Overview

- laws & regulations
- tanning devices
- ultraviolet radiation
- effects of ultraviolet radiation
- public health risks
- program components

Epidemiological Model applied to Skin Cancer

ATTITUDE TOWARDS TANNING (environment)

TANNER (host)

MELANOMA

RADIATION FROM TANNING DEVICES (agent)

Public Health Law Article 35-A Ultraviolet Radiation Devices

- license required (3551)
- suspension or revocation (3552)
- fees (3553)
- powers and duties of the commissioner (3554)
- restrictions on the use of devices (3555)
Public Health Law
Article 35-A
Tanning Access by Minors

- Persons 18 years of age or older must provide photographic identification.
- Parents or legal guardians must give informed written consent for a person 17 to 18 years of age.
- Persons under 17 years of age are prohibited from tanning in NYS.

NYCRR Title 10, Chapter 2 Subpart 72-1

Tanning Facilities
Rules and Regulations
www.health.state.ny.us/nysdoh/phforum
www.health.ny.gov/environmental/indoors/tanning

Is tanning addiction the cause of sunbed use among young adults?

[ ] Yes
[ ] No
Who tans?

1 million people tan

Who tans?

30 million people tan
2.3 million are teens

Who tans?

70% of the people that tan indoors are Caucasian females 16 to 49 years old
Indoor Tanning is a BIG business.

Where do people tan?

Fitness Clubs

Gyms
RIT's Union has a game room with billiards and electronic games, performing arts rehearsal space, a hair-styling and tanning salon, meeting rooms, a student lounge, and two separate dining areas.
Gas Station
Convenient Store

Multiple Services

Tanning Devices
aka
Ultraviolet Radiation Devices
Types of Tanning Devices

Tanning Bed

Tanning Booth
Bed or Booth

Tanning bed in operation

Tanning booth in operation
UV Lamps and Bulbs

When to tan?

Before a wedding
Before a vacation at the beach

In the winter

$5 billion a year industry
Why do people tan?

a. cosmetic reasons
b. relaxation
c. biochemical boost
d. more energy

Cosmetic Reasons

A tan looks good!

Our culture idealizes tan skin.
Relaxation

A tan feels good!
UV rays cause the release of a biochemical similar to endorphins, known as a cutaneous opioid.

Energy
The indoor tanning industry claims... 

**a. a base tan**
**b. vitamin D**
**c. cancer prevention**
**d. all of the above**

The indoor tanning industry claims...

**the risks associated with ultraviolet light are overstated and the benefits are ignored.**

The indoor tanning industry claims...

**Vitamin D** is a well-known side effect of ultraviolet light.
The indoor tanning industry claims...

there is no proof that avoiding ultraviolet radiation will decrease risks of melanoma or any cancer.

Do the risks out weigh the benefits?

Electromagnetic Spectrum
UVA
- long wavelength
- 400nm – 320nm
- penetrates deep into the skin
- responsible for tanning

UVB
- medium wavelength
- 320nm – 280nm
- causes damage to the skin
- responsible for burning

UVC
- short wavelength
- less than 280nm
- filtered out of tanning lamps
Skin Anatomy & Physiology

Effects of Radiation

What are the public health RISK associated with indoor tanning?

a. skin & eye damage
b. skin & eye infections
c. photosensitivity reactions
d. tanning by minors
e. all of the above
“Exposure to sunlamps or sunbeds is known to be a human carcinogen.”

The Report on Carcinogens, Eleventh Edition
prepared by the National Institute of Environmental Health Science National Toxicity Program Department of Health and Human Services

Skin & Eye Damage

- photo damage
- skin cancer
- eyelid neoplasm
- cataracts
- ocular melanoma
- macular degeneration

Skin Cancer

- > 2 million cases of skin cancer
- basal and squamous cell carcinoma

"Most people get skin cancer from too much sun or tanning beds."

American Academy of Dermatology 2011
Melanoma

• 76,330 estimated new cases
• 11,980 estimated deaths
• 53,360 melanoma in situ diagnosed

American Cancer Society 2011

"Melanoma is the most common form of cancer for young adults 25-29 years old and the second most common cancer in adolescents and young adults 15-29 years old."

The risk of cutaneous melanoma is increased by 75% when the use of tanning devices starts before 30 years of age."

The Lancet Oncology, c. 2009
Skin & Eye Infections

- virus
- bacteria
- fungus

Immune System Reactions

A weakened immune system can increase the risk of infection.

Photosensitivity Reactions

- allergic dermatitis
- food
- cosmetics
- medication
**Tanning by Minors**

- The over-exposure in youths are more than **twice** as likely to lead to skin cancer than over-exposure later in life.
- The sharp rise in melanoma rates in young women correlates to the use of indoor tanning facilities.

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**World Health Organization**

- Data shows a prominent and consistent increase in risk for melanoma in people who first used indoor tanning facilities in their twenties or teen years.
- Indoor tanning offers little if any protection against solar damage to the skin, nor does use of UV devices offer protection against vitamin D deficiency.

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**Centers for Disease Control and Prevention**

"UV rays from artificial sources of light, such as tanning beds and sunlamps, are as dangerous as those from the sun and should be avoided."
Federal Trade Commission

- educates the consumer about fraudulent, deceptive and unfair business practices
- protects the consumer by investigating false, deceptive and misleading advertising claims

Federal Trade Commission

"Get a beautiful tan indoors without increasing your risk of skin cancer."

"Indoor tanning is safer than the sun because the environment is controlled."

"Indoor tanning is approved by the government."

"Indoor tanning is a safe way to increase vitamin D levels."

Food & Drug Administration

"It's well established that UV radiation from the sun causes skin cancer. Since lamps used in tanning beds emit UV radiation, the use of indoor tanning devices also increase your risk of skin cancer."

"There is no such thing as a safe tan."
Federal Compliance Standards for Sunlamp Products  
21 CFR 1040.20
• performance requirements of lamps
• timer systems
• protective eyewear
• lamp compatibility
• instructions to users

Public Health Law Article 35-A

Rules and Regulations Subpart 72-1 Tanning Facilities Program

Tanning Program Components
• fees
• permits
• age restrictions
• age verification
• operation & maintenance
• protective eyewear
• general operator responsibilities
Tanning Program Components

- inspections
  - control of access by minors
  - consent and other required forms
  - protective eyewear
  - sanitation of tanning devices
  - timer testing
  - electrical safety

Tanning Program Components

- complaint investigations
  - tanning access by minors
  - unsanitary conditions

Tanning Program Components

- injury and illness investigations
  - burns
  - eye injuries
  - any injury where medical attention was sought
Tanning Facilities Program
Tools and Materials

• eHIPS database
  – permits & fees
  – inspections & complaints
• DOH forms
  – permits & fees
  – inspections & complaints
  – acknowledgement & consent
  – warning sign & hazards sheet

NYSDOH
Indoor Tanning

http://www.health.ny.gov/environmental/indoors/tanning/