What’s Running Around the Gym?

NYSCHA October 2015
What’s Running Around the Gym?

NYSCHA
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The Gym / Training Room

- NCAA.org
- Health & Safety
- NCAA Sports Medicine Handbook
- Guideline 2.J Skin Infections
- Guideline 2.S Sun Protection
National Collegiate Athletic Association

- Baseball
- Basketball
- Beach Volleyball
- Bowling
- Cross Country
- Fencing
- Field hockey
- Football
- Golf
- Gymnastics
- Ice Hockey
- Lacrosse
- Rifle
- Rowing
- Skiing
- Soccer
NCAA Sport Cont.

- Softball
- Swimming & Diving
- Tennis
- Track & Field (I)
- Track & Field (O)
- Volleyball
- Water Polo
- Wrestling
Catagories of Skin Conditions & Examples

• 1. Bacterial Skin Infections
  • Impetigo
  • Erysipelas
  • Carbuncle
  • Staphylococcal disease, MRSA
  • Folliculitis (Generalized)
  • Hidradenitis suppurativa
• 2. Parasitic skin infections
  • Pediculosis
  • Scabies
• 3. Viral skin infections
  • Herpes simplex
  • Herpes zoster
  • Molluscum contagiosum
• 4. Fungal skin Infections
  • Tinea corporis (ringworm)
  • Tinea pedis (athlete’s foot)
Superbugs

• MRSA : CA methicillin-resistant Staphylococcus aureus
• CRE : carbapenem-resistant enterobacteriaceae
• Pseudomonas aeruginos
• Clostridium difficile
Skin Infections

- Skin-to-skin contact
- Skin-to-surface contact
  - practice/compete on turf or mats
  - equipment – helmets & uniforms
  - training machines
  - locker rooms, benches, towels
- Frequent microabrasions portal of entry
Full Contact Sports

Physical contact impacts an opponent / requires tackling / blocking/ hitting a player
Hit or collide with great force
American football, wrestling, rugby, martial arts, kickboxing
Limited Contact Sports

• Regular contact but with less force
• Basketball, association football
HEADLINES: MRSA

• NFL:
  • Daniel Fells recently
  • Cleveland Browns
  • Washington Red Skins
  • Buccaneers: Lawrence Tynes, kicker

• The first case of MRSA dates back to 1968, only 9 years after the synthesis of methicillin.
MRSA

- Physical contact
- Poor hygiene
- Shared facilities & equipment
- Especially team sports: football, wrestling, basketball, rugby
Abcesses, Furuncles (boils) & Carbuncles

- Furuncle: walled-off, deep and painful, firm or fluctuant mass enclosing a collection of pus
- Often evolves from a superficial folliculitis
- Carbuncle: deep interconnected aggregate of infected furuncles or abscessed follicles
Red, Hot, Swollen, Tender
Rubor, calor, tumor, dolor
Furuncle: concern scaring
• Often present complaining of a ‘bug bite’ or a ‘spider bite’

• MRSA is usually a ‘simple’ skin infection
  • Rx: lancing the abscess
  • ? Antibiotics
  • prevent deep tissue, bone, or blood infection
Rx of Abscess

- INCISION & DRAINAGE
- C & S
- Iodoform gauze for packing large abscess
- Warn patient of signs and symptoms of advancing or systemic infection-fever, chills, malaise, spreading redness, increasing discomfort.
MRSA: Good hygiene

1. Use pump soap dispensers with anti-bacterial soap. Avoid bar soaps.
2. Don’t share towels, personal items, clothing, equipment
3. Clean gym or sports equipment with disinfectant sprays before & after use
4. Report any cuts or abrasions to the coach or team trainer
Herpes Simplex Virus

- Type 1: HSV 1 commonly causes oral infections
- Type 2: HSV2 commonly causes genital infections
• Worldwide rates: 60% to 95% of adults
• HSV 1 acquired in childhood
• 70-80% population low socioeconomic status
• 40-60% population improved socioeconomic status
• HSV 2  16% population
HSV USA

- 57.7% population infected with HSV 1
- 16.2% population infected with HSV 2

- Vaccine: unsuccessful in clinical trials
- Future: gene targeting approach
COLD SORES : HSV I

• “fever blisters” “herpes labialis”
• Primary infection: asymptomatic or severe gingivostomatitis/pharyngitis
• Recurrent infection: prodrome, grouped vesicles on an erythematous base, crust and heal in 7-8 days
Herpes : lip

• Grouped vesico-pustules on an erythematous base
Herpes simplex: herpetiform
(grouped vesicles on a red base)
Primary Phase

- Viral infection established in the nerve ganglion. Usually asymptomatic but can be symptomatic with gingivostomatitis, pharyngitis,
HSV Primary Infection
HSV Primary Infection
Secondary Phase

- Recurrent disease at the same site
- Intraoral recurrences are rare
- Usually non scarring unless secondary infection / impetigo
- Frequency of infections tend to decrease with time
Secondary phase cont.

- Prodromal symptoms: itching, burning, tingling, then grouped vesicles on an erythematous base occur over 2-4 days, rupture and crust, then shed over the next 7-8 days, leaving a pink re-epithelialized surface.

- Triggers: UVL on lips, menses, flu or other viral illness ("fever blisters")
HSV
Herpes simplex 2ndary impetigo: note honey-combed crust
• HSV can be a cause of erythema multiforme and Stevens-Johnson Syndrome
Other sites via inoculation

• Herpetic whitlow: digit often of health care worker
• Herpes gladiatorum: cutaneous herpes in athletes involved in contact sports (esp. wrestlers)
- Herpetic whitlow
- Herpes gladiatorum
- Eczema herpeticum (Kaposi’s varicelliform eruption): widespread dissemination of the virus on the skin of patients with severe skin diseases esp. atopic dermatitis
Herpetic whitlow
Herpes: grouped vesicles on an erythematous base
Herpes: Ear

- Herpes Gladiatorum
- Scrumpox
- Wrestlers herpes
- 73% head
- 42% extremities
- 28% trunk
- Mat herpes
- Herpes rugbiorum
HSV Neck Herpes Gladiatorium
Herpes: inoculation
EDUCATION

• Contagion: direct contact
• Hygiene: towels, washcloths, eating utensils. FINGERS: self-hygiene concerns especially to the eye
• Trigger factors: lip sunscreen, dietary issues (arginine)
• CAN SHED VIRUS WHEN ASSYMPTOMATIC
Herpes simplex

- Recurrences
- Asymptomatic shedding
- Rx: episodic
- Suppressive
Herpes Shedding

- HSV-2 genital: 15-25% of days
- HSV-1 oral: 6-33% of days
- HSV-1 genital: 5% of days
- HSV-2 oral: 1% of days
- Frequency & severity of episodes decrease over time – become ‘perpetually asymptomatic” – no longer experience outbreaks BUT MAY STILL BE CONTAGIOUS
L-lysine / arginine story

- L-lysine 500 mg bid
- Avoid high arginine foods such as beer, peanuts, chocolate, jello and legumes
Rx HSV

- Symptomatic: analgesics & topical anesthetics
- Antivirals: P.O.: acyclovir / valacyclovir / famciclovir /
- Antivirals: topical: acyclovir / penciclovir / docosanol
- Antivirals: mucoadhesive buccal tablet
  Sitavig 50mg buccal tablet (Lauriadi technology)
- Hygiene: saran wrap trick for topical applic.
Rx HSV: Alternative Medicine & Dietary Supplements

- Echinacea
- Eleythero
- L-lysine
- Zinc: oral & topical
- Monolaurin bee products
- Licorice root cream
- Aloe vera
- Lemon balm
Suppressive Therapy HSV

- Acyclovir 400 mg B.I.D.
- 200 mg T.I.D.
- Valacyclovir 500mg Q.D. (<9 episodes/yr)
- 1000 mg Q.D. (>9 episodes/yr)
Canker Sores / Aphthae

- Intraoral, recurrent, painful, 1-5 lesions, 2-10 mm, erythematous papular lesions that become necrotic round oval ulcers with a grayish-white fibropurulent membrane & bright red halo, heal 1-2 wks without scarring
- Some cases due to nutritional def. (vit B2, B6 & B12, folic acid, Fe, Zn)
Apthosus Ulcer

• Intraoral
• Do not present a vesicular phase
Apthosus Ulcer

- Fibropurulent membrane
- Red halo
Aphthae: intraoral
Rx aphthae

- ? Hypersensitivity to bacteria in the mouth
- Viscous xylocaine (care gag reflex)
- TCN mouthwashes (care preg females)
- Topical steroid-(Lidex Gel- fluocinonide 0.05%)
- Aphthasol: 5% amlexanox
- Soothing unsweetened apple juice mouth rinses, coat with pancake syrup pre-eating
Hand, Foot, and Mouth Disease

- Highly contagious viral infection that causes aphthae-like oral erosions & a vesicular eruption on the hands and feet
- Classically benign and self limited
- Coxsackie A 16 virus
- Can be due to enterovirus 71 and may have associated neurological syndromes (aseptic meningitis, G-B Syndrome, acute transverse myelitis, polio-like syndrome, etc)
H F & M Disease
H F & M Disease
(can be painful, esp in children)
Acne

- Self esteem / appearance
Acne

- Aggravated by sweat by sweat and friction
Acne

- Hallmark: comedone
  - open comedone: blackhead
  - closed comedone: white head
- Inflammatory papules, pustules and nodules
Acne

- Severs cystic

- Consider oral retinoids: “Accutane”

- Musculoskeletal issues can influence preformance
Severe Acne
Folliculitis

- Dome shaped pustules with small erythematous halos arise in a follicle
Folliculitis
Folliculitis


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Pseudofolliculitis
Frictional / Mechanical Acne

Sports Induced Acne

- Chin-chin strap
- Forehead – sweat bands / helmets
- Shoulders & upper back – shoulder pads
- Spandex sports wear

Chronic friction & pressure leads to inflammatory papules.
• Keep skin separated from nonpourous material
• Cotton barrier: T-shirt
• Salicylic acid washes / benzoyl peroxide topically / antibiotics topically
Hot Tub Folliculitis

- Gram negative Pseudomonas
- Improperly sanitized hot tubs
- Tender- sore- hurt
- Erythematous PAPULES and pustules
- Trunk/torso: under swimwear
Hot Tub Folliculitis: pustules
Hot Tub Folliculitis
Pseudomonas Folliculitis: Hot Tub or Whirlpool: often tender
Rx Pseudomonas Folliculitis

- None: self limited (resolves in 5 days)
- Rx hot tub / whirlpool
- Ciprofloxin 500mg to 750 mg b.i.d. for 5 - 10 days
Impetigo

- Vesicles or pustules rupture easily exposing red moist base
- Firmly adherent crust is honey-yellow color
- Lesions extend radially with little surrounding erythema
- Satellite lesions
Impetigo
Impetigo

- Streptococcus pyogenes or staphylococcus aureus or combination
- Rx localized: mupirocin 2% ointment or cream
- Rx extensive: p.o. antibiotics
Dermatophytoses / Tineas
(superficial mycoses of the skin)

• Minimal, if any, inflammation:
  Tinea versicolor
• Inflammatory response common:
  Tinea capitis (ringworm of the scalp): scalp
  Tinea barbae (barbers’ itch): beard
  Tinea faciei: face
  Tinea corporis (ringworm): body
  Tinea cruris (jock itch): groin
  Tinea manuum: hand
  Tinea pedis (athlete’s foot): feet
• Cutaneous candidiasis
Dermatophytoses

- Caused by dermatophytes:
  - Microsporum
  - Trichophyton
  - Epidermophyton
- Involves keratin containing structures:
  - stratum corneum
  - hair
  - nails
Tinea Cruris: KOH active edge
Tinea Corporis
Tinea Corporis
Tinea faciae

- KOH active edge
Tinea faciei: active edge (KOH)
Tinea Pedis
Tinea Pedis
Tinea Pedis
Interdigital Tinea Pedis
Interdigital Tinea Pedis
Inflammatory tinea pedis
• Anthropophilic
• Zoophilic
• Geophilic
KOH blister roof
Tinea Ungus
Tinea Ungus

- Tinea of toenails most frequently affects the great toe
- 5\textsuperscript{th} toenail thickening generally a reactive process to chronic pressure and trauma-‘lichen simplex chronicus-like process
Tinea Ungus
Rx tinea

- Function of site: skin, hair, nails
- Topical antifungals
- Oral antifungals
Tinea Versicolor: fungus of many colors
Tinea Versicolor: red
Tinea Versicolor (tan)

• Caused by a normal yeast/fungus of human skin
• Malassezia furfur
  Pityrosporum obicularie
Tinea Versicolor: reddish tan
Tinea Versicolor (white) : sunexposure can accentuate
Tinea Versicolor (white)

- Especially the torso
- Generally asymptomatic occasionally pruritic
Tinea Versicolor (brown)
Tinea Versicolor

- ALWAYS A FINE SCALE
- Papulo-squamous disease
- Not infectious
- Rx topical antifungals
- Oral antifungals
- Zinc: ZNP bar
- Continuous hot moist skin: chest & back
Tinea Versicolor

• Take a piece of clear scotch tape- press against skin- place on glass slide and look under microscope for clusters/groups of round spores

• Traditional KOH
KOH Tinea versicolor: “spaghetti & meatballs”
Tinea Versicolor

- Dimorphic:
- Yeast phase: clusters of spores (‘meatballs’)
- Hyphae phase: ‘spaghetti’
Pityriasis rosea

- Viral eruption / spring & fall / young adults
- Hearld patch (mother patch) followed by a shower of oval lesions along skin lines
- Collerate of scale
- Mostly on torso
- Asymptomatic to mild itching
- Self limited
Pityriasis Rosea
Warts

• Not a preformance issue
Warts

- Can be a performance issue
Warts
Wart: Rx can create a wound
NCAA: verrucae (wart)

- Wrestlers with multiple verrucae plana or verrucae vulgaris must have the lesions “adequately covered”
Warts
Flat Warts : Verrucae Planae

- How do you adequately cover these?
Digitate / Filliform Verrucae

• Wrestlers with multiple digitate warts of their face will be disqualified if the infected areas cannot be covered with a mask

• Solitary or scattered lesions may be curetted but cannot be seeping
Plantar Warts
Warts

• Can be a performance issue
Molluscum Contagiosum

- Lesions must be curetted or removed before the meet or tournament: WOUND
- Solitary or localized clustered lesions can be covered with a gas impermeable dressing pre-wrapped & stretch tape anchored & cannot be dislodged
Molluscum

- The only way that coverage ensures prevention of transmission is if the molluscum is on the trunk or uppermost thighs, which are assured of remaining covered with clothing
- Band-Aides are not sufficient
Molloscum Contagiosum
Herpes Zoster

• Skin lesions must be surmounted by a FIRM ADHERENT CRUST at meet or tournament time and have no evidence of secondary infection
Hidradenitis suppurativa

- Painful chronic disease of the apocrine glands: groin, axilla & mammary line
- Wrestlers WILL BE DISQUALIFIED if extensive or purulent draining lesions present
- Extensive or purulent draining lesions shall not be covered to allow participation
Rx Hidradenitis suppurativa

- Proper hygiene
- Topical & oral antibiotics
- Retinoids
- Anti-tumor necrosis factor-alpha agents
- Hormonal therapy
- Decrease bacterial colonization: antiseptic cleansers (chlorhexidine)
- Pyrithione zinc
Pediculosis

- Wrestlers must be treated with appropriate pediculicide and re-examined for completeness of response before wrestling
- Capitis:
- Pubis: groin, axilla and eyelashes
- Corporis: in bedding and clothing
- Vagabond's Disease
Scabies

- Wrestler must have negative scabies prep at meet or tournament time
- Finding a mite is like a “needle in a hay stack”
Open Wounds & Infectious Skin Conditions

- Cannot be adequately protected: cause for medical disqualification from practice or competition.

- “adequately protected”: the wound or skin condition has been deemed as noninfectious and adequately treated as deemed appropriate by a health care provider and is able to be properly covered.
“Properly Covered”

- Skin infection is covered by a securely attached bandage or dressing that will contain all drainage and will remain intact throughout the sport activity.
- Noncontagious/noninfectious skin conditions: “wounds”: covered with a gas impermeable dressing, pre-wrap and stretch tape that is properly anchored and cannot be dislodged.
2-way Street: the Athlete and their Competitor

- A health care provider might excuse a student-athlete if the activity poses a risk to the health of the INFECTED athlete (such as injury to the infected area) even though the infection can be properly covered.
Bandages & Dressings

Remember bandages & dressing are BIOHAZARD WASTE
The Gym / Training Room

• Let’s leave the gym / locker room & training room and see what happens during competition
What is the most common athletic injury?

• A knee ?
• An ankle ?
• A shoulder ?
• A hamstring ?
• An Achilles tendon ?

• THE UBIQUITOUS SKIN BLISTER !!!!!!
Friction Blister

• Skin layers of different types of tissues are pulled by frictional forces created during activity.

• Skin layers separate and hydrostatic pressure pushes fluid into the open space between those layers.
Ability to compete can be significantly reduced or halted

• When skin is moist, rubbing causes greater frictional pressure than when the skin is dry
• Role of:
  • perspiration
  • maceration
  • shearing forces
Friction Blisters

• Dry skin is best
• Socks: thick sock, 2 socks, polyester or acrylic better than cotton or wool
• Footwear: not to tight not to loose
• Moleskin: frictional forces are applied to the top piece of moleskin
Abrasions

• Road rash
• Mat burn
• Turf burn: esp. football artificial turf has lower coefficient of friction than natural grass – injury part abrasion and part burn
Abrasion: Raspberry or Strawberry

- Trauma denudes the epidermis
- Exposes lower papillary & reticular dermis
- Punctate bleeding within a larger patch of tissue exudate
Abrasions

• An abrasion of skin from friction/trauma with grass
• turf
• basketball courts
• sand
• pavement
• Use protective padding on commonly affected areas
WOUND CARE

• Usually superficial - if deep laceration will pressure dressing / sutures
WOUND CARE

- CLEAN wound
- Tetanus status-booster after 10 years
WOUND CARE

- Do not use H2O2
WOUND CARE

• Keep moist
• Antibiotic Ointment
• Antiseptic Healing Ointment by Brave Soldier
WOUND CARE

- Clean
- Medicate
- Cover
WOUND CARE

- Check wound
- Redress wound
- When removing tape do so slowly (don’t rip it off)
CHAFFING

- From insidious long-term friction (not immediate, direct injury)
- Mechanical rubbing of skin by another body part or clothing
- Neck, axillia, inner thighs
- Especially in athletes with disproportionate large thigh muscles
Chaffing

- Often Tennis players & bicyclists
- Use biker or ‘bun-hugger’ shorts
  elasticized fabric from waist to mid thigh
- Use sports shorts- low resistance
  polyester fabric
Jogger’s nipples

- Site specific chaffing
- Persistent friction at the nipples & areola
- More common in men- (women athletes wear soft protective sports bra)
- Marathon runners : blood stained shirts
- Ans: run without a shirt / cotton silk or soft fabric shirts / circular piece of tape over areola
Heat Rash: ‘Prickly Heat’

- Athletes in hot humid conditions
- Blocked eccrine (sweat) ducts
- Red, irritated, itchy or ‘prickly’
- Esp. where 2 surfaces rub Ex: inner thighs
- Rx: cool, dry environment
- Calamine lotion (not ointments, creams or powders-they make a ‘paste’)

•
Calluses

- Skin compensatory attempt to protect itself from chronic friction
- Weight bearing area of soles of feet
- Palms of racket sports or golfers: chronic rubbing over distal metacarpal heads
- Usually asymptomatic
- May give a competitive edge in competing Ex: gymnastics & weight-lifting
Rx calluses: if needed

- Prevention: moleskin pads or toe pads
- properly fitted gloves or shoes
- cushioned grips or rackets
- Parred
- Soak and apply salicylic acid prep
- Abrasive reduction of hyperkeratotic skin
- file / rasp / pumice stone
• Thickening of the skin on the foot
• Is it a callus
• a clavus
• a wart
Corn/ Clavus/ PlantarKeratosis

- Punctate hyperkeratoses with deep central core
- Usually over a bony prominence
- Hard corns: external surface where drying occurs
- Soft corns: interdigital / maceration from sweating & moisture
- Point painful (may prevent competing)
Rx clavi

- Hard corns: parred
- Salicylic acid preparations
- Corn pad / ‘cookie’ pad

Differential Dx: PLANTAR WART
- Look for blood puncta
- Parring may cause bleeding & does not ‘narrow’ not like a piece of corn or upside down triangle
Athlete’s nodules

- Surfer’s nodules
- Nike nodules
- Skate bites (hockey)

Collagenomas: result of recurrent trauma & friction

- 0.5 to 4.0 cm asymptomatic flesh-colored nodules
- Dorsum of feet, knees or knuckles
- Surfers/boxers/ football players/ even marble players
Rower’s rump

- Frictional form of lichen simplex chronicus
- From rowing while sitting on an unpadded seat
Ecchymoses / Hematomas
Bruises / Contusions
Hip contusion

- Slight swelling
- Red / ecchymotic
- Purplish
- Golden yellow / tan
- Hyperpigmentation
- Secondary iron deposits which tend to fade over time unless repetitive episodes of trauma
• Ping Pong patches

• Erythematous macules 1-2 cm diameter

• Forearms & dorsal aspect of hands

• High-velocity impact of the ping pong ball

• Paintball Purpura
Auricular Hematoma

- Pooled blood
- Shearing force type injury from ear rubbed or ‘struck’ tangentially (not stuck perpendicularly)
- Swollen & painful
- Boxers / wrestlers / football players
Unique injury

- Ear: core structure cartilage & perichondrium & outer layer of skin
- Perichondrium peeled off cartilage with blood & serous fluids collecting in space
- Cartilage has NO BLOOD SUPPLY & ability to heal- “INERT”
- If drained fluid refills – no healing tissue (like half a piece of velcro)
• Do not apply pressure - causes blood & serous fluids to spread further
• Open – drain incision must be kept open to prevent reaccumulation of serous fluid (seroma)
Auricular Hematoma
Cauliflower Ear

- Calcium deposits & scar tissue greatly thicken ear structure
- Draws edges inward looks like cauliflower
- Use protective head gear
Tennis toe/Joggers toe/ Skiers toe

- Painful subungual hemorrhage
- First (great) & second toes most commonly
- Repetitive slippage of foot anteriorly against footwear
- Tennis/joggers/skiers/hikers/climbers/ racquetball & basketball players
• Proper fitting footwear
• Toe pad
• Side-to-side strap in shoe to prevent anterior slippage
• May be painful – may need to drain blood under the nail plate
Golfers nails

- Splinter hemorrhages (linear dark steaks) of fingernails
- Golfer who grip the shaft of the club too tightly
Black heel (talon noir)  
Black palm (tache noir)

- Black heel
- Horizontal petechiae at upper edge of heel
- Asymptomatic
- Frequent start & stops tennis & basketball
- Shearing force of epidermis over rete pegs of papillary dermis

- Black palm
- Weightlifters / gymnasts / golfers / tennis players / mountain climbers / baseball players

- Pare with a scalpel & perform an occult blood screening test
Piezogenic papules

- Painful multiple 2 to 5 mm skin-colored papules
- Lateral or medial surfaces of heel
- Herniation of subdermal fat into the dermis
- Noticeable upon standing
- Long distance runners
- Piezogenic papules refer to symptomatic lesions
- 10-20% of the population have asymptomatic lesions
- Rx heel cup to reduce pain
Turf toe

- Artificial turf (football & soccer players)
- Acute tendonitis of the flexor and extensor tendons of the great toe
- Painful, red & swollen
- Attempts to stop quickly or ‘cut’ quickly on surfaces with little give
Hockey

- Note blood on ice!!
- Hepatitis B virus (HBV)
- HIV virus
Swimmer’s shoulder

- Erythematous plaque of shoulder
- Irritation of unshaven face during freestyle swimming
Green Hair

• Uptake of copper by hair shaft
• Old copper pipes or copper-containing algicide
• Wash hair immediately after swimming
• Maintain pH pool water between 7.4 & 7.6
• Copper –chelating shampoos (Ultraswim or Metalex) for 30 minutes
• 3% hydrogen peroxide soaks for 3 hours
Allergic Contact Dermatitis

- “equipment” in contact with the skin
- swimmer goggles
- leather gloves
• Every sport has the potential for injury to an athlete

• EVEN BOWLING
Striae distensae

- Ruptured elastic fibers in reticular dermis
- Perpendicular to lines of skin tension
- Rapid increase in size: pregnancy / weight lifters / weight gain / adolescence
Striae distensae

- Athletes: anterior shoulders / thighs / lower back

- Striae rubra : red
- Rx: topical tretinoin ?

- Striae alba : white
- Rx: cocoa butter / olive oil
Effects of Anabolic Steroids

- Atrophic striae
- Severe acne
- Receding hair line
- Hypertrichosis
Environmental injuries to the skin in sports participation

- Frostnip
- Frostbite
- Sunburn
- Phototoxicity
- Damage from long term sun exposure
- photoaging / actinic keratoses / basal cell carcinoma / squamous cell carcinoma / malignant melanoma
Cold Urticaria

• Acquired cold sensitive proteins (cryoglobulin or cryofibrinogen)
• Ice cube test (5 min)
• Full body exposure to cold, massive release of histamine & other immune mediators:
  • cause of sudden drowning deaths / ‘fainting in water’ not a good idea!!
  • “never swim alone “
SUN DAMAGE
Sunburn
Altitude & UVL
Skin Cancer

- Basal cell carcinoma: (as seen here)

- Squamous cell carcinoma

- Melanoma
Sunscren

MAYBE NEXT TIME YOU’LL TRY A LITTLE SUNSCREEN...
Tanning Beds / Tanning Booths
Working out away from home / how safe is the hotel gym?

- Hotel equipment may be unfamiliar, poorly maintained & often understaffed to explain equipment or come to the rescue if something goes wrong

- **1. SCOPE IT OUT**: how clean / litter on floor dirty mirrors, foul smell, lack of fresh towels

- **2. DRESS THE PART**: long-sleeves, foot covers, towel on mat or equipment surface
• Use flip flops in the shower, don’t sit naked on a bench after shower.

• 3. CLEAN THE MACHINE: use disinfectant wipes many gyms provide for cleaning machines BEFORE & AFTER a workout.

• 4. WASH YOUR HANDS THOROUGHLY: wash with soap & water - DO TWICE – Apply glycerin-and-alcohol sanitizer/air dry (don’t use a possibly ‘germy’ towel).
What’s going on in the gym?
LOTS of things !!!!!
Young Doctor

• Educational program for athletes / coaches / trainers / staff

• Feel free to use this set of slides in an educational program