

SEX, LIES & STDs:

THE MUST READ BEFORE YOU SWIPE RIGHT

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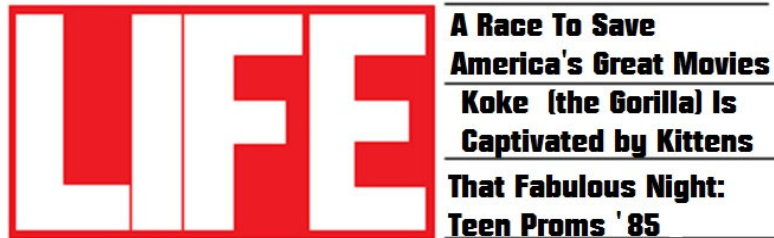
with Jeffrey Klausner, MD, MPH

Unprecedented STD scientific advances!

- Can readily Dx and fully cure merciless STDs that have plagued humanity since the beginning of time!
 - Gonorrhea
 - Syphilis
 - Pubic lice
 - Chlamydia
 - Mycoplasma
 - Hepatitis C



Unprecedented STD scientific advances!



- Incredible progress in preventing and treating killer STD viruses:
- HIV (82) (early 90's) (2015)
- Hepatitis B (2000-2011, 3.7 million deaths averted)
- Human papillomavirus (2006) (2012)

But innovative anti-STD measures falling on deaf ears!

We are smack dab in the middle of a raging STD epidemic -

LA COUNTY 2022:

- congenital syphilis (up 22.0-fold)
- syphilis (up 2.8-fold) including damage to the brain, nerves, eyes, or heart (6X greater among men)
- gonorrhea (up 2.2-fold)
- chlamydia (up 1.2-fold)
- 300,000 Californians Dx'd with gonorrhea, chlamydia or syphilis – a 50% percent jump over just the last 5 years to an all-time high

• The overall US picture (over the 4 yrs pre covid) is similarly dreadful –

- Increase gonorrhea (67%)
- chlamydia (21%)
- Syphilis (76%)
- 600% increases in debilitating neonatal syphilis. (Frustrating! Syphilis was nearly eliminated in the 1950's!)

Number of Americans Who will Catch an STD?*

BACTERIAL/PARASITIC

#8 This year, 88,000 will catch **Syphilis**.

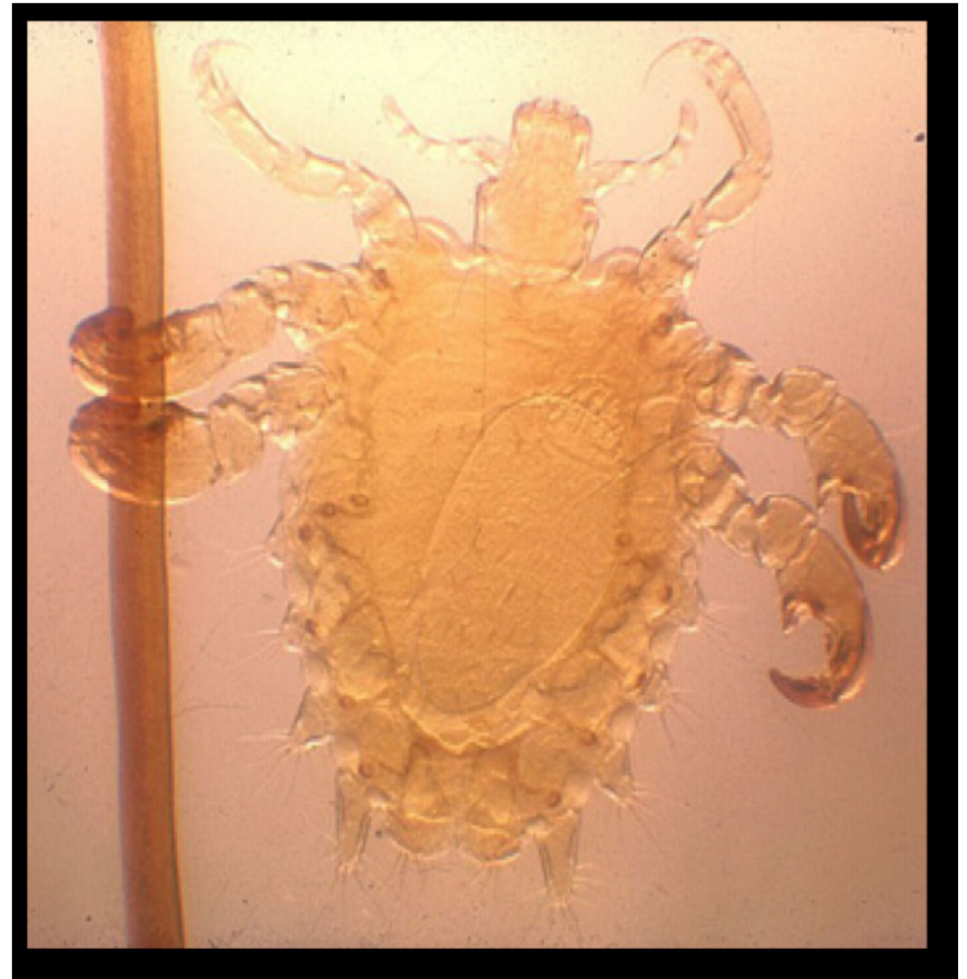
#7 This year, 120,000 (estimate) will catch **Pubic lice (crabs)**.

#6 This year, 820,000 will catch **Gonorrhea**.

#5 This year, 1,100,000 will catch **Trichomoniasis**.

#3 This year, 2,800,000 (estimate) will catch **Mycoplasma**

#2 This year, 2,900,000 will catch **Chlamydia**.



Number of Americans Who will Catch an STD?*

VIRAL

#10 This year, 31,000 will catch **Hepatitis C**;
19,000 will catch **Hepatitis B**.

#9 This year, 38,000 will catch **Human immunodeficiency virus (HIV)**.

#4 This year, 3,000,000 American adults will catch **herpes** –

Herpes simplex 1 (1,600,000)

Herpes simplex 2 (1,400,000)

#1 This year, 14,000,000 Americans will catch genital **Human papilloma virus (HPV)**.

* 2019 data



Top 10 STDs, Current U.S. Infections

VIRAL

- Human Papilloma Virus (HPV) 79,000,000
- HSV (adult onset) 70,000,000
 - HSV1 – oral** 20,000,000
 - HSV1 - genital 20,000,000
 - HSV2 - genital 30,000,000
- Hepatitis 3,920,000
 - Hep C 3,500,000
 - Hep B 420,000
- Human Immunodeficiency Virus (HIV) 1,100,000

BACTERIAL/PARASITIC

- Trichomonas 3,700,000
- Chlamydia 1,800,000
- Mycoplasma* 1,700,000
- Gonorrhea 250,000
- Pubic Lice* 120,000
- Syphilis 120,000

**ALL CURRENT STD CASES (US)
150-160 Million**

STDs are *so* scary!

- No there're not!
- When you protect yourself, STDs are no big deal.
- What's scary is ignorance and inaction!

Eliminating STDs ... Totally!

1. Education –

- How do STD's present?
- Condom effectiveness?
- When to test?
- General health and hygiene
- Destigmatize all STDs
 - especially herpes and HIV

2. Prevention -

- Provide free condoms in schools
- Teach kids how to properly use condoms
- Strong educational push for HPV vaccination for 7th grade entry
- Recommend doxycycline prophylaxis in men who have sex with men with multiple partners per year
- Study Valtrex taken prophylactically for HSV prevention

#1. What Is the Most Common Initial STD Presentation?

viral

- HPV
- HSV1-oral*
- HSV1-genital*
- HSV2
- Hep C
- Hep B
- HIV

bacterial

- Chlamydia
- Mycoplasma
- Gonorrhea
- Syphilis

parasitic

- Trichomonas
- Pubic Lice

Urinary Symptoms:

STDs	urge	discharge**	pain with urination	Non-STD's		
Chlamydia (+++++)		scant, thin, clear-whitish	(++)	long duration sex(++++)	none	(+)
Mycoplasma (+++)		scant, clear-whitish	(++)	bacterial UTI	(++)	none (++)
Gonorrhea	(++)	scant → profuse, yellow-green	(+++)	psychological	(++)	none (+)
Trichomonas	(++)	scant → profuse, clear-white	(+)	prostatitis	(++)	scant, white(++)
HSV1	(+)	rare	(+++++)	instrumentation	(+)	scant, clear (+++)
HSV2	(+)	rare	(+++++)	drug/chemical	(rare)	scant, clear (+++)
Adenovirus	(+)	scant, clear	(+++++)	urethral stricture	(rare)	none (++)
bowel bacteria	(rare)	rare	(++)			

Vaginal Discharge

bacterial

- chlamydia
- gonorrhea
- mycoplasma

discharge consistency

thin

thick, pus-like

thin

• *parasitic*

- Trich

whitish, may be profuse, bubbly

Rectal Pain and Discharge

STD	pain	Type of rectal fluid
• Chlamydia	(++)	thin
• Gonorrhea	(+)	pus-like
• Mycoplasma	(+)	thin
• HSV1/HSV2	(+)	this, maybe thick or bloody often painful
• LGV	rare	thin, may be bloody

Visible Genital sores

- HSV1
- HSV2
- Syphilis
- Chancroid
- LGV
- Non-STD causes

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- HPV
- HSV1-oral*
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- Hep C
- Hep B
- HIV

bacterial

- Chlamydia
- Mycoplasma
- Gonorrhea
- Syphilis

parasitic

- Trichomonas
- Pubic Lice

What Is the Most Common Initial STD Presentation?

viral

- HPV majority asymptomatic
- HSV1-oral* majority asymptomatic
- HSV1-genital* majority asymptomatic
- HSV2 majority asymptomatic
- Hep C majority asymptomatic
- Hep B majority asymptomatic
- HIV majority asymptomatic

bacterial

- Chlamydia majority asymptomatic
- Mycoplasma majority asymptomatic
- **Gonorrhea** majority asymptomatic (females)
Urination pain in 50% (men)
- Syphilis majority asymptomatic

parasitic

- Trichomonas majority asymptomatic
- **Pubic Lice** **itchiness**

#2. Condom effectiveness (on average with typical use) for STD prevention?

viral

- HPV
- HSV1-oral*
- HSV1-genital*
- HSV2
- Hep C
- Hep B
- HIV

bacterial

- Chlamydia
- Mycoplasma
- Gonorrhea
- Syphilis

parasitic

- Trichomonas
- Pubic Lice

* Adult acquired

#2. Condom effectiveness (on average with typical use) for STD prevention

viral

• HPV	50%
• HSV1-oral*	0%
• HSV1-genital*	50%
• HSV2	50%
• Hep C	80%
• Hep B	80%
• HIV	80%

bacterial

• Chlamydia	80%
• Mycoplasma	80%
• Gonorrhea	80%
• Syphilis	50%

parasitic

• Trichomonas	80%
• Pubic Lice	0%

* Adult acquired

Top 10 STDs, Current U.S. Infections

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- Syphilis 120,000

**ALL CURRENT STD CASES (US)
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#3. STD Incubation: Number of days from contact till STD test turns positive

viral

- HPV 90 (genetic[^])
- HSV1-oral* 14 (genetic), 30-45 (antibody)
- HSV1-genital* 14 (genetic), 30-45 (antibody)
- HSV2 14 (genetic), 30-45 (antibody)
- Hep C 30-60 (antibody)
- Hep B 45 (antibody)
- HIV 14 (genetic), 30-90 (antibody)

bacterial

- Chlamydia 5 (genetic)
- Mycoplasma 5 (genetic)
- Gonorrhea 5 (genetic)
- Syphilis 21-42 (antibody)

parasitic

- Trichomonas 5 (genetic)
- Pubic Lice 7-14 (visual)

* Adult acquired

[^]Genetic tests which detect the pathogen turn "positive" faster than antibody tests which require time for the body's immune system to react to the STD infection.

Genetic (swab) testing not generally available for HSV.

Education: stigma vs facts

1. Fact: **If you get an STD, you must inform** and make sure your recent partner(s) get treated.
 2. Partner(s) cannot be treated without consent – i.e. you can't sneak an antibiotic into your spouse's coffee
 3. Noncoital behaviors (mutual masturbation, oral sex) is low risk for most STDs
 4. Partner selection: **a lot of time is spend choosing a life partner, precious little on casual partner(s)** who are at far higher risk of STD
 5. Better to **test yourself and future partner(s) "beforehand"** rather than "afterward"
 6. Mutual "beforehand" **STD testing is a potential contract that STD status has been discussed (not consent!)**
 7. Depending on the STD, it takes a **week to several months before STD tests turn positive (the "window period")**
 8. If you're told your STD tests are "all" good - beware - **most doctors don't test for HPV, HSV and mycoplasma**
 9. If you are positive for a lifelong viral STD, consider finding similarly infected partners
1. **Ideal health** (immune function is dependent on proper diet, exercise and sleep)
 1. No cigarettes (even several/day are toxic)
 2. No excessive alcohol
 3. Good oral hygiene
 2. **Vaccinations** (HPV, Hep B and A, Meningococcal)
 3. Circumcision
 4. Premenopausal:
 1. **birth control pills do not prevent against STDs** (use BCP's plus condom)
 5. Postmenopausal females:
 1. **topical estrogen cream protective against UTIs, perhaps STDs**

Education: Pre- and Post Sex Prevention:

PRE

1. Avoid pubic skin shaving 48 hrs prior to sex
2. Pre-Exposure Prophylaxis (PrEP) (even for lower risk encounters)
 1. HIV (Truvada)
 2. Chlamydia/syphilis (doxycycline)
3. Limit recreational drugs and alcohol pre-sex (inc STD risk)
4. Partner discussion: Last STD testing? Contraception? Ask males if they have had sex with men?
 1. Disclose your STD status to partner(s)
 2. Discuss condoms (IN POSITIVE FASHION): "Condom makes me feel better. "I orgasm better knowing I'm protected".
5. Avoid oil-based lubricants/medications - i.e. hand creams, baby oil, Vaseline products
6. Optimize your use of condoms (Lelo Hex condom may be less prone to slip off or rupture)

POST

1. PEP (HIV, chlamydia and syphilis)
2. Plan B if condom less vaginal sex (premenopausal woman)
3. STD testing as needed for suspicious symptoms or if multiple partners on a routine basis
4. If STD identified, both partners need treatment
5. After condom less, sex with untested outside partner(s): wit 4 weeks and STD test before resuming unprotected with partner

Top 10 STDs (US)		Infectivity				Infectivity				Infectivity				Infectivity			
		penis to		vagina		vagina to		penis		penis to		throat		penis to		anus	
# exposures		1	3	10	52	1	3	10	52	1	3	10	52	1	3	10	52
1	HPV	0.4%	1%	4%	19%	0.4%	1%	4%	19%	unknown				1%	2%	6%	27%
2	HSV																
	HSV1	0.1%	0.3%	1%	5%	0.1%	0.1%	0.5%	3%	unknown							
	HSV2	0.1%	0.3%	1%	5%	0.1%	0.1%	0.5%	3%	unknown							
3	Chlamydia	50%	88%	100%	100%	25%	58%	94%	100%	unknown							
4	Mycoplasma	45%	83%	100%	100%	38%	76%	99%	100%	unknown							
5	Trichomonas	unknown								unknown							
6	Gonorrhea	60%	94%	100%	100%	25%	58%	94%	100%	63%	95%	100%	100%	84%	100%	100%	100%
7	Pubic Lice	unknown								unknown							
8	Syphilis	30%	66%	97%	100%	30%	66%	97%	100%	30%	66%	97%	100%	30%	66%	97%	100%
9	Hepatitis																
	Hep C	0.0%	0.1%	0.2%	1%	0.0%	0.0%	0.1%	1%	negligible							
	Hep B	1%	2%	7%	31%	0%	1%	3%	14%	negligible				12%	32%	72%	100%
10	HIV	0.1%	0.2%	1%	4%	0.0%	0.1%	0.4%	2%	negligible				1%	4%	13%	52%
		$P = 100 \times (1 - (1 - z)^n)$															
		P= chance STD, z= infectivity, n= number of sexual exposures															

Which STDs can you catch with oral sex?

Viral

HPV	+++
HSV1-oral**	++
HSV1-genital**	++
HSV2	
** Adult acquired	negligible
Hep C	negligible
Hep B	+
HIV	negligible

Bacterial

Chlamydia	++++
Mycoplasma	+++
Gonorrhea	++
Syphilis	++

Parasitic

Trichomonas	+
Pubic Lice #	+

+ mildly infectious
++ moderately infectious
+++ very infectious
++++ extremely infectious
Infection of eyebrows and eye lashes

Which STDs can you catch from sex toys?

viral

- HPV +++++
- HSV1-oral** +
- HSV1-genital** +
- HSV2 +
- Hep C negligible
- Hep B +
- HIV +

bacterial

- Chlamydia ++
- Mycoplasma ++
- Gonorrhea ++
- Syphilis ++

parasitic

- Trichomonas +++
- Pubic Lice negligible

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Eliminating STDs ... Totally!

3. Detection -

- Declare September as “National STD Check-Up Month” to identify the large pool of symptomless “carriers” and stop the vicious cycle
- Same-day testing and treatment in every high school
- encourage students to test each fall
- Support affordable online home-based STD testing
- ensure physician-initiated syphilis and chlamydia screening in recommended groups (ie pregnant women, annually for all sexually active women)

4. Treatment -

- treat *all* infected persons and their partner(s).

Will essentially eliminate:

- chlamydia
 - mycoplasma
 - gonorrhea
 - syphilis
 - trichomonas
 - pubic lice while
- Will halt the future spread:
Hep C, HIV and to a lesser extent HSV.

Eliminating STDs ... Totally!

5. Research -

- Invest in syphilis, gonorrhea and chlamydia vaccine research
- Antibiotic research for resistant gonorrhea
- Accelerate herpes vaccine development

6. Political -

- Legalize sex work
- Physician and patient notification without fail of past partners when STDs are identified.
- Properly fund public health agencies

STDs: Minorities, Women Suffer most

- Elevated woman STD risk:
 - 2-fold more HSV2,
 - 2-fold more chlamydia
 - 8-fold more sex related UTI's
 - cervical HPV (Men get 3-fold more oral HPV).
- Women have much more genital mucous membranes, so they're much more vulnerable to STD pathogens.
- oral sex, the reverse is true - men are exposed to more genital mucous membranes compared to women
- volume of male ejaculate is larger – potentially carrying more pathogens
- More missed STD diagnoses in women, ie attributing vag chlamydia discharge to yeast infection
- women way more often attribute STD symptoms to benign causes, i.e. attributing a subtle chlamydia vaginal discharge to a yeast infection.
- Increased STD complications: The difficulty in prompt diagnosis delays treatment, leading to more complications.
- STD infertility:
 - 24,000 American women/year.
 - male fertility only very rarely affected.
- social and economic dependency:
 - hinder a woman's ability to refuse unsafe sex or demand safer alternatives - must make consensual sexual relations safer.