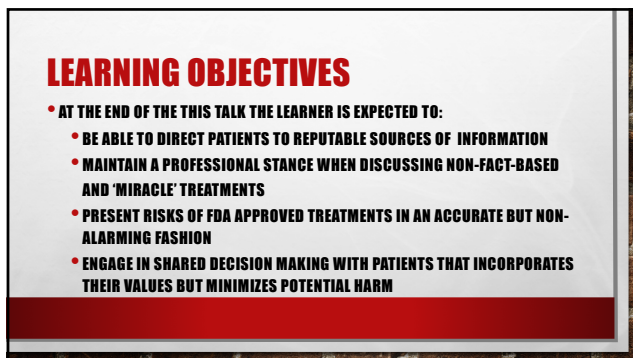




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FAKE NEWS IS NOT NEW

- 13TH CENTURY BC: RAMSES THE GREAT MISREPRESENTED HIS STALEMATE BATTLE OF KADESH AS AN EGYPTIAN VICTORY
- 1ST CENTURY BC: OCTAVIAN ENGINEERED A DISINFORMATION CAMPAIGN TO UNSEAT MARK ANTONY
- 2ND AND 3RD CENTURIES AD: DISINFORMATION ABOUT CHRISTIANS—CANNIBALISM AND INCEST
- 15TH CENTURY: ANTI-SEMITIC BLOOD LIBELS BEGIN
- 19TH CENTURY: SPANISH-AMERICAN WAR LARGELY DRIVEN BY PULITZER/HEARST RIVALRY

4

CURRENT STATE OF AFFAIRS: INFORMATION POLLUTION

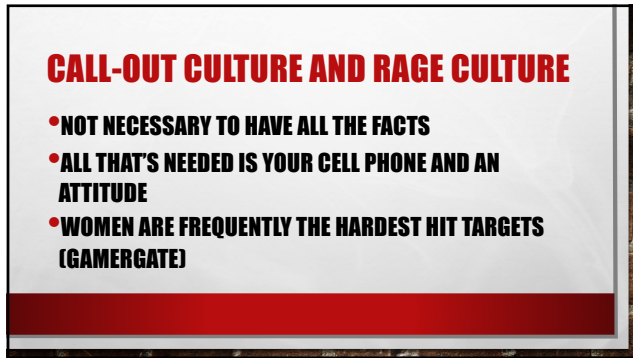
- CLICKBAIT
- PROPAGANDA
- SATIRE/PARODY
- SLOPPY JOURNALISM
- MISLEADING HEADINGS
- BIASED OR SLANTED NEWS

5

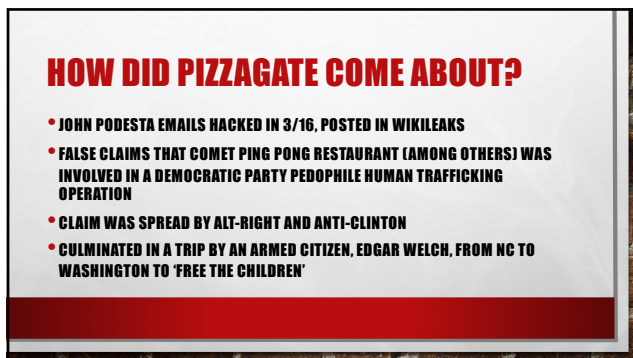
THE INTERNET IS KIND TO FAKE NEWS

- 'PARITY OF ESTEEM': THERE IS NO SIMPLE WAY TO ASSESS VERACITY OF INFORMATION
- SEARCH ENGINE OPTIMIZATION: YOU CAN PAY TO BE SEEN
- THE BEST VISUAL APPEAL 'WINS' THE ATTENTION OF THE VIEWER
- STYLE TRIUMPHS OVER SUBSTANCE

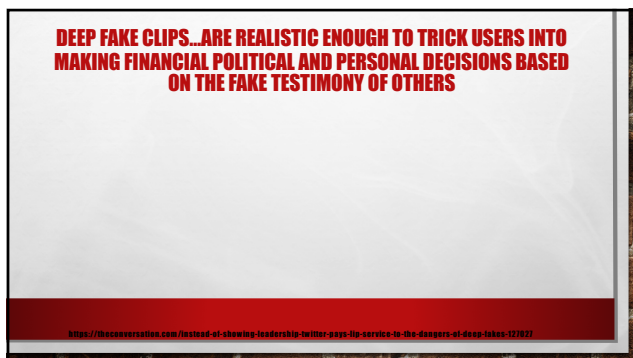
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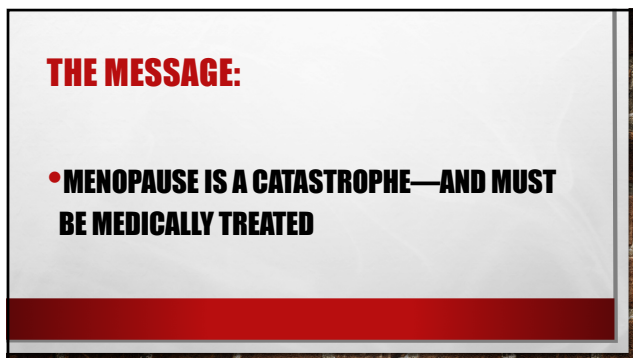
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12

WHAT IS THE REALITY

- ABOUT 6% OF MENOPAUSAL WOMEN USE HORMONE THERAPY (SWAN STUDY)
- MOST WOMEN VIEW MENOPAUSE IN A NEUTRAL TO POSITIVE MANNER:
 - FREEDOM FROM MENSTRUAL PERIODS
 - FREEDOM FROM CONTRACEPTION

13

WHY DOES THIS IMAGE PERSIST?

- THE MOST EFFECTIVE TREATMENT—HORMONES—IS FEARED (THANKS FOR MORE FAKE NEWS!)
- AGING WOMEN ARE VIEWED NEGATIVELY BY OUR SOCIETY—AND MENOPAUSE IS A MARKER OF AGING
- BECAUSE MENOPAUSE IS A DRAMATIC HORMONAL EVENT FOR WOMEN, DELAYING OR AVOIDING IT BY GIVING BACK 'REPLACEMENT' HORMONES IS EQUATED WITH AVOIDANCE OF AGING ITSELF

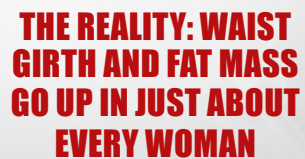
14

SO WHY IS THIS FAKE NEWS HARMFUL?

- IT FRAMES MENOPAUSE AS A MEDICAL CONDITION IN DIRE NEED OF TREATMENT
- THERE ARE (ALMOST) NO OTHER APPROVED TREATMENTS BEYOND HORMONE THERAPY
- THE FLOODGATES ARE NOW OPEN TO INNUMERABLE UNTESTED 'ALTERNATIVES'

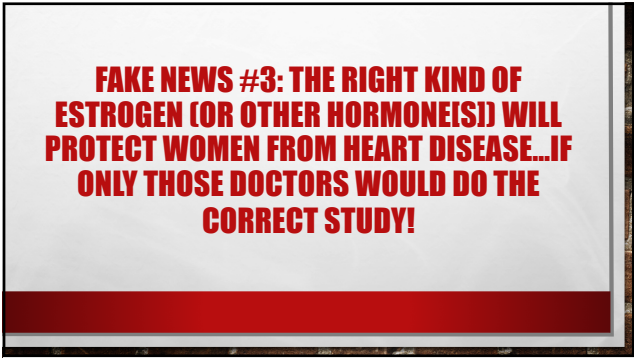
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• DO ALL OF *YOUR* MENOPAUSAL PATIENTS FIT INTO THEIR SKINNY JEANS?

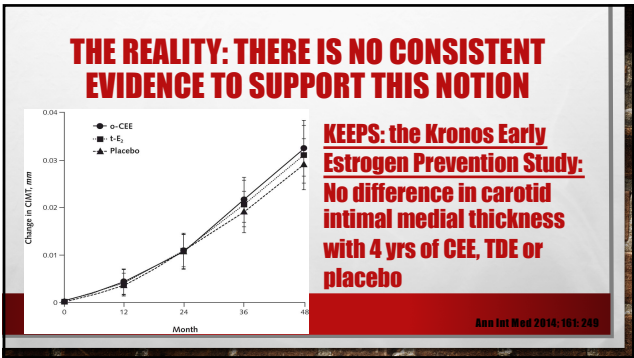
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IT SETS UP THE EXPECTATION THAT THERE ARE MAGICAL TREATMENTS THAT KEEP WOMEN LOOKING YOUNG, SKINNY, AND UNWRINKLED FOREVER!

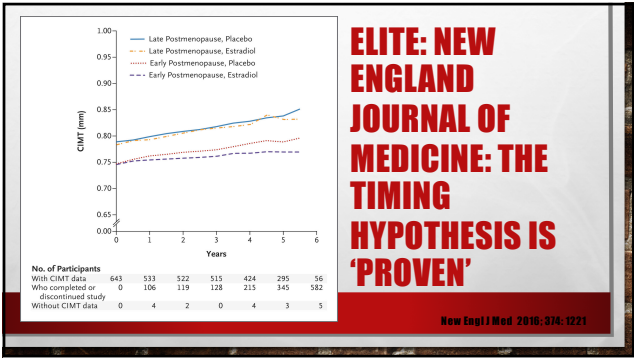
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21

KEEPS (2014)	ELITE (2016)
• N=727	• N=643
• <4 YRS FMP; <54 YRS	• <6 OR >10 YRS FMP
• CEE OR TDE, CYCLICAL VAGINAL P GEL	• ORAL E2, CYCLICAL VAGINAL P GEL
• PLACEBO CONTROLLED	• PLACEBO CONTROLLED
• 1 ^o OUTCOME: CIMT	• 1 ^o OUTCOME: CIMT
• 2 ^o OUTCOME: CAC	• 2 ^o OUTCOME: CAC
• CIMT LAB: USC	• CIMT LAB: USC

22

WHY THIS FAKE NEWS IS HARMFUL

- IT BULLIES WOMEN INTO BELIEVING THAT THEY MUST DO SOMETHING TO AVOID LATER LIFE DISEASE
- GOD HELP YOU IF YOU MISS YOUR CHANCE

23

FAKE NEWS #4: 'BIOIDENTICAL' HORMONES HAVE NO RISKS, PREVENT AGING

ACTUAL CLAIMS FROM ACTUAL WEBSITES:

- ([HTTPS://WWW.BIOTEMEDICAL.COM](https://www.biotemedical.com)):
- WE ONLY USE BIOIDENTICAL HORMONES THAT HAVE FEWER OF THE UNWANTED SIDE EFFECTS OF SYNTHETIC HORMONES
- HAVING ONE'S HORMONES CHECKED REGULARLY WILL REVEAL WHETHER THEIR HORMONES ARE OPTIMIZED AND HELP AVOID HORMONAL IMBALANCE IN A WOMAN'S ENDOCRINE SYSTEM.

24

BLACK BOX WARNING FOR FDA APPROVED HORMONES:

WARNING: ENDOMETRIAL CANCER, CARDIOVASCULAR DISORDERS, BREAST CANCER AND PROBABLE DEMENTIA

IN THE ABSENCE OF COMPARABLE DATA, THESE RISKS SHOULD BE ASSUMED TO BE SIMILAR FOR OTHER DOSES OF CE AND OTHER DOSAGE FORMS OF ESTROGENS

IN THE ABSENCE OF COMPARABLE DATA, THESE RISKS SHOULD BE ASSUMED TO BE SIMILAR FOR OTHER DOSES OF CE AND MPA, AND OTHER COMBINATIONS AND DOSAGE FORMS OF ESTROGENS AND PROGESTINS.

25

YET, NO SUCH LABELLING IS REQUIRED FOR BIOIDENTICAL HORMONES

- THEY ARE CONSIDERED 'DIETARY SUPPLEMENTS' AND THEREFORE EXEMPTED FROM FDA REQUIREMENTS TO PROVE EFFICACY AND SAFETY

26

MORE ACTUAL CLAIMS

- WHEN WE HELP BALANCE FEMALE HORMONES, IT MAY PROVIDE AN INDIVIDUAL WITH A GREATLY IMPROVED QUALITY OF LIFE. IN ADDITION TO FEELING GREAT, STUDIES HAVE SHOWN THAT BALANCING HORMONES IN WOMEN MAY BE ABLE TO HELP REDUCE ONE'S CHANCE OF CONTRACTING CERTAIN DISEASES AS WELL AS THE SEVERITY OF PARTICULAR CONDITIONS.
- [HTTPS://WWW.MEDICALNEWSTODAY.COM/ARTICLES/319465.PHP](https://www.medicalnewstoday.com/articles/319465.php).
- HORMONE REPLACEMENT THERAPY, OR HORMONE THERAPY, CAN ...ALSO LOWER THE RISK OF BRITTLE BONES AND HEART DISEASE.
- HOWEVER, IN 2002, THE WOMEN'S HEALTH INITIATIVE WARNED AGAINST THE LONG-TERM USE OF TRADITIONAL HORMONE THERAPY (HT). THEIR CONCERN WAS DUE TO THE INCREASED RISK OF BREAST CANCER, BLOOD CLOTS, STROKE, AND EVEN HEART DISEASE. SINCE THIS SAFETY WARNING CAME OUT AGAINST THE USE OF TRADITIONAL HORMONE THERAPY, ALTERNATIVE METHODS, SUCH AS BIOIDENTICAL HORMONE THERAPY, HAVE BEEN DEVELOPED.

27

WHY THIS FAKE NEWS IS DAMAGING

- IT DIRECTS PATIENTS TO NON-FDA APPROVED, NON-EVIDENCE-BASED TREATMENTS FOR THEIR MENOPAUSAL SYMPTOMS
- IT FRAMES THE ISSUE IN A WAY THAT MAKES PATIENTS NOT WANT TO TRUST THEIR DOCTORS

28

FAKE NEWS #5: THE GUARDIAN: "NEW PROCEDURE THAT CAN DELAY MENOPAUSE UP TO 20 YEARS!"

- DELAYING THE ONSET OF MORE COMMON SYMPTOMS OF THE MENOPAUSE, WHICH RANGE FROM LOW MOOD, ANXIETY AND DIFFICULTY SLEEPING, TO HOT FLUSHES, NIGHT SWEATS AND A REDUCED SEX DRIVE
- COULD BENEFIT THOUSANDS OF WOMEN WHO EXPERIENCE SERIOUS HEALTH PROBLEMS, SUCH AS HEART CONDITIONS AND BONE-WEAKENING OSTEOPOROSIS, THAT ARE BROUGHT ON BY THE MENOPAUSE."

<https://www.theguardian.com/science/2015/sep/04/martienprocedure-delay-menopause>

29

OVARIAN TISSUE CRYOPRESERVATION

- NINE WOMEN HAVE HAD ELECTIVE SURGERY TO REMOVE OVARIAN TISSUE AND CRYOPRESERVE IT FOR LATER REIMPLANTATION, THUS OUTSMARTING MENOPAUSE
- REQUIRES 2 OPERATIONS
- WILL CONTINUE ENDOGENOUS OVARIAN HORMONE PRODUCTION BEYOND THE AGE AT NATURAL MENOPAUSE
- WILL REQUIRE CONTINUED USE OF CONTRACEPTION, MENSTRUAL PRODUCTS, ETC
- REALLY?

30

WHY THIS FAKE NEWS IS HARMFUL

- IT DESTROYS SCIENTIFIC CREDIBILITY
- IT AGAIN IMPLIES THE CONTINUING HORMONE PRODUCTION WELL AFTER MENOPAUSE IS GOOD FOR WOMEN (IF ONLY IT COULD BE DONE CORRECTLY)
- IT DISTRACTS PEOPLE FROM THE DAY TO DAY HEALTHY BEHAVIORS THAT HAVE BEEN PROVEN TO PREVENT DISEASE

31

THE FAIRNESS DOCTRINE

- 1949 FCC POLICY THAT HOLDERS OF BROADCAST LICENSES WERE HELD TO REPORTING ON PUBLIC MATTERS OF CONSEQUENCES IN A MANNER THAT WAS "HONEST, EQUITABLE AND BALANCED"
- POLICY ELIMINATED IN 1987, CONCURRENT WITH THE ESTABLISHMENT OF FOX NEWS
- RULE REMOVED IN 2011—LEADING TO THE IRONIC MOTTO OF 'FAIR AND BALANCED' FOR FOX NEWS

32

OTHER TOXIC EFFECTS OF THE 'FAKE NEWS' ENVIRONMENT

- DISTORTION OF FACTUAL DATA TO ACCOMMODATE OPINIONS
- EVENTUAL 'TURNING AWAY' OF REASONABLE PEOPLE WHO CANNOT RESOLVE THE APPARENT 'DEBATE' EXAMPLES:
 - VACCINATION PROMOTING MDS DEBATING 'ANTI-VAXXERS' ON THE SAME PUBLIC PLATFORM APPEARS TO ASSIGN THE SCIENTIFIC ARGUMENTS SIMILAR GRAVITAS
 - CLIMATE CHANGE SCIENTISTS DEBATING CLIMATE CHANGE DENIERS, SIMILAR DYNAMIC
- THERE IS A LOSS OF COMMONLY AGREED UPON, OBJECTIVE TRUTH

33

**MORE SUBTLE EROSIONS OF TRUTH
ACCOMPANY THE 'FAKE NEWS' ONSLAUGHT**

- ASSUMPTIONS ARE MADE THAT EVERY POSSIBLE FACT OR STATISTIC HAS A COUNTERPOINT
- "THERE ARE LIES, THERE ARE DAMN LIES, AND THEN THERE ARE STATISTICS"—MARK TWAIN
- CALL-OUT AND OUTRAGE CULTURE CAN SHOUT DOWN SOME OF THE SANEST VOICES IN THE ROOM
- VIRAL ITEMS GAIN CREDIBILITY FAST—WELL BEFORE THEY CAN BE VERIFIED

34

**AND IT DOESN'T EVEN HAVE TO BE TOTALLY
FAKE TO WORK AGAINST TRUTH...**

35

JAMA VIEWPOINT

October 18, 2019

**Neglecting Major Health Problems and Broad-
casting Minor, Uncertain Issues in Lifestyle
Science**

John P. A. Ioannidis, MD, DSc¹

[➤ Author Affiliations](#) | [Article Information](#)

36

IOANNIDIS, VIEWPONT JAMA 10-19

IS IMPARTIALITY POSSIBLE FOR RESEARCH PERFORMED WITHIN CHARGED ENVIRONMENTS, WHERE EVEN LEADING SCIENTISTS MAY LOBBY TO SILENCE DISSENTERS OR BLOCK PUBLICATION OF OPPOSING VIEWS?

37

MOST PEOPLE BELIEVE

- **THAT THEY CAN SORT FACT FROM FICTION**
- **THAT A THOROUGH SEARCH THROUGH THE INTERNET WILL ALLOW THEM TO BALANCE THE INFORMATION THEY ARE ACQUIRING AND ARRIVE AT 'TRUTH'**
- **THAT TROLLING AND DISINFORMATION IS RARER THAN IT IS**

38

IN OUR CURRENT CLIMATE

- **HARD TO DISTINGUISH REPORTING FROM OPINION**
- **FEW WAYS TO DEFEND AGAINST FAKE NEWS UNLESS IT IS DEFAMATORY**
- **WE CAN UNWITTINGLY HELP DISPERSE QUESTIONABLE MATERIAL**

39

HOW TO INOCULATE YOURSELF AND YOUR PATIENTS AGAIN FAKE NEWS

- PROMOTE EVIDENCE BASED SOURCES OF DATA: MENOPAUSE.ORG, ACOG.ORG, ENDOCRINE.ORG, ETC
- HAVE LITERATURE AVAILABLE FOR PATIENTS
- DIRECT PATIENTS TO HIGH QUALITY RESEARCH FINDINGS AND SUMMARIES AVAILABLE ONLINE

40

MEDIA LITERACY

- WHAT TYPE OF ARTICLE ARE YOU READING (OPINION PIECE, ORIGINAL RESEARCH, EDITORIAL)?
- IS IT PEER REVIEWED?
- IS IT A CLINICAL TRIAL?
- IS THE CLINICAL TRIAL REPORTED TO CLINICALTRIALS.GOV?
- WAS THERE A CONTROL GROUP? WAS THE STUDY RANDOMIZED? TO WHOM DO THE DATA APPLY?
- ARE THE REFERENCES ALL INTERNALLY CONCATENATING?
- WHAT ELSE HAS BEEN WRITTEN BY THIS AUTHOR?

41

SOME FACT CHECKING SITES

- SNOPE.COM
- FACTCHECK.ORG
- POLITIFACT.COM

42

SUMMARY

- THE WORLD WIDE WEB HAS BOTH BROUGHT US CLOSER TOGETHER AND FARTHER APART
- WE ARE ONLY JUST BEGINNING TO APPRECIATE THE IMPACT OF INSTANT AND CONSTANT INFORMATION EXPOSURE
- THE HUMAN MIND WAS NOT DESIGNED TO COPE WITH VIRAL NEWS

43

SUMMARY

- THE BAD GUYS WIN WHEN THE LOUDEST VOICE IS THE ONLY ONE THAT GETS HEARD
- WE NEED TO SLOW THE FLOW FOR OUR PATIENTS (AND OURSELVES)
- LEARN TO ASSESS THE SOURCES OF INFORMATION BEFORE REACTING TO IT
- TEACH OTHERS TO DO THE SAME

44
