NOTES

25:21 I meant to say "micrograms per liter" here, not "milligrams per liter". That'd be a LOT!

Thanks to Dr. Elizabeth Pearce for speaking to me about iodine – an incredible interview! Thanks as well to Dr. Maria Andersson and Dr. Gary Beauchamp for their valuable expertise. Thanks to my friends at America's Test Kitchen (Paul Adams, Joe Gitter, Simon Savelyev, and many more who joined the shoot) for taking on my experiment and teaching me about salt!

Disclaimer, I am not a doctor and I cannot give medical advice. I'll just repeat what the actual doctors said in the video: if you're pregnant, it's worth looking into an iodine supplement. For everyone else, eat some iodized salt. There's no need for pricey supplements since even just semi-regularly eating iodized salt can keep you iodine sufficient! Note: there are cases when people may actually need to avoid iodine (screenings for thyroid cancer, for example), so as always, please talk to your doctor before doing anything based on advice from the internet!

ATK Taste Test Methodology – credit to Paul Adams for developing this!
We set up a double-blind taste test. None of the tasters besides me and Joe knew this was a test about iodine; they were only asked to tell three cups of water apart. The ABC cups were placed in varying orders so no one was preferentially picking the first or last cup tasted. After each sip of water, testers ate a palate cleanser (a saltine). Each tester did the test alone in the room, and no one spoke about the test between trials. The cups were set up at an 0.8% salt concentration by an assistant in another room, so only the assistant and Simon (who watched the tasters and tabulated the results in real-time) knew the cups' contents. This is not a perfect study, not least because our sample size was only ten people, but we did our best! And hey, if a group of people who work in food can't tell them apart…

The sources that led me down this rabbit hole…
Impact | Iodine Global Network <- org dedicated to fighting iodine deficiency worldwide!
Iodized salt: Celebrating the centennial of a major US… - Elizabeth Pearce | Endocrine Today
Do we still need iodized salt? (wtf even is it?)
History of U.S. Iodine Fortification and Supplementation - Angela Leung et al. | PubMed Central
(autodownload) The history of iodine deficiency in Switzerland - Jonah Goodman | SAMW
Iodine | Linus Pauling Institute
The Cognitive Effects of Micronutrient Deficiency - James Feyrer et al. | NBER
Salt, Fat, Acid, Heat - Samin Nosrat | Simon & Schuster
USDA, FDA, and ODS-NIH Database for the Iodine… Release 4.0 - Heydorn et al. | USDA

ALL SOURCES

Welcome to Element 53
Do we still need iodized salt? (wtf even is it?)

Iodine - Chemical Properties, Uses, & Applications | Britannica
Counterfeit banknote detection pen | Wikipedia
Emergency Disinfection of Drinking Water | US EPA
Iodine as a drinking-water disinfectant - Ruth Bevan & Andreas Nocker | WHO
Iodine | Wikipedia
Iodine | U.S. Geological Survey, Mineral Commodity Summaries
Cradle-to-gate LCA of iodine… - Lindsey Roche et al. | Intl Journal of Life Cycle Assessment
Iodine production process
- visuals used -
The Iodine Myth
SQM 50 AÑOS

The iodine investigation
History of U.S. Iodine Fortification and Supplementation - Angela Leung et al. | PubMed Central
Gunpowder & Seaweed - Tracey McIntire | National Museum of Civil War Medicine
Why is Iodine added to Salt? - Joe Schwarcz | McGill Office for Science & Society
Humphry Davy's writings, Issue 104, Philosophical Transactions | The Royal Society
The discovery of thyroid replacement therapy. Part 1 - Stefan Slater | PubMed Central
Jean-Francois Coindet - J. Orgiazzi & S. W. Spaulding | European Thyroid Association
Iodized Salt - Holly Frey & Tracy Wilson | Stuff You Missed in History Class
- visuals used -
Bernard Courtois and the accidental discovery of iodine | India Today Education Desk
Iodine Crystals | Wikimedia Commons
Medicine: Goiter, 1822 | Granger
Kone med stor struma | Wikimedia Commons
A National Evil - Jonah Goodman | London Review of Books
Beiji qianjin yaofang | Wikipedia
Portrait of Dr. Jean-Francois Coindet | Wikimedia Commons
Remembering a forgotten… - Elizabeth Wiedmer & Joseph Woermann | Institute for Medical Education

Got thyroid problems?
Iodine | Linus Pauling Institute
Iodine | NIH Health Professional Fact Sheet
Congenital hypothyroidism due to iodine deficiency | Wikipedia
- visuals -
How to Draw a Brain - Matthew Matthysen | Art in Context
Ch 17: The Endocrine System - Rajeev Chandra | Anatomy & Physiology Laboratory Manual for Nursing
Triiodothyronine | Wikipedia
Thyroxine | Wikipedia
Gray38 – Illustration of a fetus in utero between the fifth and sixth months | Wikimedia Commons
The discovery of thyroid replacement therapy. Part 1 - Stefan Slater | PubMed Central
Cretinnen aus Steiermark, 1819 gez. Loder, gest. Leopold Müller | Wikimedia Commons
original meaning of 'cretin': 'Christian', 'human being' - Pascal Tréguer | word histories

Mont Blanc & the goiter
(autodownload) The history of iodine deficiency in Switzerland - Jonah Goodman | SAMW

The Impact of Iodine Deficiency Eradication on… - Dimitra Politi | The University of Edinburgh
100 years of salt iodization in Switzerland, Vol 51, Iss 1 | IDD Newsletter | Iodine Global Network
Iodised salt | Wikipedia
Sodium Chloride - Gisbert Westphal et al. | Ullmann's Encyclopedia of Industrial Chemistry
- visuals -
Switzerland Flag Animation | 4k | Flags of the World | YouTube
Mark Twain by AF Bradley | Wikimedia Commons
Switzerland Travel Guide - Simon Willis & Jonny Bierman | AFAR
This Stunning Alpine Village In Switzerland Is A Natural Winter Wonderland - Jenna Busch | PlanetWare
Otto Bayard (1911) | Wikimedia Commons

Miracle in Michigan
"When it rains it pours": endemic goiter, iodized salt, and... - Howard Markel | PubMed Central
How the arrival of iodized salt 100 years ago… - Ray Cavanaugh | The Washington Post
A Grain of Salt - Howard Markel | PubMed Central
Why is Iodine Added to Salt?
- visuals -
Michigan Goiter Outbreak Led To Iodized Salt in America - Meatball | WRKR Kalamazoo
Young men registering for military conscription, New York City, June 5, 1917 | Wikimedia Commons
WWI: AEF: United States Army | National Museum of the US Navy
Knowledge Only Adds to Reading: I Don't See How It Subtracts - Doug Lemov | Teach Like a Champion
University of Technology, Hietalahdentori. Lecture room. (14336110264) | Picryl
Interior Azteca Theater, Houston Texas, July 15, 1927 | Wikimedia Commons

Wait, like our brains?
Iodized salt: Celebrating the centennial of a major US… - Elizabeth Pearce | Endocrine Today
The Cognitive Effects of Micronutrient Deficiency - James Feyrer et al. | NBER
Did iodized salt raise the IQ of 50 million Americans… - Thomas Sittler | Giving What We Can
Live Births and Birth Rates, by Year | Infoplease
The effects of iodine on intelligence in children - Ming Qian et al. | APJCN
- visuals -
'Dracula' and Diet: Goitre - Fiona Subotsky | Dracula for Doctors
Better Than No Options At All - Martin Morse Wooster | Philanthropy Daily
'Only Son' Law and the Draft | TogetherWeServed Blog
Will There Be a Draft? Young People Worry After Military Strike - Sarah Mervosh | The New York Times
States that drafted the most men in World War II - Martha Sandoval | Digital Journal
Training the American GI | National WWII Museum New Orleans
Cretin group | Wikimedia Commons

A salt breakdown
Where Does Salt Come From? Ask Paul - Paul Adams | America's Test Kitchen
Salt Production and Processing | Morton Salt
Gourmet salt (NaCl or halite): origins and culinary variety - John Warren | Salt Work Consultants
SALT IODIZATION TECHNOLOGY
Iodized Salt Production: Training Module - English
Process of Iodisation of Salt | India Salt Commissioner Office

Technical Specifications for Iodized Salt | World Food Programme
Which Salt is the Best? Doctor's Review of Kosher, Pink Himalayan, Sea, Table, and Salt …
Potassium Iodate vs. Iodide in Salt | Nanjing Chemical Material Corp.
Potassium iodide | Wikipedia
Countries with mandatory or voluntary legislation status | Global Fortification Data Exchange
Morton Salt | Wikipedia
Salt: A World History - Mark Kurlansky | Penguin Books
Comparison of Salt Iodization Requirements… - Rachel Paige Greenwald et al. | ScienceDirect
Sustainable Elimination of Iodine Deficiency | UNICEF DATA
In Raising the World's I.Q., the Secret's in the Salt - Donald G. McNeil Jr. | New York Times
Global perspectives in endocrinol… - Michael Zimmerman & Maria Andersson | PubMed Central
Impact | Iodine Global Network
Title 21: Ch I: SubCh B: Pt 100: SubPt G: Salt & iodized salt | Code of Federal Regulations
Title 21: Ch I: SubCh B: Pt 184: SubPt B: Potassium iodide | Code of Federal Regulations
- visuals -
Salt Production and Processing | Morton Salt
Automatic Iodized Salt Making Machine Salt Production Line | YouTube
Making of iodised salt
Global Data Visualizations | Global Fortification Data Exchange (GFDx)
(archived) Vintage Ads | Morton Salt

We got iodine so wrong
Estimating the Health and Economic Benefits of… - Jonathan Gorstein et al. | PubMed Central
Iodine | UNICEF DATA
Iodized Salt | Global Health NOW, Johns Hopkins Bloomberg School of Public Health
Iodine deficiency | WHO
Iodine in Foods and Dietary Supplements… - Pamela Pehrsson et al. | PubMed Central
USDA, FDA and ODS-NIH Database for the Iodine Content… - Katherine Heydorn et al. | USDA
Iodized Salt
Iodine Toxicity - Alison P. Southern et al. | StatPearls, NCBI Bookshelf (NIH)
Iodine Levels in the United States, 2000 | National Center for Health Statistics
Iodine nutrition: iodine content of iodized salt in the US - Purnendu Dasgupta et al. | PubMed
Iodophor | Wikipedia
Iodine and Iodine Defic… - Adrienne Hatch-McChesney & Harris R Lieberman | PubMed Central
- visuals -
Here's a map I made about our planet 20,000 years ago… | r/Paleontology
Best Sources of Iodine | YouTube
Different Cooking Salts to Use
Is Fancy Salt A Scam?
Throw Away Your Iodized Salt | YouTube

Beating the taste allegations
Europe at Risk for Iodine Deficiency Resurgence | Medscape
Salt, Fat, Acid, Heat - Samin Nosrat | Simon & Schuster
Salt Fat Acid Heat is 622 pages and it's worth reading every one. But if you don't… | r/Cooking

Can you taste iodine in salt? There does not seem to be a consensus as far… | r/Cooking
TIL iodized salt can have bitter flavors bc of the way it's processed… | r/cookingforbeginners
Why do they sell non iodized table salt? | r/Cooking
Iodized Salt vs. Noniodized Salt on Food Flavor | America's Test Kitchen
Way to Go, Ohio - Malcolm Gladwell, Revisionist History | Pushkin
Can people tell the difference between sea salt and table salt… | Skeptics Stack Exchange
The Great Salt Taste Test - Joe Barkson | Worldwide Recipes
Why Does Salt Change the Taste of Everything?
Effect of iodized salt on organoleptic properties… - Jessica Blankenship et al. | PubMed Central
Possible effects of iodized salt on the taste… Osama Badran et al. | WHO EMed. Health Journal
Influence of iodized table salt on fermentation… - Alexandra Müller et al. | PubMed
Impact of iodized table salt on the sensory characteristics… - Maija Greis et al. | ScienceDirect
- visuals -
The Ultimate Salt Guide | YouTube
The Best and Worst Salts for Cooking | YouTube
Best & Worst Salts at Costco #costco #salt #seasalt | YouTube
Three Comforting Egg Recipes | America's Test Kitchen Full Episode (S23 E10)
The Best No-Knead Sandwich Bread Recipe | Joe Vs. The Test Kitchen

A simple solution
Global scorecard of iodine nutrition 2025 | IGN
A Review of Iodine Status of Women of Reproductive… Pallavi Panth et al. | PubMed Central
Ask Paul: What's the Difference Between Table Salt… - Paul Adams | America's Test Kitchen
Can you really taste the difference between different kinds of salt? | r/Cooking
New to cooking. Question about salt types and when to use | r/Cooking
Table Salt versus Kosher Salt? | America's Test Kitchen

This is a living doc, to be updated and added to over time, but some core principles upfront!

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