Module 3

Searching and selecting information

HEAL
E-HEALTH LITERACY

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Imprint

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Learning Outcomes

After this **training** you will:

- **get acquainted with ways** how **to make advanced search** health-related information by using **Google services&products;**
- **know** how to **distinguish safe and reliable** health information **on the Internet.**
- **know** the ways how **social media** supports **searching and selecting** reliable and trustful **health information** online.

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Activity 1:

Icebreaker

- Mood Barometer

Activity 2:

Search and find information

- Audience feedback

Lecture 1:

Advanced search of health-related information with Google

- It does not matter if you open **Google.com** on your smartphone's, tablet's or computer's Internet browser it seems, that you open a blank page and do not see much information. However, **billions of people come here with questions about all kind of things every single day!**
- **Health topics** are one of the most **popular subjects searched by internet users**. As estimated by Google **7 % of Google's daily searches are health-related.**
- Are **you also one of those who search for information on the conditions you are experiencing** on Google? Duration of flu, special diet, clinic, doctor, drug, etc.?
- Did you know that there are numerous very **useful tips and tricks** that can **help you** to make a **meaningful search** and find what you are looking for.
- **Get acquainted** how **to search** health-related information by using **Google Search, Scholar engines and Lens technology.**

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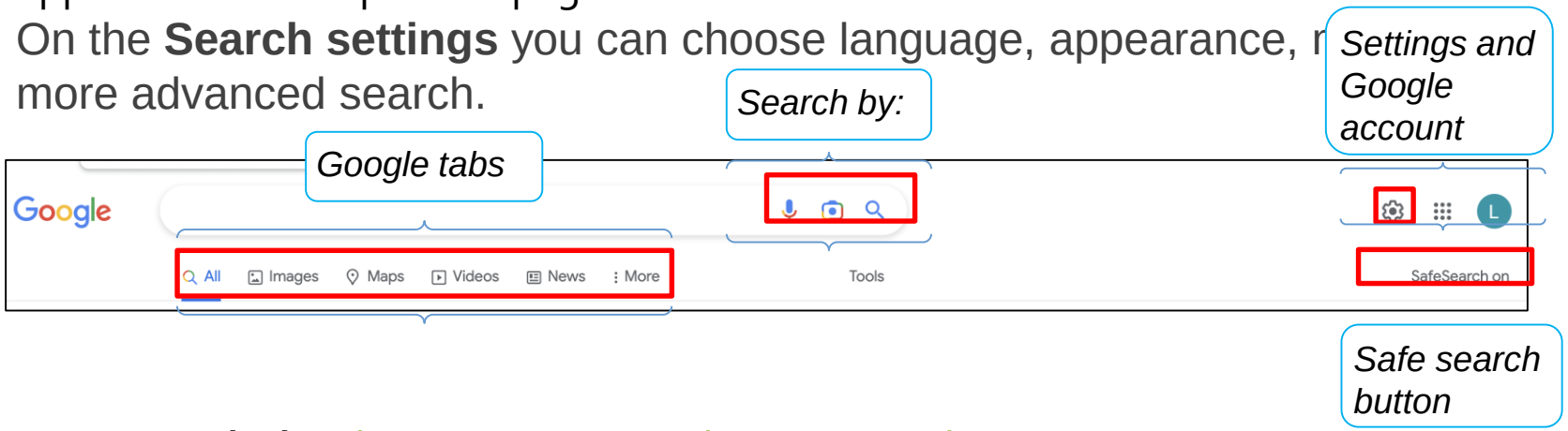
General tips to maxime search on *Google search engine*

- **Use the tabs.** Below the search bar are a number of tabs: **All, Image, Videos, News and More**. Using these tabs, you can help to define what kind of search you need to do.
- **Pay attention to keywords of your search**. Keep it simple and use important words only.
- **No need** to spell words **correctly, no need** to use **capital letters.**
- **Browse safe** and turn on SafeSearch on Search settings.
- **Search** also by **voice** and **image.**
- **Be aware** the majority of search results pages include Google **ads. Ad means** that the owners of web-sites paid Google to have their web-site appeared at the top of the page.
- On the **Search settings** you can choose language, appearance, r more advanced search.



- **More search tips**: https://www.youtube.com/watch?v=LQrWW4ovsCA

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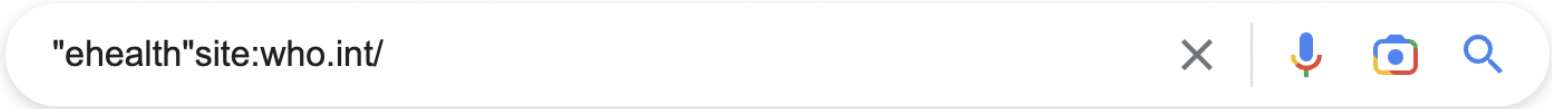
Lecture 1.

Google search operators (commands)

- You can refine your search by using **Google search operators**.
- Google search operators are **combinations of words, symbols and commands** that improve your **text search** results on Google search engine.
- In the following slides you will find **some of the most used operators with concrete samples** how to use them in search of health related information.



Let’s get started!

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Lecture 1.

How to use operators as: “”; OR; AND; Filetype; site; -; domain.

Search Operators	Examples
" " Exact phrase	"what is ehealth” (Search for the exact words or phrases to narrow down your results by using quotation marks.)
AND Limit results	symptoms AND coronavirus (Search for content that contains both symptoms and coronavirus.)
OR One term OR another	symptoms OR coronavirus (Search for content that contains symptoms OR coronavirus.)
Filetype: pdf, docx, txt, ppt, etc files	ehealth filetype:pdf (Search for results in filetype)
site: Include a website from the search	ehealth site:wikipedia.org (Limits results to those only on Wikipedia.)
- Exclude a term from the search	drugs for headache pain relief –ibuprofen (Limits results to only those with drugs for headache pain relief and not the term. ibuprofen)
de, lt, gr, sl domain	site: de ehealth Get a perspective from outside of where you are located.

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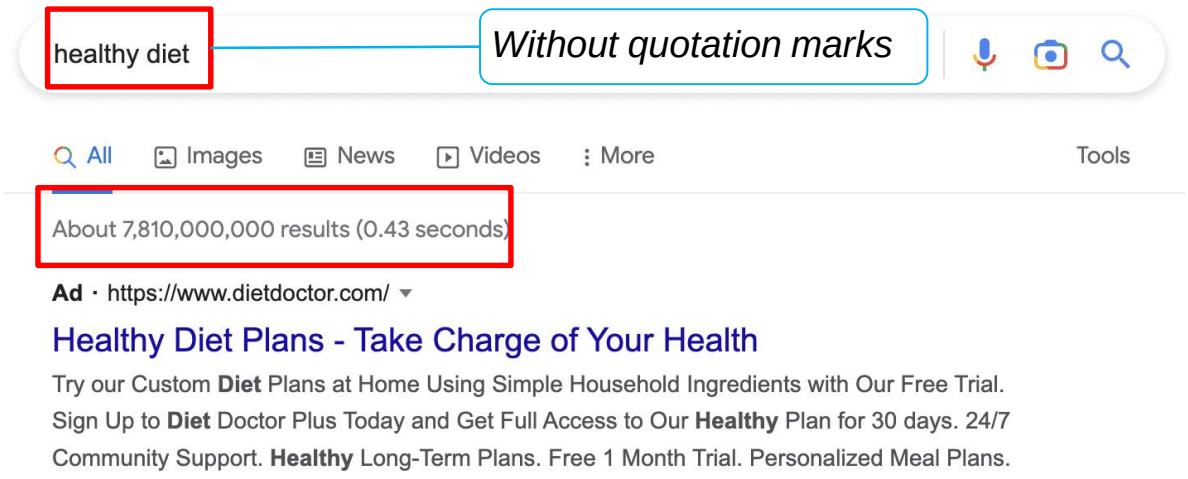
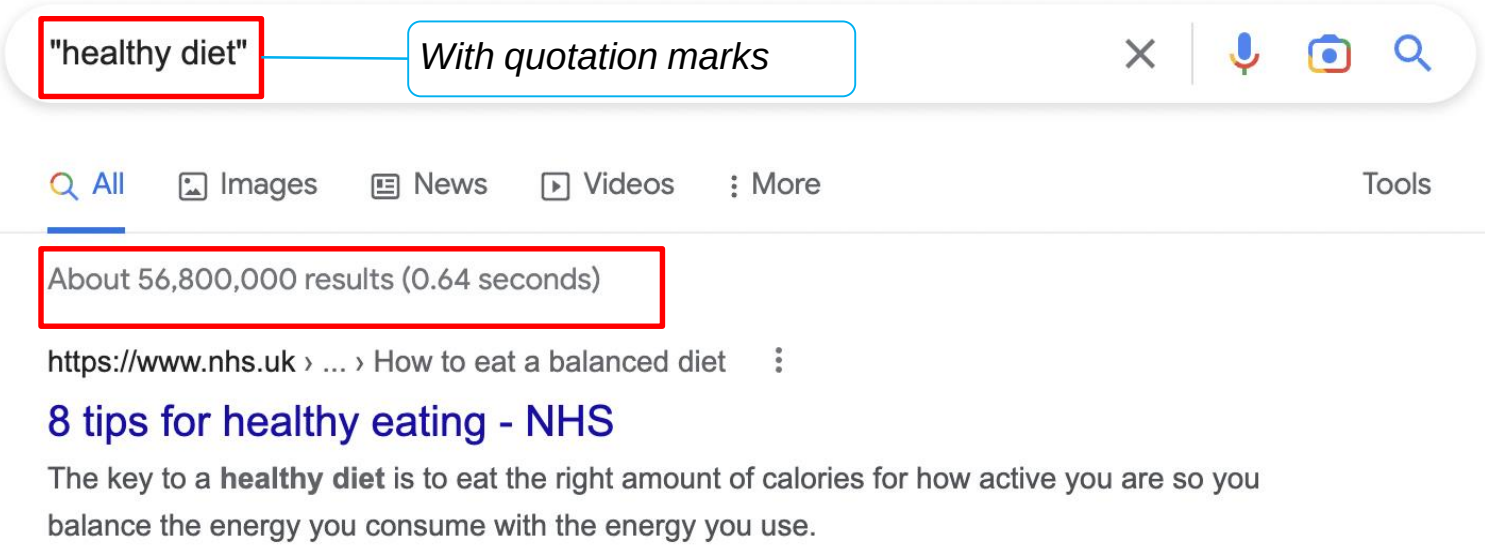
#1 Sample. *How to use quotation marks*



You can search for **exact words** or **phrases** to narrow down your results. All you need to do is place **quotation marks** " " around the desired search terms. For example, if you search for "**healthy diet**", your search results will only include results with exact responses to your search term, instead of any healthy diet term.



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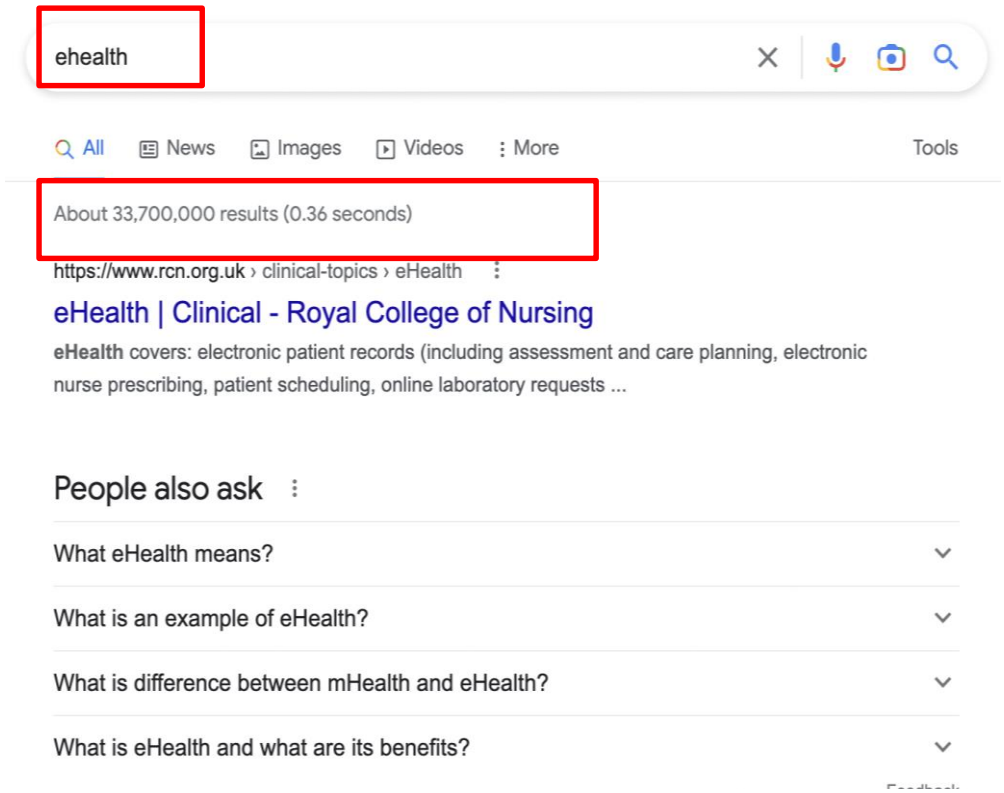
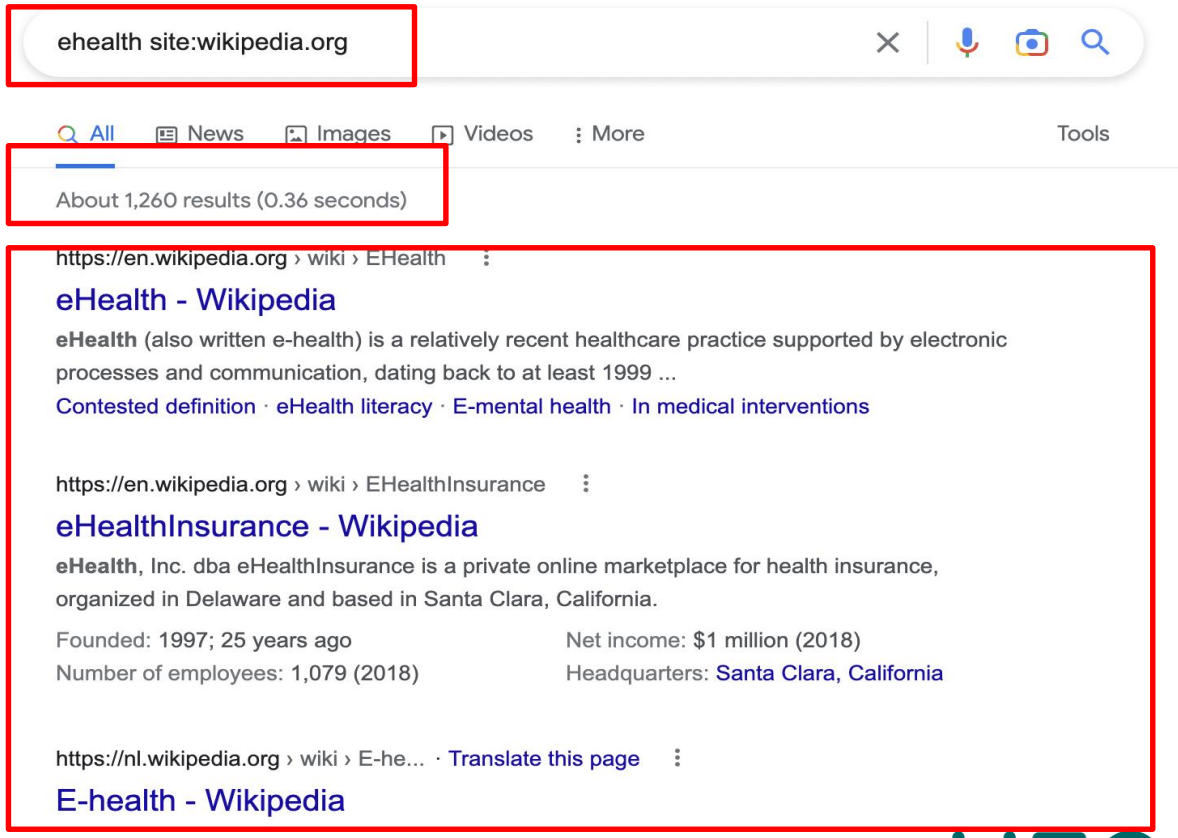
#2 Sample. *How to use command site:*

If you are looking for an information on specific web-site use command **site:** It will limit results to those from a specific website. For example you want to receive information about ehealth from Wikipedia. Type the key word **ehealth** insert **site: together with the link to web-site**. In this case information will be searched only in indicated web-site.





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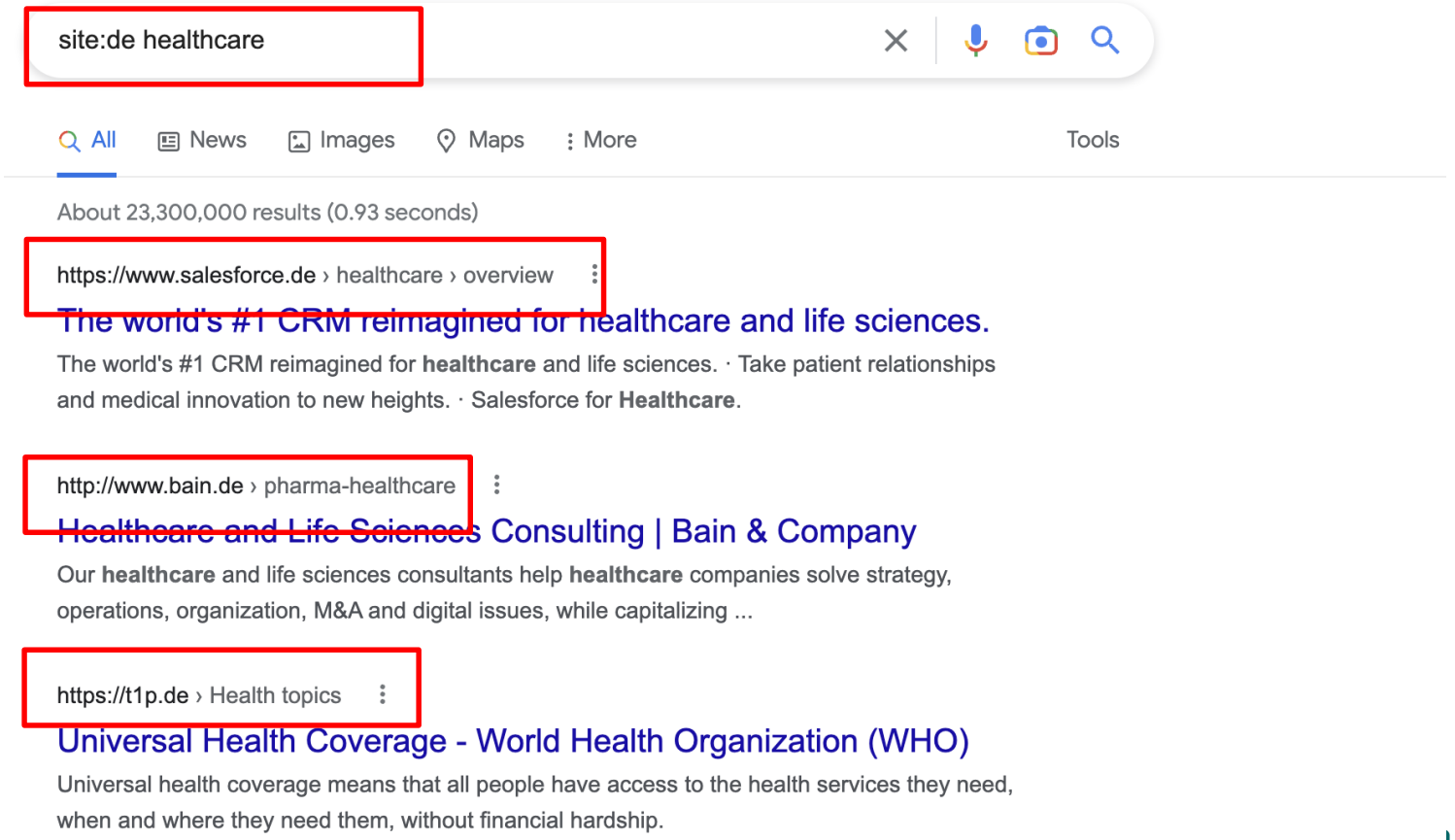
#3 Sample. *Search for information in other countries*

You are looking into something and would like to get a perspective from outside of where you are located. For example, you are living in Lithuania and would like to know more about healthcare system in Germany. Germany domain end in "de". So write in search site: de and healthcare and you will get number of sources from Germany.



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Lecture 1.

Text search by using Google Scholar search engine

- Google Scholar search engine specializes only in academic sources;
- It is a reliable place to find credible sources.
- Google Scholar engine is searching information by using inserted Keyword.
- Therefore, It is very important before searching information create a list of acceptable keywords.

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Lecture 1.

Text search by using Scholar search engine on Google

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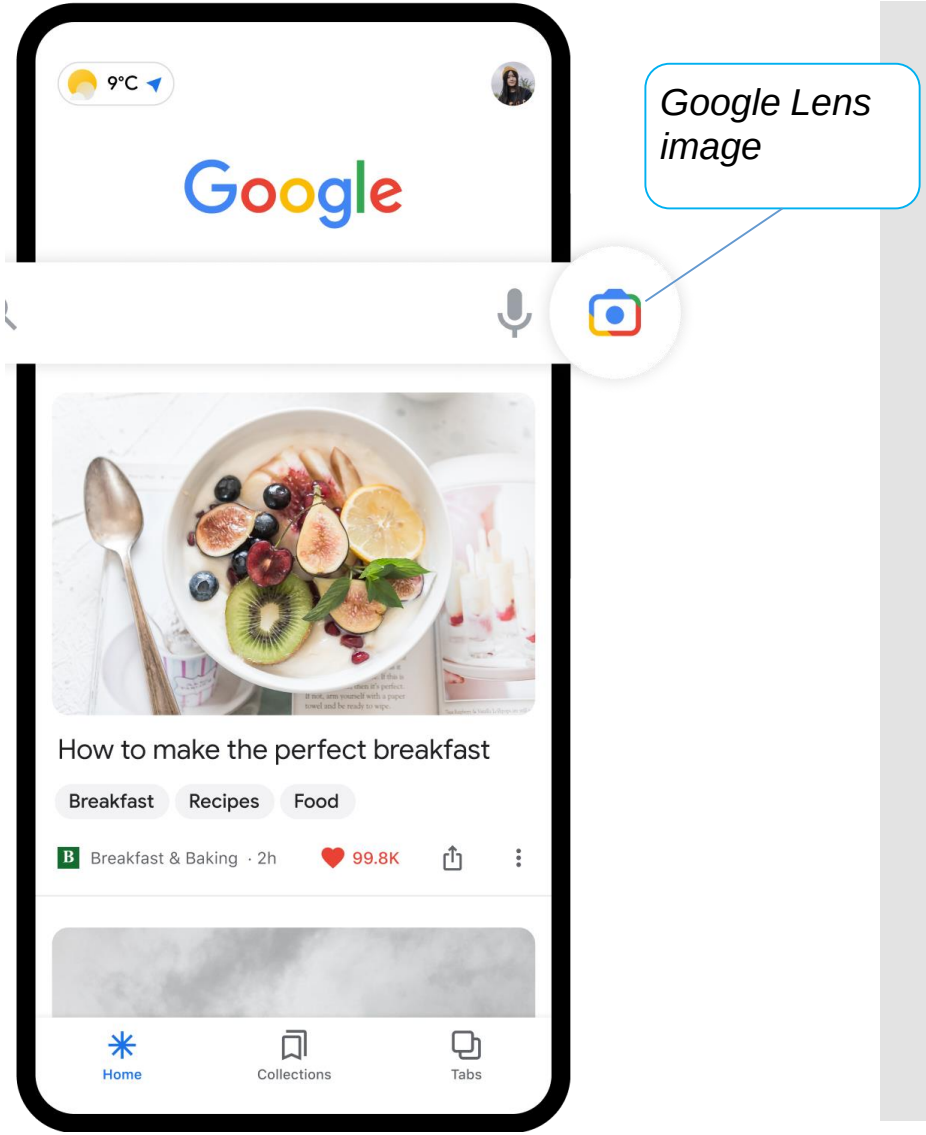
Lecture 1.

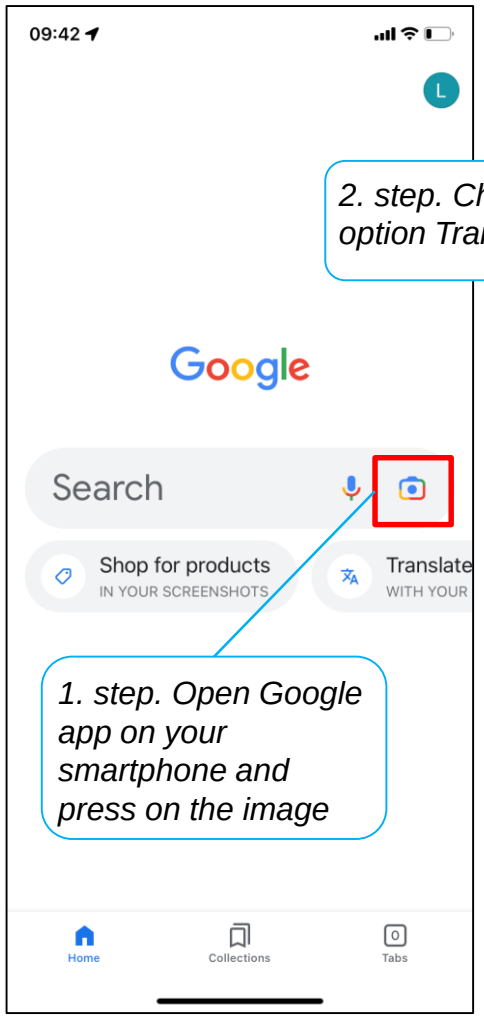
Google Lens and how it can help you to be more digital health literate?

- **Google lens** is AI – powered technology that uses your **smartphone camera** to detect an **object in front of camera lens and offter actions as translation, finding something specific, scanning, etc.**
- If you want to use Lens you need to have **Google app** on your **smartphone or tablet. Google Lens works on both OS: IOS and Android**.
- You can **download** both apps from **Google Play or App Store** to your smartphone for **free**. Today, many phones already come with this software already integrated.
- Get **acquainted** with **3 concrete samples** on how Google Lens can be **helpful to you**.

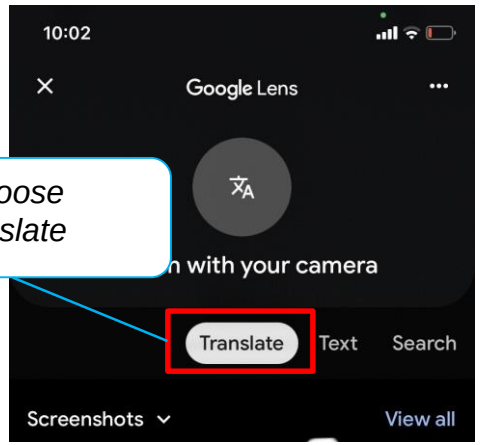


#1 Sample. *Copy and translate text from the real world*

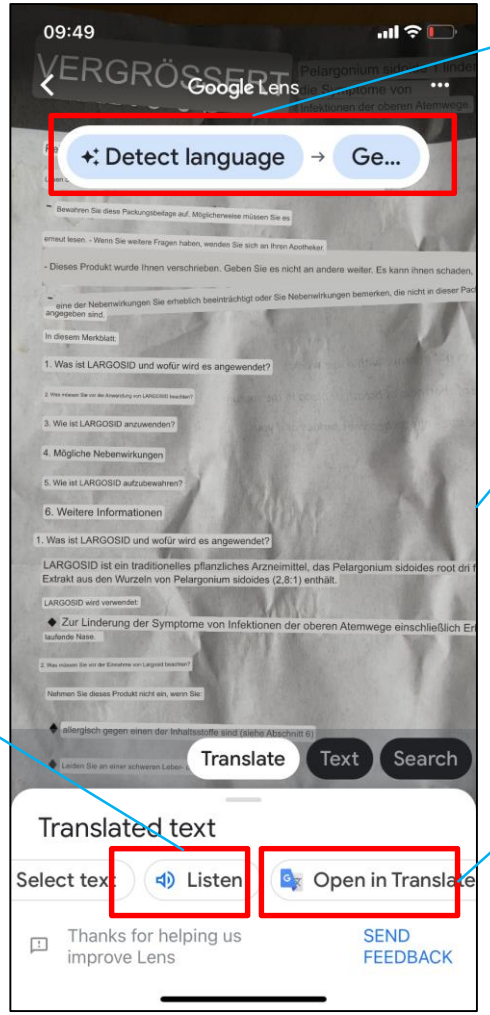
Did you know that you can use Google Lens to **translate printed text or any other text, written on the wall or in the book text from one language to another?** For example you have a description of medicine in one language and you want to translate to another. See following instructions how it works with Google Lens:



1. step. Open Google app on your smartphone and press on the image



2. step. Choose option Translate



3. step. Detect the language you want your text to be translated

4. step. Take the text you want to translate and make a picture

5. step. You can read translated text on the screen but you can also choose option Listen.

Note. some languages as Lithuanian, Slovenian are not supported yet and can not be listened only read.

If you want you can open the text in Google Translator and also find translation there

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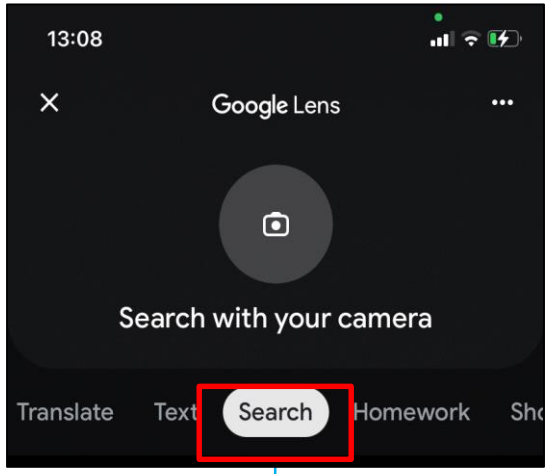
#2 Sample. ***Search for similar images***

Did you also know that you can use your **smartphone camera or an image to search information on Google Lens**? For example you are not sure what kind of medicine you have in your medicine box. You can take a photo and Google Lens is able to quickly identify objects in your image and present numerous types of information about it.



1. step. On Google Lens choose option Search

2. step. Take the image you want to find on Internet and make a picture.

3 step. Google Lens will find you related information about your image.

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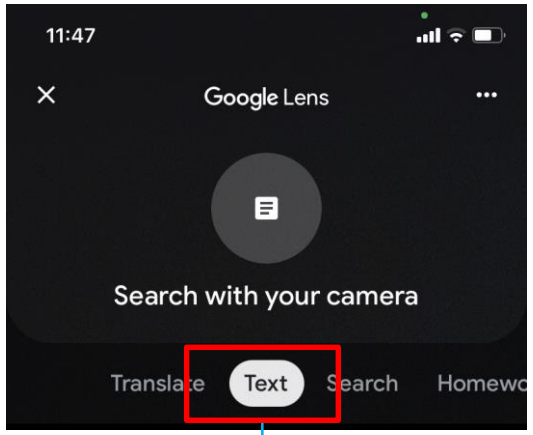
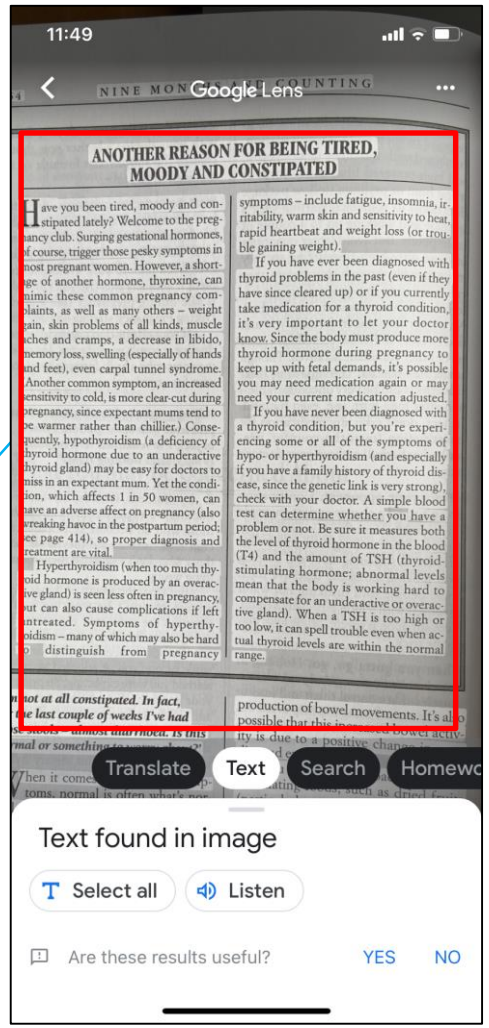
#3 Sample. *Send text from the real world to your computer or notebook*

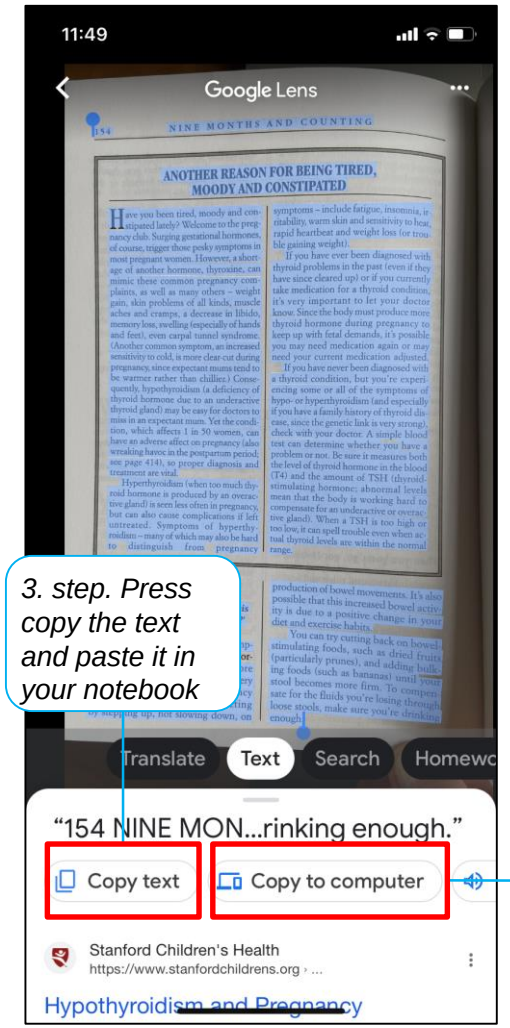
Google Lens allows you to **copy then paste the text into your notes or a document.** For a example, you are sitting at the doctors cabinet. While you are waiting for your visit you read magazines about health. Suddenly you find a very useful article you would like to save. Instead of taking photo with your smartphone you can use Google Lens copy paste text in your notes.



1. step. On Google Lens choose option Text



2. step. Take a photo of the text.



3. step. Press copy the text and paste it in your notebook

Also you can copy it to your computer

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Other useful features with Google Lens

- **Google Lens** can be **used in many other ways**. It was presented only the tip of the iceberg- **Google Lens has so many more features such as:**
- It can also **read text loud** to you.
- **Shopping**: Google Lens can identify an item of clothing in a picture. Once it has scanned the item, it will show you that piece of clothing and similar items. You then have the option to purchase the item.
- **Call**: if you've scanned a phone number, it will give you an option to call the number.
- Many more features can be found here: https://www.computerworld.com/article/3572639/google-lens-android.html

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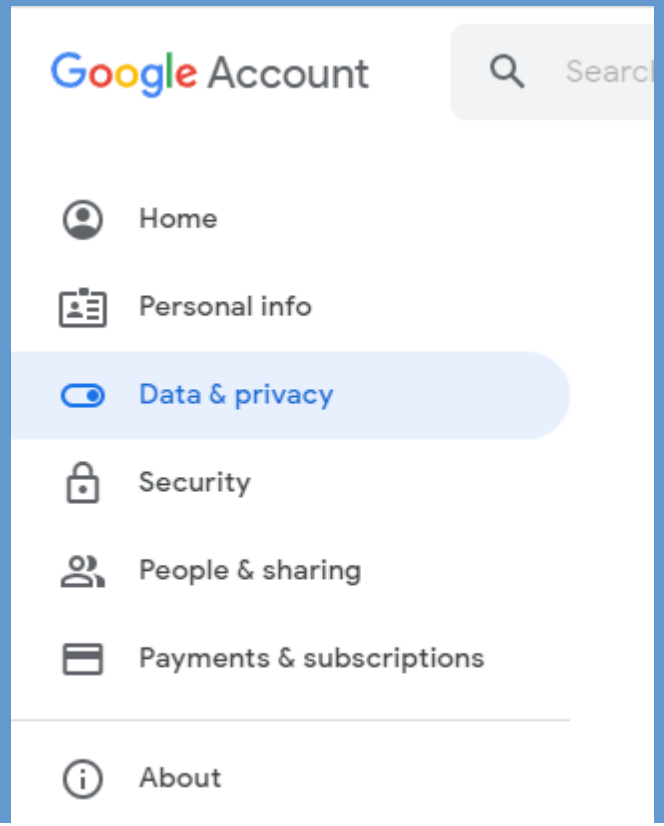
Be aware!



- While **Google search** is one of the **most popular** Google's **services** for billions of people **be aware** that it also **collects, stores and processes unprecedented amounts of data.**
- Google knows a lot about you and what you do each day (where you have been, topics you are most interested in, has your Youtube history, your spending habits through Google Play, etc).
- You can find detailed information about your **own data in your Google account settings "Data&Privacy page.**
- There **you can see** the many types of **data Google collects from you**.

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Activity 2:

Search and find information

- Advanced Google search

Activity 3:

Ways to distinguish safe and reliable health information on the Internet.

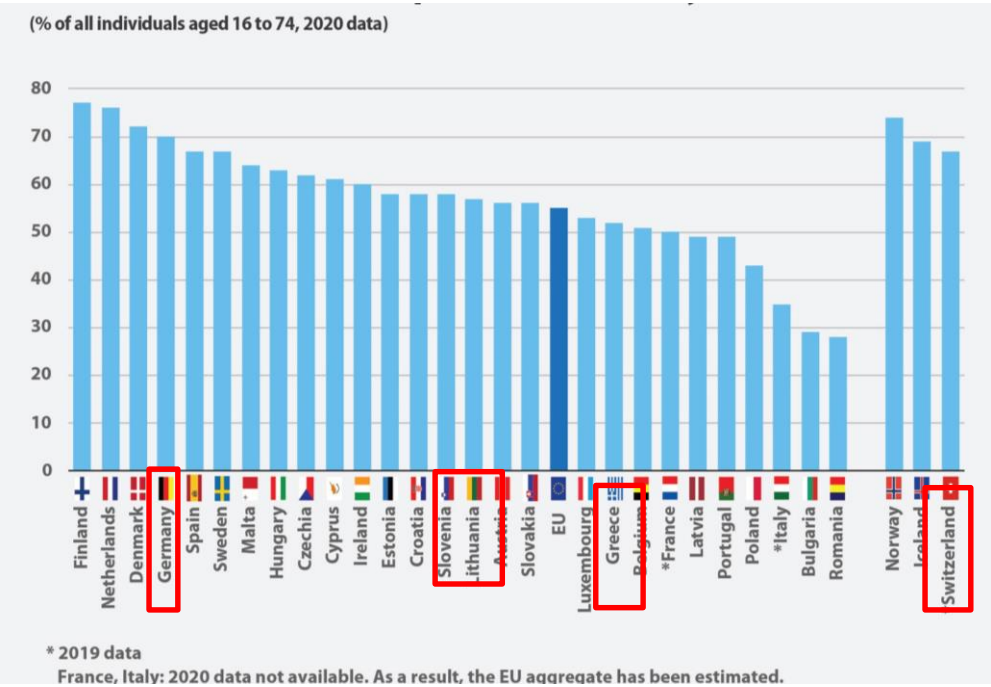
- Audience feedback

Lecture 2:

5 W's. Ways to distinguish safe and reliable health information on the Internet

Facts and figures

Share of people seeking information online



- According Eurostat data from 2021 **one in two EU citizens (55%) aged 16-74 reported** that they **had sought online health information related to injury, disease, nutrition, improving health or similar**.
- **20%** of EU citizens reported that they made an **appointment with a practitioner over the internet.**
- **13% accessed** other **health services via a website or app** instead of visiting the hospital or a doctor in person,
- **11%** of citizens accessed their **personal health records online.**

Increasingly **Internet is becoming first stop** for looking up **health information.**

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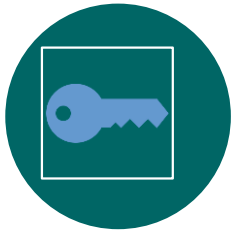
Lecture 2.

Many of you share a common concern: "How I can trust and rely the health information I find on the Internet?

While Google can be wonderful source of information not all information on the Internet is reliable, accurate and high quality.

Finding good quality health information can help you to make better choices about your health.

The same applies if we talk about health information online. It can be very useful but it also can be misleading and possibly even dangerous to your health.



In this part you will find useful tips how to evaluate information about health you find on the Internet.

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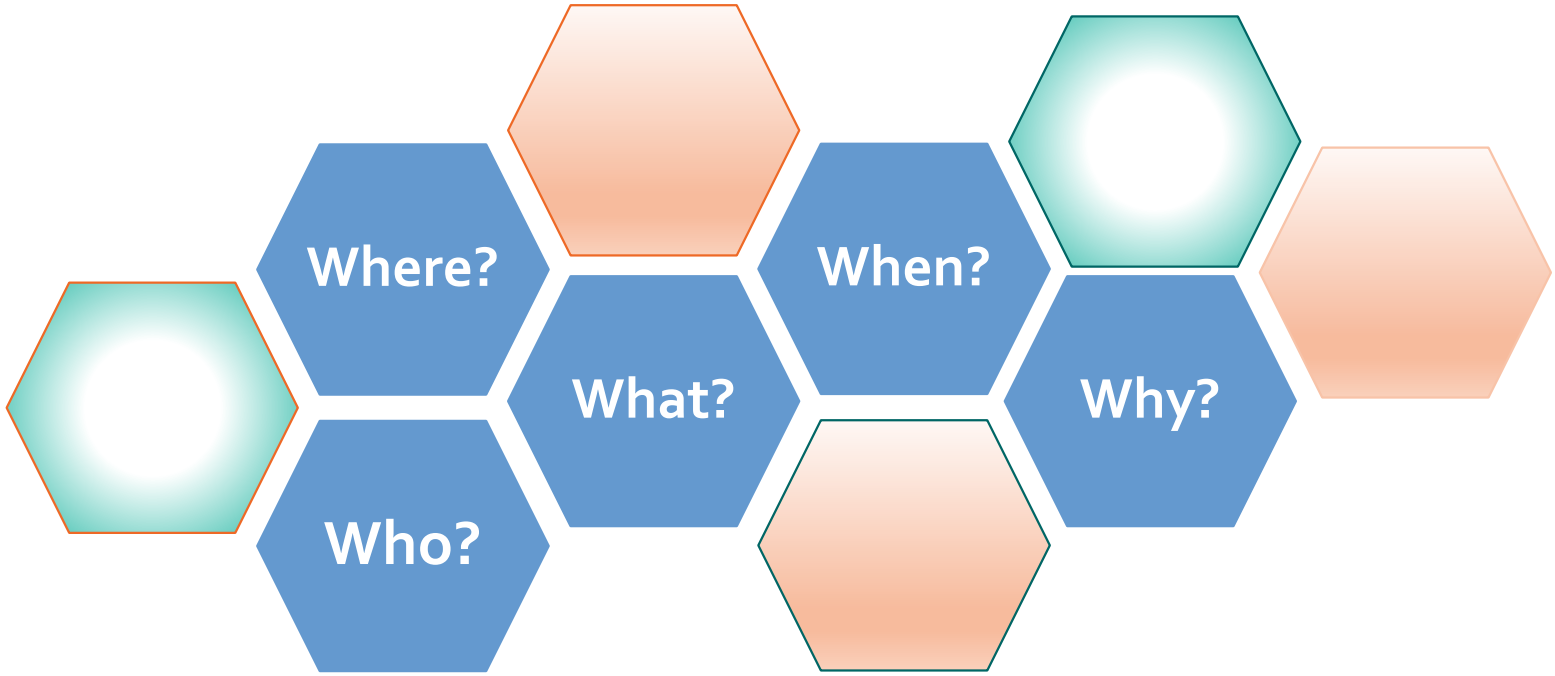
Lecture 2.

The 5 W's

- In order to **find good quality health information** it is **important to ask yourself five simple questions** while you **search on Internet**:



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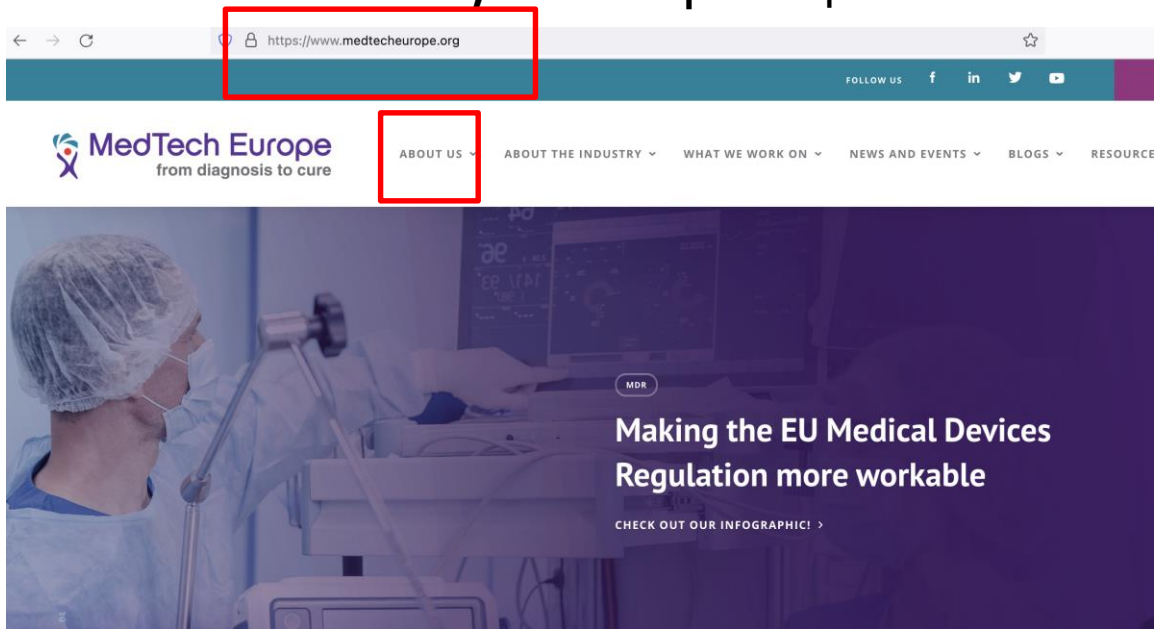
Lecture 2.

How to evaluate online health information:

Who?

- When looking at the web-site it is important to **understand who runs it: individual, group or organization?**
- It is also Important to check domain name of the website **(e.g., org, edu, com, gov);**
- Always look to **About us** page to learn who is **in charge of the content provided** inside the web-site**;**
- Web-site should **provide** contact information as **phone number, email address.**
- **There are also free websites that assess if web-site is legal and provides credible information, for example:** https://www.scamadviser.com/



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- If you **found an article** or any other information on personal blog, postcast, etc. **always check**:

- Who **wrote** this **information**?
- What **are his/her qualifications** in this subject?
- Is there any **contact details**?
- Is it **affiliated with known/trusted institution**?

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Lecture 2.

How to evaluate online health information:

What?

- It is very **important to pay attention** to **what** does the **website say.**
- **Check provided links**. Are they are working or broken?
- Are there **grammatical or spelling errors in the information provided**?
- Is it easy to **navigate** in the web-site and **find information?**
- Read the **website's privacy policy**. It is usually at the bottom of the page or on a separate page titled "Privacy Policy" or "Our Policies."
- If a **website says it uses "cookies,"** your **information may not be private.** You can choose to disable the use of cookies through your Internet browser settings.
- Be aware that Internet has a lot of **Scam and Fake web-sites**. If web-site you found is full of dramatic health claims and phrases like miracle happens, buy secret ingredients, etc. do not trust and do not buy anything as well as **do not provide your credit cards number, home adress, ID number and other personal data.**

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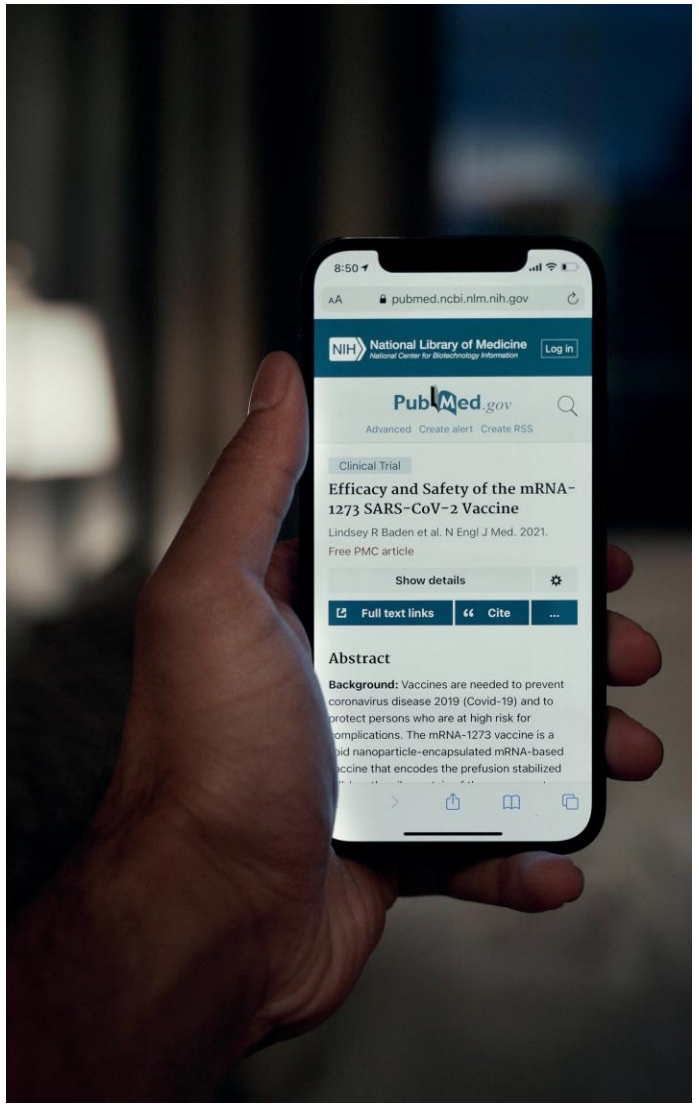
- If you **found an article always check**:

- Does the **article agree or disagree** with **other** sources you have found?
- Does it **sound** sensationalistic or too good to be true?
- How this article is **written? In casual or formal way?**
- **Be careful about testimonials**. Personal stories may be helpful and comforting but not everyone experience health problems in the same way.
- Remember, there is a **big difference** between a website, blog, social media website developed by a single person and a website developed using strong scientific evidence.



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Lecture 2.

How to evaluate online health information:

Where?

- Check **where did the information** come from?
- Is information provided in the web-site or article is based on **specific research or sound evidence**? Was it written by a medical professional?
- Was it sourced from another website?
- Look for **citations, footnotes and links** relating to the information being provided.

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Lecture 2.

How to evaluate online health information:

When?

- Probably you do not want to **make decisions** about your **health based on out-of- date information.**
- Usually each web-site has a **date establishment** or update date at the **bottom of the page.**
- The same for an article. **Check** when the **article was posted? Is it up-to-date?**
- Usualy at the top or bottom of the **article** there is a **date when the content was reviewed, revised or posted.**

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Lecture 2.

How to evaluate online health information:

Why?

- Why the website exist or article written?
- **Is the web-site trying to inform? Or to sell/promote a product?**
- Have a look what are web-site's sponsors? Some web-sites can be funded by pharmasutical or other campanies and information provided can be bias towards using and buying specific products, services, etc.
- Is information provided **through a certain perspective or viepoint?**

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Lecture 2.

Ask healthcare professionals

- **Always discuss** what you **find online with your healthcare providers**.
- **They** can help you to **determine** whether **information** you found **is accurate, trustful and applicable to your specific situation.**

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Activity 3:

Ways to distinguish safe and reliable health information on the Internet.

- Distinguish safe and reliable health information online

Lecture 3:

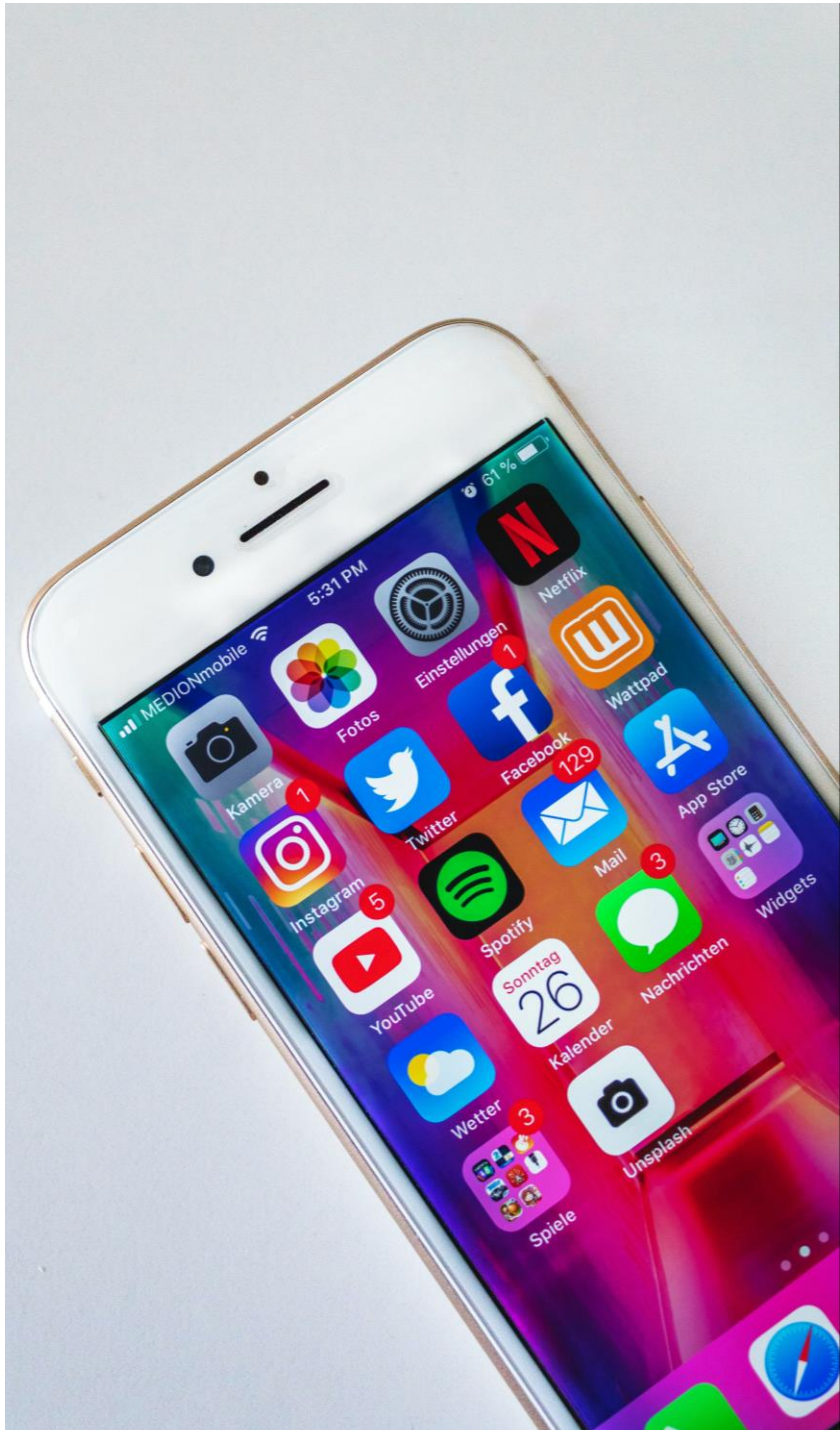
Social media - a new big frontier for healthcare

- People seek, share, and receive **health information** from a wide variety of sources, such as health care professionals, insurance and pharmaceutical companies, family and friends, media, educational materials, advertisements, and the internet, including

social media

- Covid-19 pandemic has tought us that **healthcare** and **social media** platforms such as Facebook, Twitter, Instagram, Snapchat, Youtube, WhatApp **can be very powerful combination**.

- However, both **true and false health information** can be found on **social media.**



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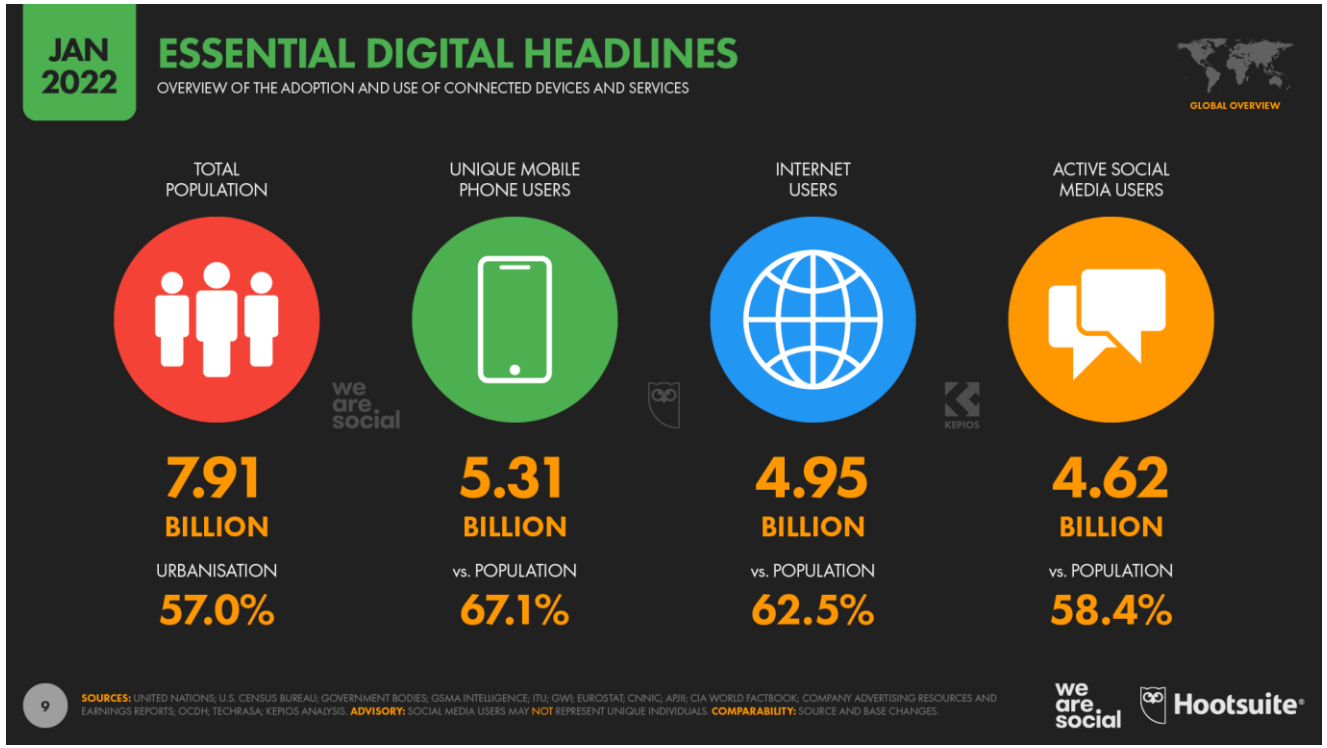
Global digital snapshot

- The world's population stands already at **8 billion** in 2022;
- More than two-thirds (**67.1 percent**) of the world's population now uses a mobile phone;
- Global internet users have climbed to **4.95 billion** at the start of 2022
- There are **4.62 billion** social media users around the world in January 2022
- People as average spend **2.5 hours** a day using social media.

Source: https://datareportal.com



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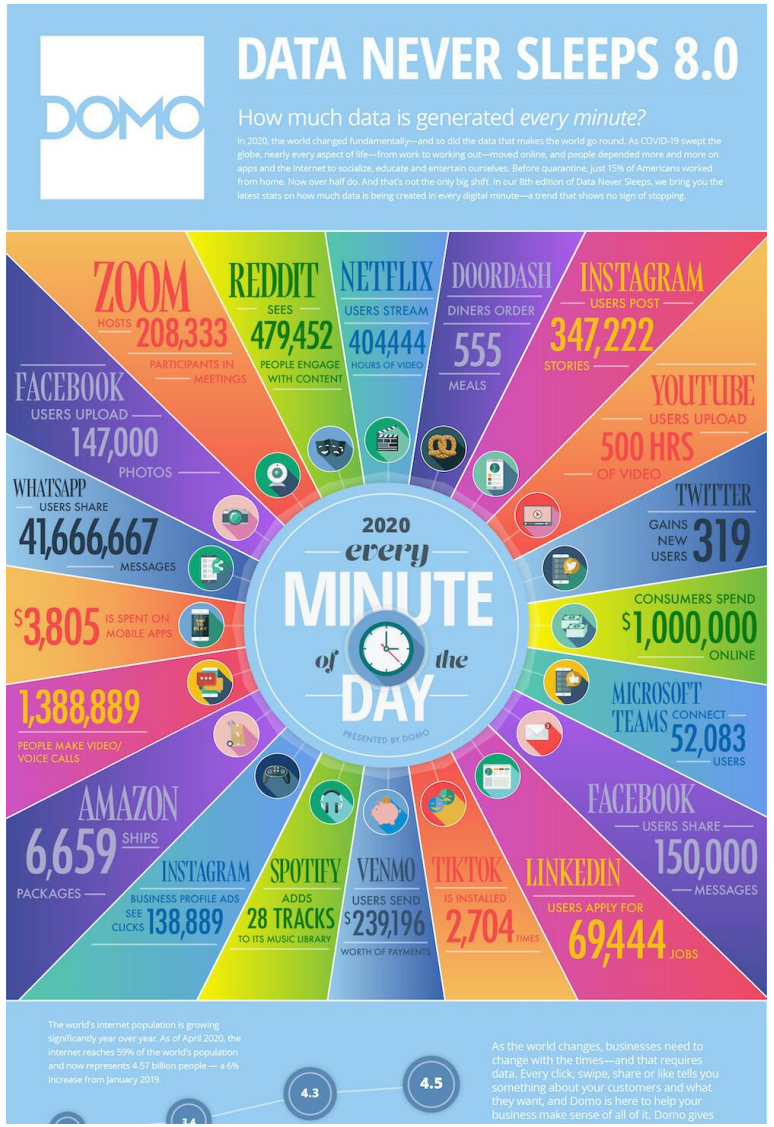
Lecture 3.

Data never sleeps

Amount of information generated in 1 minute on the Internet

Data is constantly being generated in ad clicks, reactions on social media, shares, rides, transactions, streaming content, and so much more. When examined, this data can help you better understand a world that is moving at increasing speeds.

Source: https://www.domo.com/learn/infographic/data-never-sleeps-8



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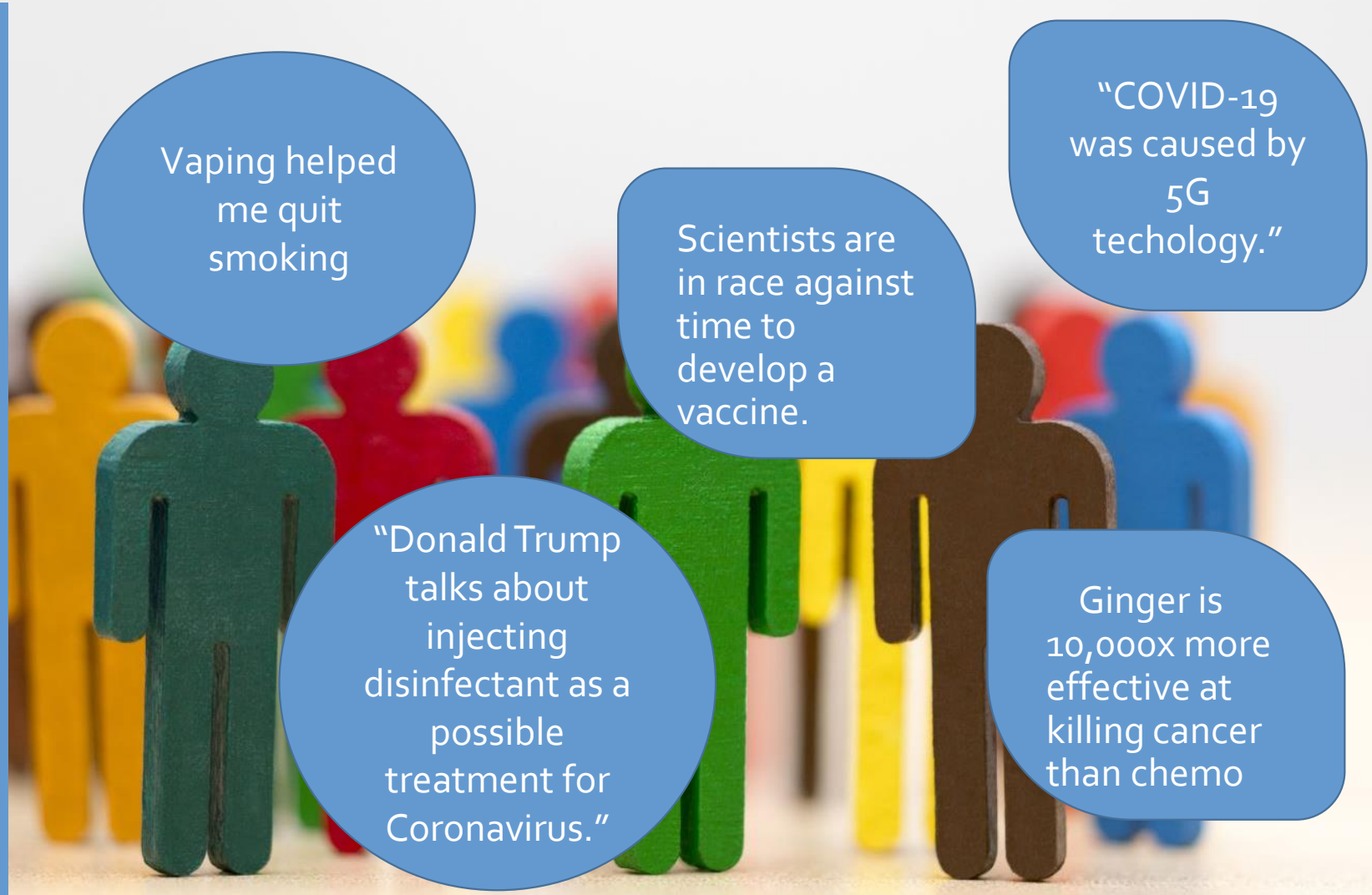
Lecture 3.

Social media and health information: empowering or misleading?



Lecture 3.

Benefits of social media in healthcare

- raising public awareness
- combating misinformation
- communicating during a crisis
- expanding the reach of existing resources and recruitment efforts
- answering common questions
- promoting citizen engagement

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Risks on social media

- Fake accounts
- Social bots
- Deepfake
- Clickbait

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Fake accounts

- Fake accounts are unauthorized social media profiles.
- Most often fake accounts are found on Facebook, Instagram, Twitter.
- Fake accounts are created by people: to share thoughts without being judged, to spy on someone else's profile, to raise chances of winning online contests, to increase the likes on followers on real accounts, to fool friends, to scam other users.

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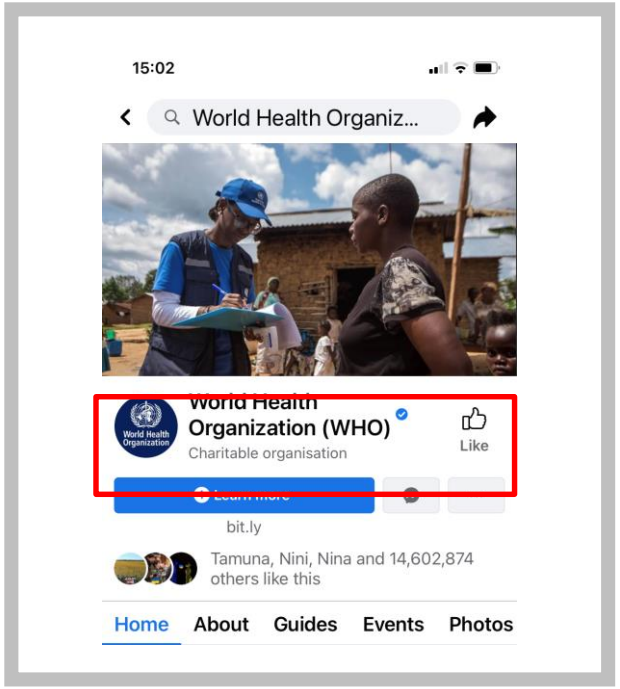
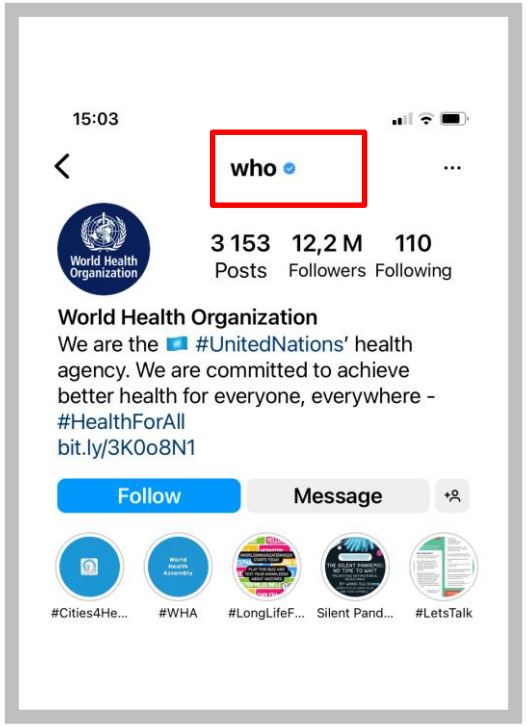
Ways to verify fake accounts

- Always check if organizations or person uses verified badge on social media profiles FB, Instagram, Twitter;
- Outdated profile pictures or use of low resolution images;
- Check if profile has few followers, but the account is following a large number of profiles;
- All of the posts read similar to spam messages (asking for money, offering "free prizes" etc.);
- The posts contain misspellings and poor grammar.





Social bots

- Bots – short for robot - are software application that can perform automated, repetitive, predefined tasks.
- There are many types of bots on the Internet and can be used for good and bad. Example of good bot: The World Health Organization built a bot on WhatsApp and Facebook to share public information related to the coronavirus pandemic.
- Bad bots carry risk and can be used for hacking, spamming, spying web-sites, social media platforms, emails, etc.
- Specifically, bots on social media are used to automatically generate messages, advocate ideas, reply to posts as as a follower of users, and as fake accounts to gain followers themselves.
- Unlike Fake accounts that are created by real people social bots are automated and operate much faster.

https://www.kaspersky.com/resource-center/definitions/what-are-bots

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Ways to recognize bots

- There is very little information shown in the profile. The **#1 user name is often strange,** for example a user name with numbers**.**
- Often **#2 a profile picture** does not show a real person. If it shows a real person the image can be always checked by using Google Image tool and see the results that Google offers.
- **The #3 number of followers.** The account usually does not have followers or share content of other accounts that are often bots themselves.
- Bots are far **#4 more active than a human**. They can share or tween hundreds of news/tweets a day. If account has more than 50 posts/sharing a day you should be sceptical.
- **# 5 content of the profile might be misleading**. Writing style does not not sound natural, language used is simple.

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Sample fake accounts

Tweets 3,272 | Followers 3,185 | Likes 729 | Lists 1

Follow

Benefsi Bagcik
@BagcikBenefsi

Adversity and loss make a man wise

Follow

Haticenur Oner
@HaticenurOner

A closed mouth gathers no foot.

Follow

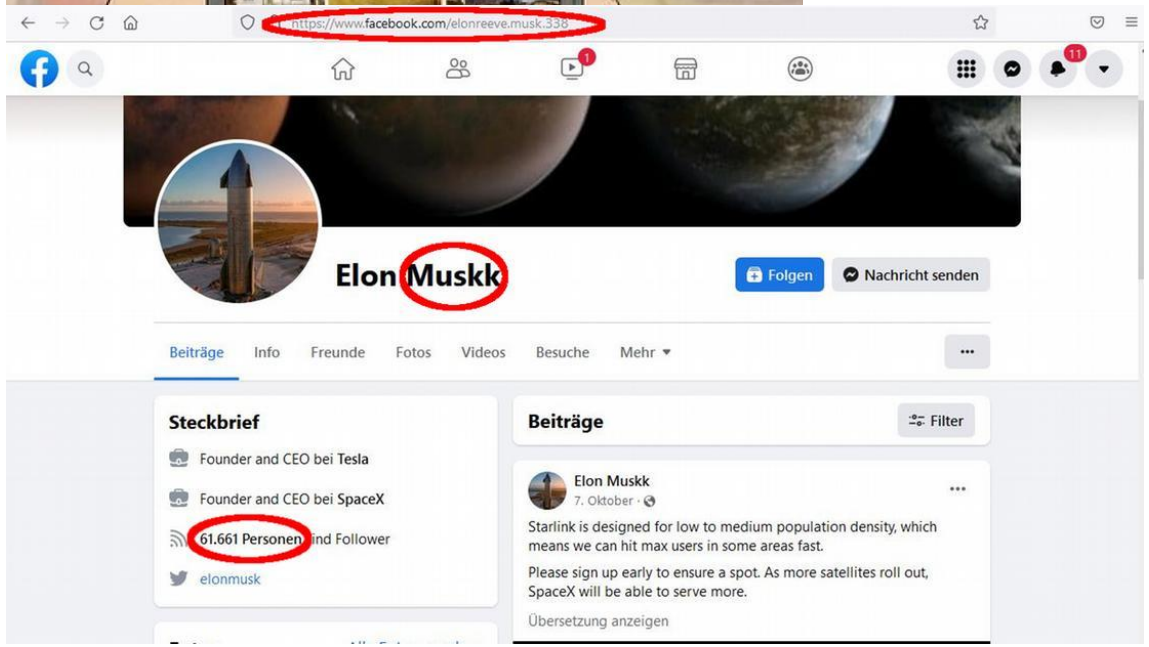
Gokturk Altinboga
@GokturkAltinbo1

Too many clicks spoil the browse.

Follow

Nasim Akgun
@AkgunNasim

The hardest work is to do nothing.



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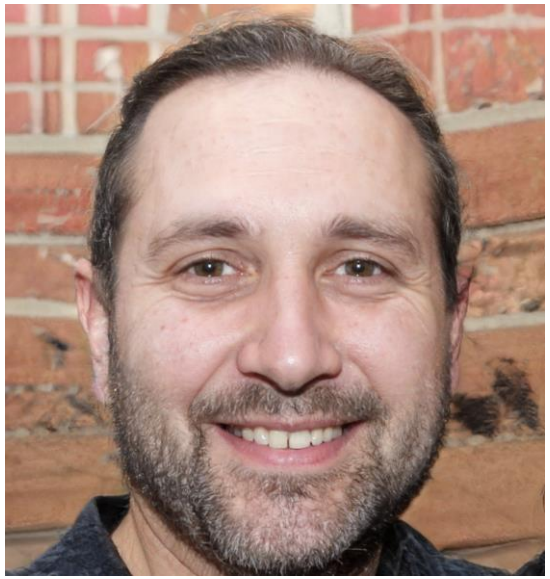
Deepfake

- Fake images and videos are not new thing. With invention of photography int he 19th century people manipulated with images.
- However, Deepfakes are the most prominent type of ‘synthetic media’ meaning images, audio, video content that is generated by Artificial Intelligence (AI).
- Deepfakes are, in their most common form, videos where one person's face has been convincingly replaced by a computer-generated face.
- Let’s watch video with concrete sample:
- https://www.youtube.com/watch?v=Yb1GCjmw8_8&t=53s (start at 0:54 second until 3:10 second).
- Being able to swap faces in videos or create new voice clips has a lot of possibilities but also can be used to create fake news, misleading, counterfeit videos.



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Activity 4:

How social media supports searching and selecting of health information online

- DeepFake apps

Lecture 3.

What can we do to recognize fake from real?

- To be aware of the dangers of deepfakes, synthetic media;
- While browsing on social media platforms we should be aware that some of the platforms already have deepfake policies that treat deepfakes like any other content that is misleading or could lead to people getting hurt.
- For instance, Instagram's and Facebook's policy is to remove 'manipulated media';
- Different antivirus for deepfakes or deepfake recognision programmes.

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Lecture 3.

Clickbait

Image YOU are in the big crowed place like supermarket and suddently you hear someone yelling or screaming. What do you do? Do you look? Do you go towards that sound and make sure everything is ok, etc.?

- **Clickbait** is the same thing only it is digital and found on Internet and social media.
- It is designed to attract your **attention to make you CLICK/SHARE/LIKE.**
- Clickbait can be text, videos or images.
- Clickbait has attention grabbing headlines:

✓ You won't believe what happens next!

✓ This blow up your mind!

✓ What we found was shocking!

✓ ....and other tricks to grab **your attention and curiousity!**

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Activity 4:

How social media supports searching and selecting of health information online

- Clickbait