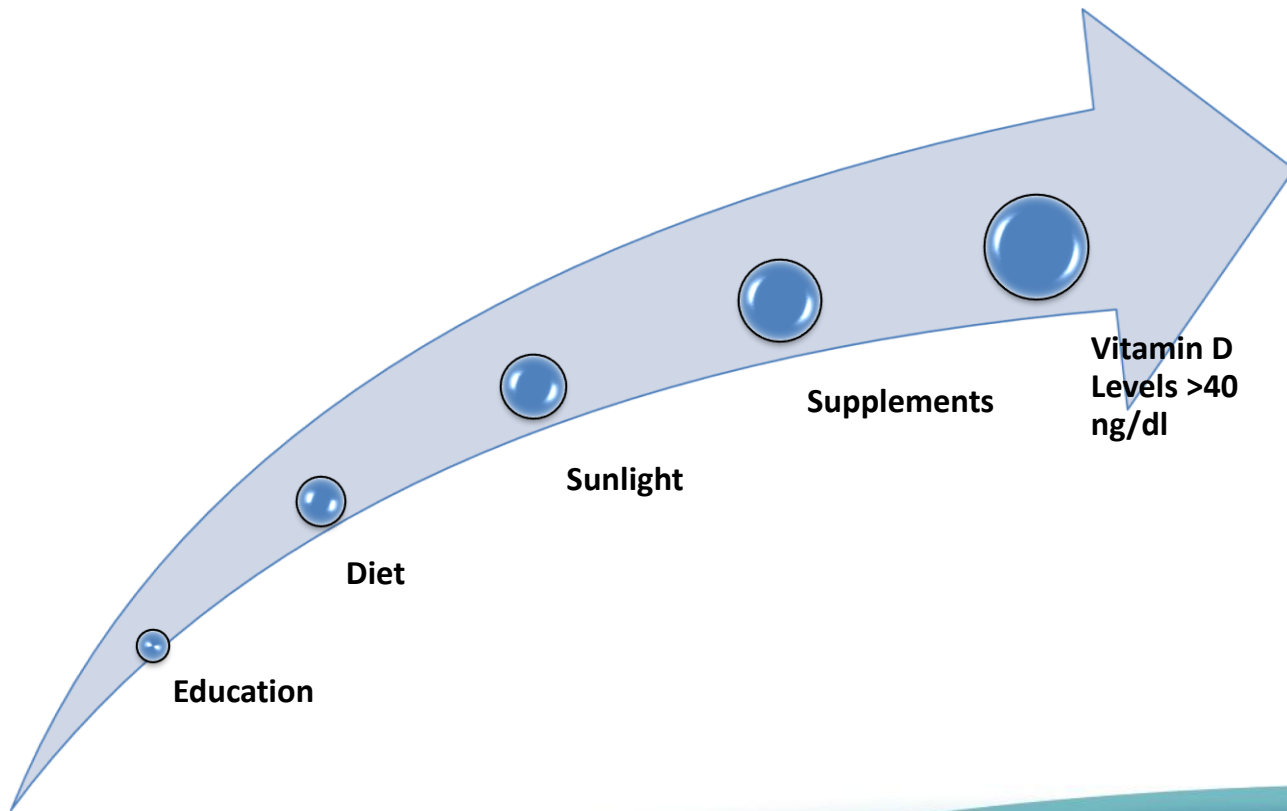
# Vitamin D Conclusions: 2011

- Vitamin D inadequacy is common
- Prudent to recommend D<sub>3</sub>
- We need at least 1,000-2,000 IU/day
- These “higher” doses are safe
- Not everyone needs the same dose
- Casual sun exposure is not enough
- Vitamin D adequacy will reduce osteoporotic fractures, falls, probably cancer and potentially other diseases



# Vitamin D

## The Vitamin of the Century



# Summary



# Top Ten Questions to Ask Before Taking Herbal Supplements

1. Do I need nutritional supplements?
2. Am I taking supplements to try to treat a disease or illness?
3. Are the supplements and the quantities I'm taking right for me?
4. Will taking more of a supplement provide me with beneficial results faster?
5. Can I mix my medications with my supplements?
6. Should I stop taking supplements if I'm scheduled to have surgery?
7. Does it matter if my supplements are natural?
8. How can I tell if my supplements are effective?



# How Do I Know Which Products Are Best?

- Look for any of these symbols on the package:



- These symbols signify that you are getting a quality product with no harmful contamination that is manufactured under GMPs.



# Guidelines for Herbal Use

- Herbal products **ARE** drugs
- Natural **does not always equal** safe
- Not all herbals are effective
- Ask your physician or pharmacist **before** taking
- Tell your physician and pharmacist about **all** herbal products you are taking



# Guidelines for Herbal Use (cont)

- Avoid combination products
- Only begin one herbal product at a time
- Look for the Quality Assurance symbols
- Report any *new symptoms* experienced after starting to your physician or pharmacist
- Take **all** herbals and vitamins and supplements to your healthcare visits



**The first wealth is  
health. ~**

**Ralph Waldo Emerson**



From here . . . it is possible!

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