Safer at Home

BALANCING THE THREAT OF SICKNESS AND YOUR PHYSICAL HEALTH DURING THE CORONAVIRUS PANDEMIC

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No financial interest.
It’s just the flu, or is it?

- Covid-19 deaths are reported directly versus estimates as with influenza
- CDC estimates influenza deaths 6x greater than actual counts.
- Between 2013-2014 and 2018-2019, the reported yearly estimated influenza deaths ranged from 23K to 61K. Actual counts were between 3,448 and 15,620 yearly.
- More valid comparison would be to compare weekly counts of COVID-19 deaths to weekly counts of seasonal influenza deaths.
- Week ending 4/21/2020, there were 15,455 COVID-19 counted deaths in the US. The week ending 4/14/2020 there were 14,478.
- Peak influenza season from 2013-2014 to 2019-2020, influenza related deaths ranged from 351-1626.
Are we flattening the curve?

Source: John Hopkins
Georgia: How are we doing?

- 69,381 Confirmed Cases to date
- 10,313 hospitalizations
- 2,206 ICU admissions
- 2,698 deaths

CORONAVIRUS RISK LEVEL BY ACTIVITY

9
- BARS
- LARGE MUSIC CONCERTS

8
- BUFFETS
- SPORTS STADIUMS
- GYMS
- AMUSEMENT PARKS
- CHURCHES

7
- BASKETBALL
- PUBLIC POOLS
- SCHOOLS

6
- CASINOS
- RESTAURANTS, INDOOR SEATING
- PLAYGROUNDS
- HAIR SALONS, BARBERSHOPS
- PONTOON BOAT RIDES
- MOVIE THEATERS

5
- DINNER PARTIES AT A HOUSE
- AIRPLANES
- BACKYARD BARBECUES
- MALLS
- BEACHES
- BOWLING

4
- DENTIST'S OFFICE
- WALKING IN A BUSY DOWNTOWN
- OFFICES
- DOCTOR'S WAITING ROOMS
- EATING OUTSIDE AT A RESTAURANT

3
- GETTING GROCceries
- CAMPING
- HOTELS
- GOLFING
- LIBRARIES AND MUSEUMS

2
- GOING FOR A WALK, RUN OR BIKE RIDE WITH OTHERS
- GETTING FUEL

1
- GETTING TAKEOUT FROM A RESTAURANT
- PLAYING TENNIS

WHAT A GREAT BOOK! WHAT SHOULD I DO NOW... MAKE SOME BREAD? TAKE ANOTHER NAP? MAYBE I'LL JUST GET DRUNK...

HELP
SEND WINE

QUARANTINE: WITHOUT KIDS:

QUARANTINE: WITH KIDS:

The Pandemic - Pound for Pound

1. Significant weight and fat mass accumulation can occur in a relatively short time frame.

2. Those obese/overweight at baseline are at higher risk.

3. Regular exercisers are NOT protected.

4. Weight gained in a very short period of time is likely to stay in some populations (women > risk).

5. Changes in eating behavior, main driver.
(Not) Coping during Quarantine

- Compared similar but not identical situations (ie. Vacations and holidays)

- Common factor: Deviation from normal routines.

- Higher Energy Intake
  - Increase in shelf-stable, ultra-processed, energy dense comfort foods.
  - Consumption of more takeout foods, baking more, and more alcohol

- Less Energy Expenditure
  - Increase stress, anxiety, and boredom → higher energy intake, sleep disturbances, less exercise
  - Upward trend of television, internet-connected devices, app/web on smartphone
Author’s recommendations...

- Frequent or daily self weighing
- Utilizing behavioral nutritionist via telemedicine
- Limiting energy dense but nutrient poor foods
- Cooking at home > Fast food take out or delivery
- Taking frequent breaks to perform short bouts of physical activity & scheduling structured exercise sessions that can be done at home
- Establishing daily routines
- Finding different outlets for stress such as meditation, yoga, or walking, and using tracking applications
Vitamin D Deficiency

- Osteoporosis/Osteomalacia in adults, Rickets in children
- Supplementation/Sunshine = Prevention of falls and beneficial effects on immune and cardiovascular health

- High Risk Groups
  - Obese
  - Dark Skinned
  - Certain medications
  - Limited sun exposure
  - Malabsorption Disease

Source: Uptodate.com
- Sedentary lifestyles may lead to diminished overall health and wellness
- Obesity is a risk to lung inflammation and secondary injury
- Vitamin D deficiency and insufficiency
  - Studies suggest that it is lung protective
- Modifiable lifestyle factors should not be overlooked.
Heart Health

- Psychological Impact
  - PTSD, confusion, anger, stress, depression

- Stressors
  - Quarantine duration, inadequate supplies, infection fears, frustration, boredom, inadequate information, financial loss

- Psychological effects and associated behaviors may lead to increase in cardiovascular events at the end of the pandemic
Epigenetics

- How internally (e.g., thought, perception, feeling, nutrition, movement, sleep, stress) and externally (e.g., social relationship, shift-work, pollutions, light, stressor) induced lifestyle and environmental factors change our biochemical landscape.

- Biochemical reactions can lead to either promotion of health or tendencies towards illness.
Epigenetics and Stress

- Mindfulness = ↓ proinflammatory genes
- Meditation and Lifestyle Modification = ↓ systolic BP, ↑ telomeres, ↓ inflammatory cytokines
- Choices to slow epigenetic clock
  - Dietary choices and moderate alcohol intake
- Green/black tea = ↓ oxidative stress and inflammation
- Regular exercise vs short bouts of intensive exercise
- Yoga = beneficial epigenetic expression of genes
Traveling and Vacationing during the Pandemic

- Choose destination wisely
- Drive if possible
- If air travel: sanitize your space, wear a mask
- If staying in an hotel, disinfect all commonly touched surfaces
- Prepare your own food if possible, take-out, or eat at restaurants with outdoor options
- Stay home if possible
Questions?
References


