

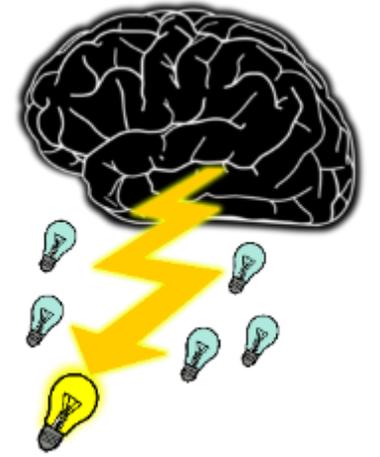
# Chromosomes & Neurochemical Tsunamis

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1-18

**This presentation is  
designed to share study  
research conclusions**



**It is not a theological or  
ecclesiastical discussion...**

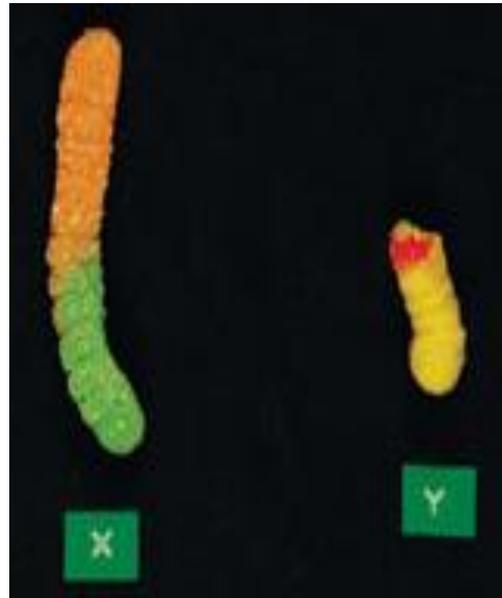
**Human beings are at least  
Spiritual, Relational, and  
Sexual at their core—addictive  
behaviors can readily develop  
around religion, relationships,  
and sex (but likely not around  
spirituality)**



Typically have  
23 pairs of  
chromosomes

F: XX

M: XY



**Empathizing  
Brain - XX**

**Systemizing  
Brain - XY**

**Humans are a mix of “E” & “S”  
Dr. Simon Baron-Cohen: 95%  
of humans could fit on this  
M-F Continuum**

**2012: 'Y' chromosomes found  
in cells of deceased women  
in multiple brain areas**

**2004: 'Y' chromosomes in  
the peripheral blood of  
women who had not had  
male progeny**



**Empathizing**

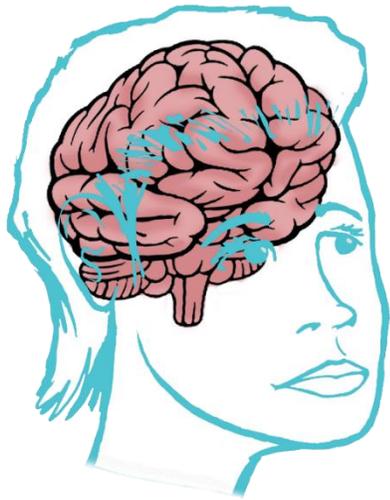
**XO XX XXX**

**50:50**

**Systemizing**

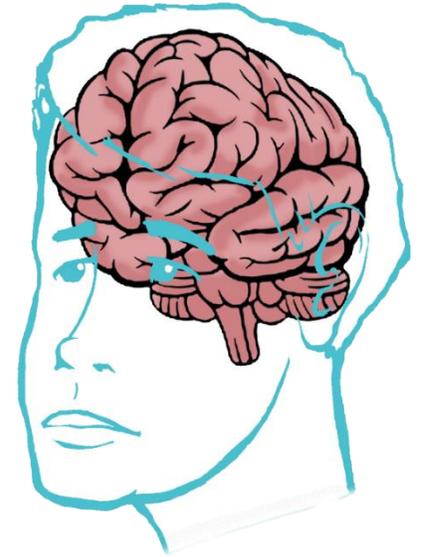
**XY XXY XYY**

**Additional chromosomal patterns were being identified**  
**Inter-Sex (50:50): XX or XY**  
**with 1 ovary & 1 testicle or an ovotestis (model changed)**



**X0 45**  
**(M\*) XX 46**  
**XX 46**  
**XXX 47**  
**XXXX 48**  
**XXXXXX 49**

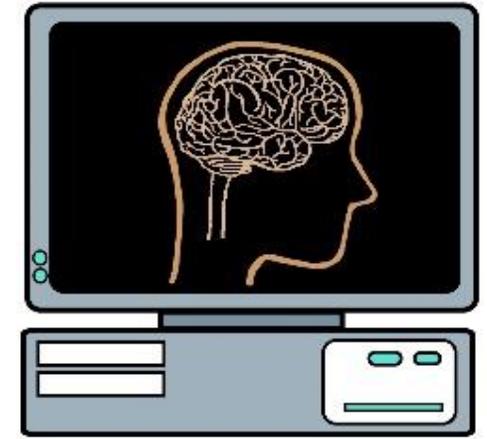
(No Y equivalent)  
**46 XY (M\*)**  
**46 YX**  
**47 YXX YYX**  
**48 YXXX YYXX**  
**YYYYX**  
**49 YXXXX YYXXX**  
**YYYYXX YYYYYX**



**M\* - May be Intersex or appear F as the Y is hidden inside an X or SRY testicle gene is damaged**

# Tel-Aviv U - brain 1400 scans:

**1. M & F are more alike than different; no default position**



**2. Multiple ways to be M or F; most ways are completely overlapping**

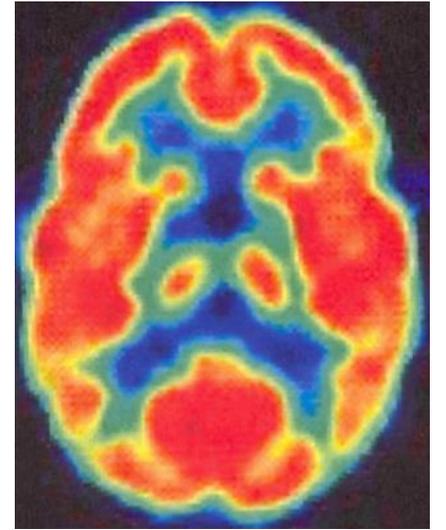
**3. Gender is not determinable by looking at the brain**

**4. Some individuals are congruent and some are not**

**5. Anyone with a 'Y' is considered male —Daphne Joel**



**PET scans: intensity of male  
ejaculation is comparable  
to the response induced  
in the brain by heroin**



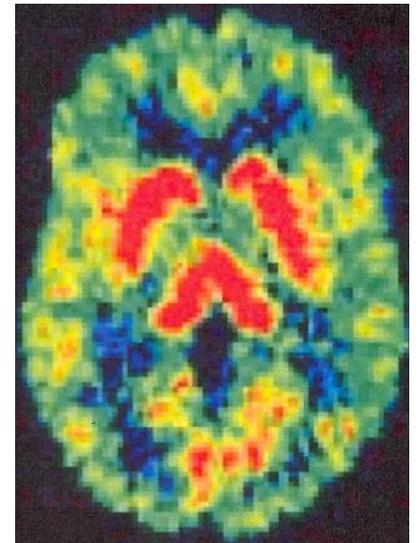
**‘Y’ variations have an ↑  
risk for linkage with sexual  
misuse or related addictions**

**PET scans: much of female  
brain went 'silent' (at orgasm)  
suggesting a release of tension,  
inhibition, ↓ in moral reasoning,  
vigilance, social judgment,  
reflection (fear-anxiety link)**

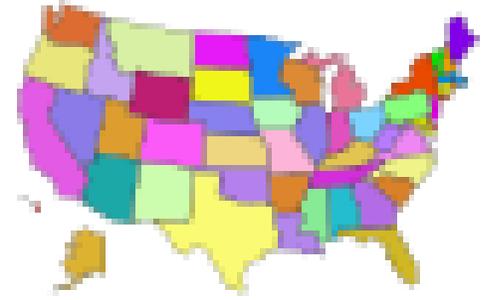
**—Scientific American Mind 2016**



**Sexual addiction: a condition that involves excessive preoccupation with thoughts or behaviors that give a desired sexual effect (a 'high' that alters a brain state via the BRS) Is sex addiction or sex misuse a problem?**



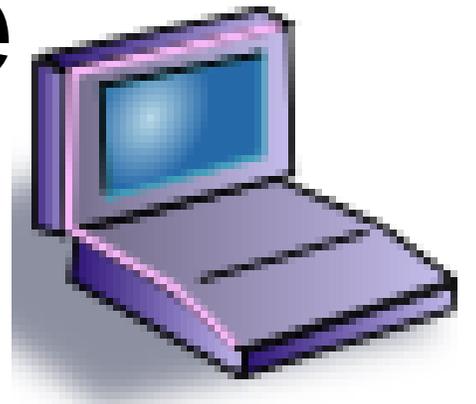
# **In the United States:**



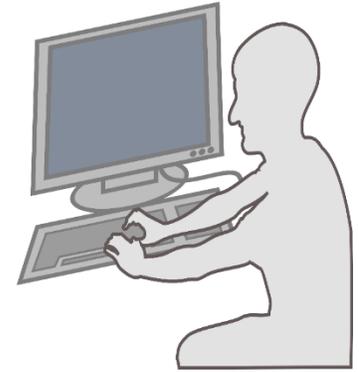
**- 40 million are sexually involved with Internet sites**

**- Sex is the #1 topic searched**

**- 25% of all search engine requests are related to pornography**



**Promise Keeper Males survey:  
53% admitted viewing porn  
in the past week**



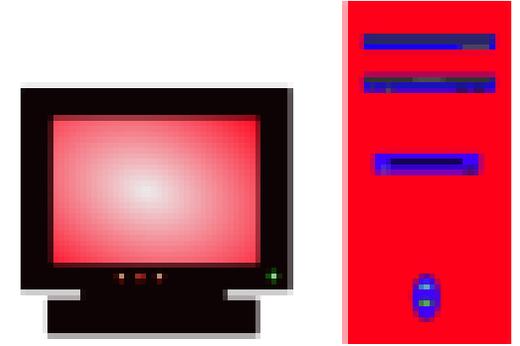
**Pastors: 54% admitted  
viewing internet porn in the  
last year; 30% admitting  
viewing in the last month**

**Employees: 25% of those with Internet access viewed pornography during work hours**

**Christians: 50% of males and 20% of females admitted to being addicted to pornography**



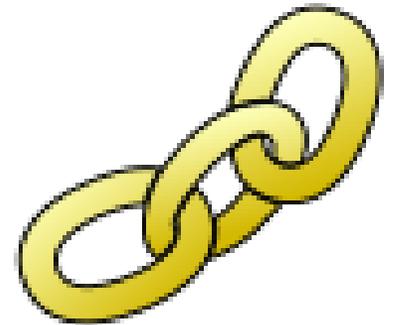
**Viewing porn boosts dopamine  
so porn-on-demand is  
highly addictive**



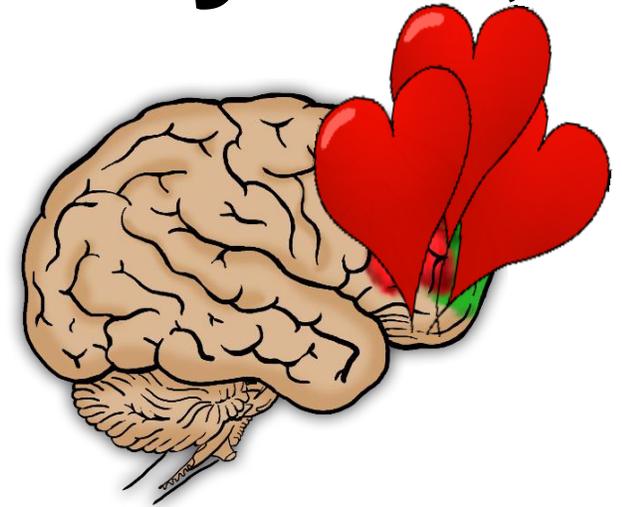
**Social media - checking often  
for messages provides a 400%  
spike in dopamine, only slightly  
less than that of cocaine**

# **Sexual misuse risk factors:**

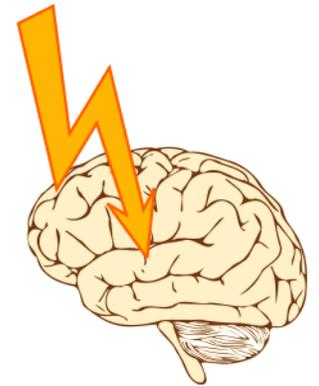
- Poor self-esteem/self-image**
- Psych disorders - depression**
- Self-medication (dopamine)**
- Family dysfunction/abuse**
- Involved with other  
addictive behaviors**



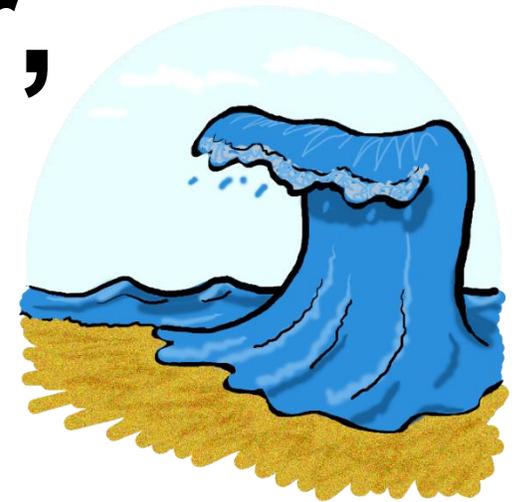
**Brain is the most amazing organ in the known universe; it works 24 hours a day, 365 days a year, from birth to death until you 'fall in love' ... then you risk turning into a chemically-fueled PEA brain**



**“We have chemistry!” Sure - neurotransmitters, hormones, and sexual energy. Type of situation impacts type of chemicals released: sexual-romantic encounter or a committed marriage or life-partner relationship**



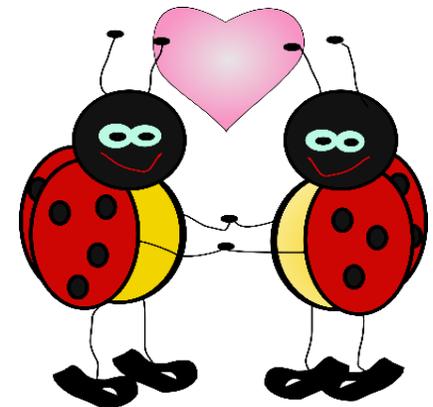
***Romantic / sexual attraction:***  
**fueled by 3 powerful ‘Attraction’**  
**neurochemicals (PEA brain); if**  
**mismanaged → STDs, untenable**  
**marriages, affairs, cancer,**  
**pregnancy, disastrous**  
**liaisons . . . crimes . . .**



**#1A - Phenylethylamine or PEA,  
an amphetamine-like neuro-  
transmitter; creates elation, can  
↓ conscience, boundaries,  
morality, decision-making,  
judgment (PEA brain);  
is also found in dark  
chocolate and avocado**



**#2A - Norepinephrine (N&H);  
provides those gut butterflies;  
sweaty palms; pounding heart;  
light headedness; regulates  
sexual arousal; puts you ↑ risk  
of becoming 'a mental  
bug on speed' with ↓  
cognitive function**



**#3A - Dopamine—*feel-better* neurotransmitter; 50% is in gut, (linked with BRS, emotional responses, addictions, bonding); Levels ↑ as adrenalin rises, with sexual activity, anticipation of pleasure, etc. (Voles)**



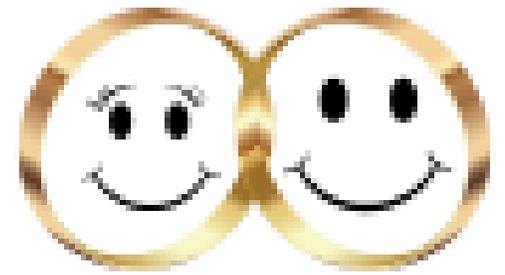
**Tsunami lasts about 18 months (distance, sexual 48); if addicted to PEA you may move on to another—trying to recapture the passionate PEA stage (or get involved with sexual misuse: porn, phone sex, affairs, masturbation . . .)**



**If the couple marry, 3 different “bonding” neurochemicals are released to help them develop a happy, deeply committed relationship over time [UNLESS it was a poor choice to begin with and then this may not happen]**



**#1B - Endorphins—brain's natural morphine; levels ↑ with physical exercise, sexual activity in committed love; promote attachment, comfort, calm anxiety, reduce stress, relieve pain, and generate energy**



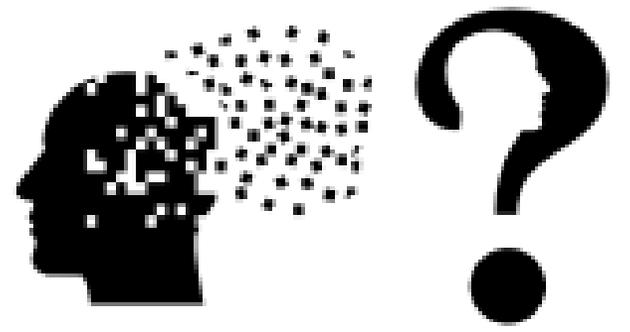
**#2B - Oxytocin—hormone that plays a role in neuroanatomy of pair bonding and maternal behaviors; promotes contentment, sense of security, calmness in presence of one's mate, and allows orgasm to occur in partners**



**#3B - Serotonin—a (N) required for the brain/nervous system to function properly (90% in gut); impacts mood, happiness, and sleep; contributes to sense of well-being; levels ↑ with moderate physical activity and exercise**



**The past is the best  
predictor of the future!**



**Relationships can be wonderful  
but they take energy; the more  
you have in common, the less  
energy is required to keep the  
relationship rewarding and on  
track**

**Important to develop:**

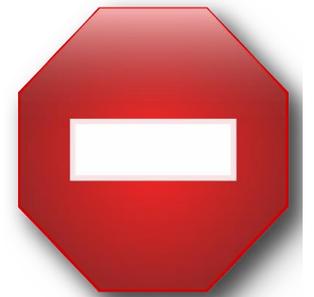


- A good moral character**
- Clear standards & willpower**
- Bona fide boundaries**
- High Emotional Intelligence**

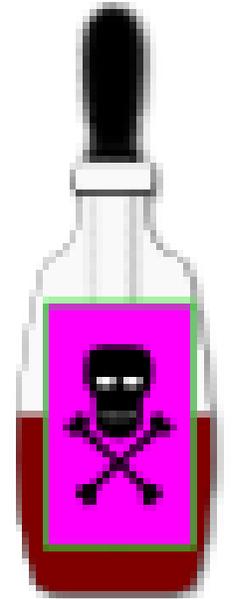
**Become the person you want  
to attract as a partner**

**Evaluate person as a potential parent of your child(ren) and your in-laws for cellular memory**

**Trying to change the other person is a one-way dead-end street—although people continue to try**



**When merchandised ...  
for instant gratification,  
there is nothing deadlier  
than sex —William Swing**



**When you know better, you can  
do better . . . choose carefully  
because it *matters***