LIFESTYLE MEDICINE

WELLNESS WEEK

MAY 23, 2023

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OCUPATIONAL MEDICINE CLINIC
“The best way to predict the future is to create it”

Abraham Lincoln
DEFINITION

Lifestyle medicine is the use of evidence-based lifestyle therapeutic interventions:

- A whole food plant-based eating pattern
- Regular physical activity
- Restorative sleep,
- Emotional Health/Stress management
- Avoidance of risky substances
- Positive social connection

As a primary modality, delivered by certified clinicians to prevent, treat and reverse chronic medical conditions.
80% of premature deaths are attributable to 3 main factors:

1. Tobacco use
2. Poor diet
3. Lack of physical exercise
Chronic Disease in U.S.

Problem

- 6 in 10 Americans have a Chronic Disease
- 4 in 10 Americans have 2 or more Chronic Diseases
- 38% of Americans will be diagnosed with Cancer during their lifetimes
- Half of all Americans have Cardiovascular Disease

- 72% of Americans with Overweight or Obesity
  - 36 million men and 29 million women with overweight
  - 32 million men and 36 million women with obesity

- 88 Million Americans have Pre-Diabetes
- 34 Million people live with Type 2 Diabetes

Cause

Eliminate

- Poor Diet
- Sedentary Behavior
- Smoking

Prevent

- 80% of heart disease & stroke
- 80% of type 2 diabetes
- 40% of cancer

Solution

Restore Health

1. Whole-food, plant predominant diet
2. 150 mins/wk of moderate exercise
3. 8 hours of restful sleep
4. Daily relaxation time to lower stress
5. No Smoking
6. Regular connection to positive people

Lifestyle Medicine providers treat and reverse chronic disease
STATISTICS

• 72% of the US population are obese or overweight (based on BMI)

• 33% have pre-diabetes (90% do not know it)

• 60% have a chronic disease (heart disease, cancer, stroke, etc.)

• 10-15% have Diabetes
DIETARY SPECTRUM

THE AMERICAN COLLEGE OF LIFESTYLE MEDICINE DIETARY POSITION STATEMENT
ACLM recommends an eating plan based predominantly on a variety of minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds.

WHAT AMERICA EATS

- Increased risk for Obesity, T2Diabetes, Heart Disease, and some Cancers
- Poor nutrition is the leading cause of death globally.

Increase whole plant foods, fruits, vegetables, whole grains, beans, legumes, nuts, seeds, water

Decrease sweets and snacks, fast food, fried foods, refined grains, refined sugar, meat, dairy, eggs, poultry, high sodium foods

TIPS FOR IMPROVED NUTRITION AND HEALTH

- Any movement toward WFPB eating is positive
- More movement toward a WFPB eating plan increases impact
- Tailored and sustainable approaches are recommended

WHOLE FOOD PLANT-BASED EATING PLAN

Decreased risk for Obesity, T2Diabetes, Heart Disease, and some Cancers
Chronic disease treatment and potential reversal
Build a Healthy Eating Routine

You know that healthy eating is key to a healthy life—and the good news is that small changes can make a big difference! Follow these tips to build a healthy eating routine that works for you.

Choose a mix of healthy foods

There are lots of healthy choices in each food group! Choose a variety of foods you enjoy, including:

**Whole fruits** — like apples, berries, grapefruit, papaya, and bananas

**Veggies** — like broccoli, sweet potatoes, beets, okra, spinach, peppers, and jicama

**Whole grains** — like brown rice, millet, oatmeal, bulgur, and whole-wheat bread

**Proteins** — like lean meats and chicken, eggs, seafood, beans and lentils, nuts and seeds, and tofu

**Low-fat or fat-free dairy** — like milk, yogurt, cheese, lactose-free dairy, and fortified soy beverages (soy milk) or soy yogurt

**Oils** — like vegetable oil, olive oil, and oils in foods like seafood, avocado, and nuts

Depending on your culture and tastes, you might choose different foods than the ones listed here—and that’s okay! You can find healthy foods that work for you.
MyPlate for Older Adults

Fruits & Vegetables
Whole fruits and vegetables are rich in important nutrients and fiber. Choose fruits and vegetables with deeply colored flesh. Choose canned varieties that are packed in their own juices or low-sodium.

Healthy Oils
Liquid vegetable oils and soft margarines provide important fatty acids and some fat-soluble vitamins.

Herbs & Spices
Use a variety of herbs and spices to enhance flavor of foods and reduce the need to add salt.

Fluids
Drink plenty of fluids. Fluids can come from water, tea, coffee, soups, and fruits and vegetables.

Grains
Whole grain and fortified foods are good sources of fiber and B vitamins.

Dairy
Fat-free and low-fat milk, cheeses and yogurts provide protein, calcium and other important nutrients.

Protein
Protein rich foods provide many important nutrients. Choose a variety including nuts, beans, fish, lean meat and poultry.

Remember to Stay Active!

Tufts University
AARP Foundation
1. **MEDITERRANEAN** Overall Score: 4.6

Plant-Based - fruits and vegetables, whole grains, beans, nuts, seafood, lean poultry and unsaturated fat from extra-virgin olive oil is incredibly good for overall well-being.

Gluten-Free, Vegan and Diabetes friendly

2. **The DASH diet:** 4.4

~ emphasizes fruits, vegetables, whole grains, lean protein and low-fat dairy, which are high in blood pressure-lowering nutrients, like potassium, calcium, magnesium and fiber.

3. **Flexitarian Diet:** 4.4

~ semi-vegetarian diet
~ Eating more plant-based and less meat

Gluten-Free and Diabetes friendly
Health Benefits of Physical Activity for Adults

**IMMEDIATE**
A single bout of moderate-to-vigorous physical activity provides immediate benefits for your health.

**LONG-TERM**
Regular physical activity provides important health benefits for chronic disease prevention.

- **Sleep**
  Improves sleep quality.

- **Less Anxiety**
  Reduces feelings of anxiety.

- **Blood Pressure**
  Reduces blood pressure.

- **Brain Health**
  Reduces risk of developing dementia (including Alzheimer’s disease) and reduces risk of depression.

- **Heart Health**
  Lowers risk of heart disease, stroke, and type 2 diabetes.

- **Cancer Prevention**
  Lowers risk of eight cancers: bladder, breast, colon, endometrium, esophagus, kidney, lung, and stomach.

- **Healthy Weight**
  Reduces risk of weight gain.

- **Bone Strength**
  Improves bone health.

- **Balance and Coordination**
  Reduces risk of falls.

Emerging research suggests physical activity may also help boost immune function. More information can be found at [this link](https://www.sci.gov/physicalactivity/guidesforadults/health-benefits-of-physical-activity-for-adults.html).

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**Implements**
Circulation
Oxygenation
Muscle and Bone health

**Increases**
Immunity
Endorphins
Strong evidence that physical activity lowers the rate of

• Coronary Artery Disease
• Hypertension
• Type 2 Diabetes
• Breast Cancer
• Colon Cancer
• Depression
• Falls
PHYSICAL ACTIVITY

- Adults should move more and sit less

- They should do at least 150 minutes a week of moderate-intensity, or 75 minutes a week of vigorous-intensity aerobic physical activity

- Aerobic activity should be spread throughout the week

- Adults should also do muscle-strengthening activities of moderate or greater intensity and that involve all major muscle groups on 2 or more days a week.
# Benefits Of Exercise

<table>
<thead>
<tr>
<th><strong>BRAIN</strong></th>
<th><strong>Increased</strong></th>
<th><strong>Decreases:</strong></th>
</tr>
</thead>
</table>
| ![Brain Image](image1.png) | • cerebral blood flow  
• maximal oxygen consumption and delivery of oxygen  
• serum concentrations of endocannabinoid receptors  
• grey matter  
• increased levels of neurotransmitters (e.g., serotonin, beta-endorphins) | anxiety, depression, dysfunctional and psychotic behaviors, hostility, tension, phobias, headaches |

**IMPROVES:** Emotional stability, cognitive functioning

<table>
<thead>
<tr>
<th><strong>HEART</strong></th>
<th><strong>Improves</strong></th>
<th><strong>Reduces</strong></th>
</tr>
</thead>
</table>
| ![Heart Image](image2.png) | • the muscles’ ability to pull oxygen out of the blood, reducing the need for the heart to pump more blood to the muscles  
• Works like a beta blocker to **slow the heart rate and lower blood pressure** | • **Stress hormones** that can put an extra burden on the heart  
• **Increases** high-density lipoprotein (HDL) or “good” cholesterol and helps control triglycerides |

**Reduces**

- Stress hormones that can put an extra burden on the heart
- Increases high-density lipoprotein (HDL) or “good” cholesterol and helps control triglycerides
SLEEP

Normal healthy sleep

• Characterized by sufficient **duration**, good **quality**, appropriate **timing** and **regularity**, and the absence of sleep disturbances and disorders

• **32.8% of Americans** say they sleep less than 7 hours.
## Recommended sleep duration by age group

<table>
<thead>
<tr>
<th>Age group</th>
<th>Sleep hours per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborns (0-3 months)</td>
<td>14-17</td>
</tr>
<tr>
<td>Infants (4-11 months)</td>
<td>12-15</td>
</tr>
<tr>
<td>Toddlers (1-2 years)</td>
<td>11-14</td>
</tr>
<tr>
<td>Preschoolers (3-5 years)</td>
<td>10-13</td>
</tr>
<tr>
<td>School-age children (6-13 years)</td>
<td>9-11</td>
</tr>
<tr>
<td>Teenagers (14-17)</td>
<td>8-10</td>
</tr>
<tr>
<td>Younger adults (18-25)</td>
<td>7-9</td>
</tr>
<tr>
<td>Adults (26-64)</td>
<td>7-9</td>
</tr>
<tr>
<td>Older adults (≥65)</td>
<td>7-8</td>
</tr>
</tbody>
</table>
Do you know
the difference between...
sleep needed to feel awake and
sleep needed to be healthy?

Sleep is important for good health. Studies show that not getting enough sleep or getting poor quality sleep on a regular basis increases the risk of having high blood pressure, heart disease, and other medical conditions.

It's possible to get just enough sleep to stay awake and alert during the day. Research from the National Institutes of Health shows that four key sleep factors are crucial to protect your health:

- **Good quality, uninterrupted sleep**
- **7-8 hours of sleep each night (adults)**
- **Regular bedtime and wake-up time every day**
- **Exposure to sunlight during the day**

For more information, visit [www.nhlbi.nih.gov/sleep](http://www.nhlbi.nih.gov/sleep).
### Category

#### Risk factors

<table>
<thead>
<tr>
<th>Category</th>
<th>Risk factors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lifestyle</strong></td>
<td>• Consuming excessive amounts of caffeine</td>
</tr>
<tr>
<td></td>
<td>• Drinking alcohol</td>
</tr>
<tr>
<td></td>
<td>• Drug abuse</td>
</tr>
<tr>
<td></td>
<td>• Shift work</td>
</tr>
<tr>
<td></td>
<td>• Attending university</td>
</tr>
<tr>
<td></td>
<td>• Jet lag</td>
</tr>
<tr>
<td><strong>Environmental</strong></td>
<td>• Excessive noise</td>
</tr>
<tr>
<td></td>
<td>• Excessive light</td>
</tr>
<tr>
<td><strong>Psychosocial</strong></td>
<td>• Anxiety, worry, and rumination</td>
</tr>
<tr>
<td></td>
<td>• Parents of young children</td>
</tr>
<tr>
<td></td>
<td>• Caregivers to a family member with a chronic, life-threatening, or terminal illness</td>
</tr>
<tr>
<td><strong>Sleep disorder</strong></td>
<td>• Insomnia</td>
</tr>
<tr>
<td></td>
<td>• Obstructive sleep apnea</td>
</tr>
<tr>
<td></td>
<td>• Restless leg syndrome</td>
</tr>
<tr>
<td></td>
<td>• Narcolepsy</td>
</tr>
<tr>
<td></td>
<td>• Circadian rhythm disorders</td>
</tr>
</tbody>
</table>
Sleep disruption

Physiologic effects

- ↑ Catecholamines
- ↑ Secretion of ACTH and cortisol
- Circadian rhythm disruption
  - ↓ Insulin sensitivity
    - ↓ Leptin
    - ↑ Ghrelin
    - ↑ Appetite
  - ↑ Oxygen consumption/CO₂ production
- ↑ Upregulation of TNF, IL-1, IL-6, CRP
  - ↑ Reactive oxygen species
- ↓ Melatonin production

Short-term consequences
- Stress
- Somatic problems
- Psychosocial issues

Long-term consequences
- Cardiovascular disease
- Obesity
- T2DM
- Cancer
- Death
Tips for
Getting a Good Night’s Sleep

Practice healthy habits during the day:
• Go to bed and wake up at the same time each day.
• Try to get at least 30 minutes of sunlight.
• Exercise regularly, but not within 2-3 hours before bedtime.
• Don’t take naps after 3 p.m.
• Avoid caffeine and nicotine.
• Avoid alcoholic drinks before bed.
• Avoid large meals and drinks late at night.
• Avoid medicines that delay or disrupt your sleep, if possible.

Create a good sleeping environment:
• Have a comfortable mattress and pillow.
• Keep the room temperature cool.
• Avoid distractions such as noises, bright lights, clocks, TVs, and computers.

Take time to relax before going to bed:
• Read a book or listen to music, and turn off the TV and electronic devices.
• Take a hot bath, which will adjust your body temperature and help you relax.

If you are awake for more than 20 minutes, get up and do something relaxing.
If you continue to have trouble sleeping, talk to your doctor about it.

For more information, visit www.nhlbi.nih.gov/sleep.
Emotional Well-being

It is defined as an
• Overall positive state of one's emotions
• Life satisfaction
• Sense of meaning and purpose,
• Ability to pursue self-defined goals
Emotional Well-being

Stress causes unhealthy behaviors which leads to:

- Increased Catecholamines & Cortisol Production
- Obesity & HTN
- Sleep Problems
- Increased clotting & Heart disease
- Increased Inflammation
- Lowered Immunity
**Dopamine**
Reward/Motivation Chemical
- Listen to music
- Get moving
- Get quality sleep Eat enough protein

**Oxytocin**
The Mood Stabilizer
- Dinner with family or friends
- Give a hug
- Dance
- Give compliments

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**Serotonin**
Love/Contentment Hormone
- Yoga
- Spend time in nature
- Be in the sun
- Achieve a goal

**Endorphins**
The Pain Killer
- Move your body
- Laugh
- Be creative
- Dark chocolate
GET YOUR DAILY HAPPINESS CHEMICALS
The happy brain chemicals that make you feel good

1. What are the Happy Chemicals?

DOPAMINE
- Enables motivation, learning, and pleasure
- Gives you determination to accomplish goals, desires, and needs

OXYTOCIN
- Feeling of trust, motivates you to build and sustain relationships
- Known as "Cuddle or Love Hormone", plays a role in bonding

SEROTONIN
- Feeling significant or important among peers
- Calm form of accepting yourself with the people around you

ENDORPHINS
- Releases a brief euphoria to mask physical pain
- Response to pain and stress that alleviates anxiety and depression

2. How Deficiency Affects You

DOPAMINE
- Procrastination
- Low self-esteem
- Lack of motivation
- Low energy or fatigue
- Feeling anxious
- Feeling hopeless

OXOTOCIN
- Feeling lonely
- Stressed
- Lack of motivation
- Low energy or fatigue
- Feeling disconnected from relationships
- Feeling anxious

SEROTONIN
- Low self-esteem
- Overly sensitive
- Anxiety/panic attacks
- Mood swings
- Feeling hopeless
- Social phobia

ENDORPHINS
- Anxiety
- Depression
- Mood swings
- Aches and pains
- Insomnia
- Impulsive behavior

3. How to Increase Happiness Levels

DOPAMINE
- Meditate
- Daily to-do list
- Long term goals
- Food rich in L-Tyrosine
- Exercise regularly
- Create something: writing, music, or art

OXOTOCIN
- Physical touch
- Socializing
- Massage
- Acupuncture
- Listening to music
- Exercise
- Cold shower
- Meditate

SEROTONIN
- Exercise
- Cold showers
- Sunlight
- Massage

ENDORPHINS
- Laughter/crying
- Creating music/art
- Eat dark chocolate
- Eat spicy foods
- Exercise/stretching
- Massage
- Meditate
Non-Pharmacological Stress Management

- Light Therapy
- Deep Abdominal Breathing
- Creative Art, listening to music & singing
- Massage
- Reading books to enhance frontal brain function
- Religious and Spiritual activities
- Volunteering for meaningful causes
- Time in Nature, physical exercise
- CBT/Psychotherapy
Depression

Intake of whole grains, olive oil, fruits and vegetables reduces symptoms of depression.

30 mins of brisk walking for 10 days can start to show an anti-depressant response.
Avoid junk food!
BNL’s Employee Assistance Program

- Provided through Magellan — 1-800-327-2182
- Provides 5 free visits per family member in a calendar year
  Need to mention — “Brookhaven Science Associates”
- Confidential consultations with licensed behavioral health professionals
- Free Webinars on Emotional health, Financial planning, Relationships, Caregiving
- Get Help Online
  Log on to Magellan Healthcare

Up to five free visits per family member per calendar year provided through Magellan Healthcare
Avoidance of Risky Behavior

• Smoking
• Alcohol
• Drugs
Smoking

- Tobacco products kill 1 in 2 people who use them
- Smokers experience more illness and disability
- 489,000 smoking related deaths occur in the US each yr.
- Accounts for 1 out of 3 cancer deaths
Smoking can damage every part of the body.

**Cancers**
- Head or Neck
- Lung
- Leukemia
- Stomach
- Kidney
- Pancreas
- Colon

**Chronic Diseases**
- Stroke
- Blindness
- Gum infection
- Aortic rupture
- Heart disease
- Pneumonia
- Hardening of the arteries
- Chronic lung disease & asthma
WHAT HAPPENS WHEN YOU QUIT SMOKING

Within minutes of smoking your last cigarette, your body starts to recover:

20 MINUTES
Your heart rate and blood pressure drop.

24 HOURS
Chance of heart attack decreases.

2 - 3 WEEKS
Your circulation improves and your lung function increases.

1 - 9 MONTHS
Coughing, shortness of breath and sinus congestion decrease.

1 YEAR
Risk of heart disease drops to half that of a smoker.

5 YEARS
Risk of cancer of the mouth, throat, esophagus and bladder are cut in half.

10 YEARS
Lung cancer risk is half that of a smoker.

15 YEARS
Risk of heart disease is that of a nonsmoker.
<table>
<thead>
<tr>
<th>Type</th>
<th>Form</th>
<th>Common Brand Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescription pills</td>
<td>Pill</td>
<td>Zyban® Wellbutrin® (bupropion SR)</td>
</tr>
<tr>
<td></td>
<td>Pill</td>
<td>Chantix® (varenicline)</td>
</tr>
<tr>
<td>Prescription nicotine replacement therapy</td>
<td>Inhaler</td>
<td>Nicotrol®</td>
</tr>
<tr>
<td></td>
<td>Nasal Spray</td>
<td>Nicotrol®</td>
</tr>
<tr>
<td>Over-the-counter nicotine replacement therapy</td>
<td>Gum</td>
<td>Nicorette®</td>
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<tr>
<td></td>
<td>Patch</td>
<td>Nicoderm® Habitrol®</td>
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<tr>
<td></td>
<td>(can be prescription)</td>
<td>Prostep® Nicotrol®</td>
</tr>
<tr>
<td></td>
<td>Lozenge</td>
<td>COMMIT®</td>
</tr>
</tbody>
</table>
Smoking Cessation Resources

Quit Assist Information Resource

NYS Smoking cessation Programs

NYS Smoker’s Quitline 1-866-NY-QUITS

Smoking Cessation Program - Health Department (suffolkcountyny.gov)
Health Benefits of Social Connectedness

**Prevents**
- Heart disease.
- Stroke.
- Dementia.
- Depression and anxiety.

**Helps**
- Improve recovery from stress, anxiety, and depression.
- Promote healthy eating, physical activity, and weight.
- Improve sleep, well-being, and quality of life.
- Reduce your risk of violent and suicidal behaviors.
- Prevent death from chronic diseases.

People with stronger social bonds have a **50% increased** likelihood of survival than those who have fewer social connections.
Increases your risk of:

- Dementia by 50%
- Heart disease by 29%
- Stroke by 32%

Social isolation and loneliness among older people are widespread:

In some countries, up to 1 in 3 older people are lonely.
Social Connectedness

**OXYTOCIN**
- Meal with friends
- Complimenting
- Giving a hug

**Endorphins**
- Laughing
- Being Creative

Make connections
Connecting to your community is one of the best resources for reducing stress.

www.cdc.gov/HowRightNow
Spend time with others in nature

• Spend more quality time with family and friends
Exercise Together

Increase Dopamine, Serotonin, Oxytocin and Endorphins
Provide social support, such as listening to a friend dealing with problems

Getting to know a neighbor

If you cannot connect in person, substitute a phone call for screen time

 Increases dopamine, serotonin and endorphins
JOIN A GROUP

Join a club, or class related to an interest or hobby (books, art, sports)
Health is Wealth

Invest in yourself
RESOURCES

How right now- Mental Health
https://www.cdc.gov/howrightnow/resources/index.html

Dietary guidelines for Americans
Home | Dietary Guidelines for Americans

Learn how to eat healthy with MyPlate
MyPlate | U.S. Department of Agriculture
RESOURCES

Sleep
Sleep and Sleep Disorders | CDC

Physical Exercise
How much physical activity do adults need? | Physical Activity | CDC

Social Connectedness
How Does Social Connectededness Affect Health? | CDC