Health Benefits of Woodlands

Jarel Bartig, USDA Forest Service and Natural Resources Conservation Service

14 May 2021

Webinar Objectives

• What’s the problem?
• 3 solutions and supporting science
• Ideas for techniques you can try
• Places to experience woodlands
• Resources to learn more
What’s the Health Connection?

• Time in nature = increased physical and mental wellbeing

What’s the disconnect?

• Humans living apart from the land for the first time in our history
• Source of our stress has changed
• Way we recover has not!
Three Solutions and How They Work

• Negative ions
• Tree air
• Time in nature

Negative ions: what

• Molecules floating in air that have been charged with electricity - anions
• Moving water (Lenard effect)
• Plants and soil
Negative ions: where are they

- Forests
- Waterfalls
- Large bodies of moving water
- Mountains
- Seashores
- Hot springs
- Home environment?

Negative ions: how

- Reduce stress and depression
- Quicker recovery from physical exertion
- Promotes antimicrobial activity
- Improves cognitive performance

Scioto River
Break for questions

Tree air: what

• Shinrin-yoku (Japan)
• Salim yok (Korea)
Aerosols: phytoncides

- Help plants and trees protect themselves from insects and germs
- Tree aerosols are natural pharmaceuticals

Aerosols: Geosmin

- Molecule discovered in 2007
- Combines in the air to create petrichor
- Comes from soil organisms
Tree air: where

- Forests and woodlands*
- Urban parks and yards

Tree air: how

- Reduces blood pressure and blood sugar
- Lowers cortisol
- Increases natural killer cells
Tree air: how long is enough?

• 20 minutes can last for 3 months!

Break for questions
Time in nature: what

- Brain networks:
  - Executive
  - Spatial
  - Default

Time in nature: where

- woods*
- gardens
- parks
- water
- art
Time in nature: how

- Decreased stress/nervous system arousal
- Increased focus and memory
- Impulse inhibition
- Feelings of well-being
- Decreased rumination*
- Increased awe*
- More creativity

Time in nature: how long?

- 2+ hours every week toward a kinder, happier and more creative you!
Break for questions

Techniques You can Try: boost your health and well-being

• Walk in the woods for 90 minutes
• Create a mandala from natural materials at hand
• Nature journaling
• Just sit and breathe!
Techniques You Can Try: boost creativity

- Meditation
  - Sit quietly and observe where your mind travels
  - Stay present and focus on sounds, smells, colors of your environment
  - Become aware of types of thoughts and how they can create changes in body and emotion
  - Follow without judgement or reaction – stay in the moment

Other Things You Can Do

- Read the Lorax to a child
- [www.discovertheforest.org](http://www.discovertheforest.org)
- Plant a garden
- Add negative ions to your living space
Some Places You Can Go

State Forests in Ohio
http://forestry.ohiodnr.gov/findaforest

Natural Areas and Preserves in Ohio
http://naturepreserves.ohiodnr.gov/findapreserve

Wayne National Forest
https://www.fs.usda.gov/wayne

Resources to Learn More

• *The Nature Fix* by Florence Williams
• *Last Child in the Woods* by Richard Louv
• *Forest Medicine* by Qing Li
• Ohio Leave No Child Inside Collaborators
  • https://ohiolnci.org/
• International Society of Nature and Forest Medicine
  • https://www.infom.org/
• The Association of Nature and Forest Therapy Guides and Programs
  https://www.natureandforesttherapy.org/
Resources continued

• Walk with a Doc
  • https://walkwithadoc.org/

• Children and Nature Network
  • https://www.childrenandnature.org/

• National Environmental Education Foundation’s Children and Nature Initiative
  • https://www.neefusa.org

• Park RX America
  • https://parkrxamerica.org/

“To the body and mind which have been cramped by noxious work or company, nature is medicinal and restores their tone.”

-Ralph Waldo Emerson