The left side of the slide features a light gray background with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance.

THE USE OF SALT COMPOUNDS IN MEDICINE



WHAT ARE SALTS?

SALTS ARE CHEMICAL COMPOUNDS DERIVED FROM HYDROXIDES AND ACIDS. THEY CONSIST OF AN ANION OF AN ACID RESIDUE AND A METAL CATION OR AMMONIUM CATIONS.

Me_mR_n <--- UNIVERSAL PATTERN

ME – THE SYMBOL OF THE METAL WHOSE CATION IS PART OF THE SALT,
R – SYMBOL OF THE ACID RESIDUE WHOSE ANION FORMS A SALT,
N,M – STOICHIOMETRIC INDICES DETERMINED ON THE BASIS OF THE VALENCY OF THE METAL AND THE ACID RESIDUE



SALTS WHERE THEY CAN BE USED?

- BUILDING MATERIALS
- PHARMACY
- MEDICINE
- FOOD INDUSTRY
- CLEANING CHEMICALS



SALTS IN MEDICINE:

AN EXAMPLE OF SALTS USED TO TREAT VARIOUS CONDITIONS IS:

- SODIUM CHLORIDE
- MAGNESIUM CARBONATE
- PIPECURONIUM BROMIDE
- POTASSIUM MANGANATE (VII) (POTASSIUM PERMANGANATE)
- SILVER NITRATE (V)
- SALBUTAMOL SULPHATE (VI)
- IRON(II) FUMARATE OR IRON(II) SULPHATE



ANEMIA:

ANEMIA IS A CONDITION WHERE THE TOTAL MASS OF RED BLOOD CELLS OR THEIR ABILITY TO CARRY OXYGEN IS INSUFFICIENT TO ENSURE PROPER OXYGENATION OF TISSUES AND ORGANS. HEMOGLOBIN (HB) CONCENTRATION DETERMINES THE BLOOD'S EFFECTIVE ABILITY TO TRANSPORT GASES AND IS THE MOST RELIABLE INDICATOR OF ANEMIA AMONG RED BLOOD CELL PARAMETERS.

Anemia can be diagnosed without a blood test. It is enough to see the color of our gums and the inside of the lower eyelid.



SOME EXAMPLES OF ORAL PREPARATIONS CONTAINING IRON SALTS

- TARDYFERON
- SORBIFER DURULES
- HEMOFER PROLONGATUM
- FERRUM LEK (SYRUP OR CHEWABLE TABLETS)
- FEROPLEX
- ACTIFEROL FE
- ASCOFER



PARENTERAL IRON COMPOUNDS

- IRON ISOMALTOSIDE 1000 III (DIAFER, MONOVER),
- COMPLEX OF IRON III HYDROXIDE AND POLYMALTOSE (COSMOFER),
- COMPLEX OF IRON III HYDROXIDE AND CARBOXYMALTOSE (FERINJECT),
- COMPLEX OF IRON III HYDROXIDE AND SUCROSE (VENOFER).



IRON SUPPLEMENTS

- IRON(II) FUMARATE (PHARMOVIT, ORGANIC IRON)
- IRON (II) GLUCONATE (FLORADIX TONIC)
- IRON (II) DIGLYCINATE (SZELAZO+SR, CHELA-FERR FORTE, BIOFER)
- IRON (III) PYROPHOSPHATE - SIDERAL



IRON ANALYSIS

CONCLUSIONS THAT I WOULD LIKE TO PASS ON TO PEOPLE STRUGGLING WITH ANEMIA:

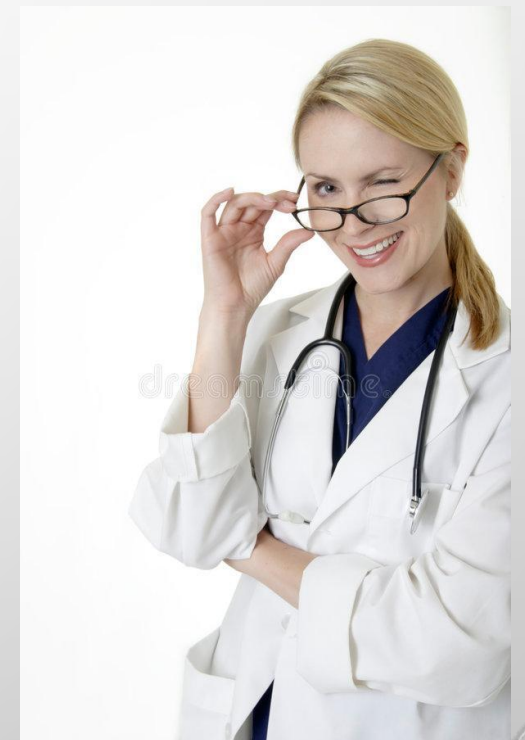
- DO NOT TAKE PREPARATIONS WITHOUT CONSULTING A DOCTOR, **"DO NOTHING ON YOUR OWN"**
- BE SURE TO PERFORM DIAGNOSTIC TESTS (PREFERABLY IN CONSULTATION WITH A DOCTOR), BLOOD COUNT, AND IF SOMETHING WORRIES US OR WE WANT TO BE SURE OF OUR RESULTS, THE DIAGNOSTICS SHOULD BE EXTENDED BY:

- SERUM IRON CONCENTRATION
- FERRITIN (SUCH AN IRON STORE),
- TRANSFERRINS (BASIC IRON TRANSPORTER)
- AND TOTAL AND LATENT IRON BINDING CAPACITY (TIBC, UIBC,



WHAT IS WORTH PAYING ATTENTION TO

- REMEMBER TO CHECK THE LEVEL OF IRON IN THE BLOOD AS PRESCRIBED BY YOUR DOCTOR WHEN TAKING IRON-CONTAINING PREPARATIONS BECAUSE: EXCESS IRON IS MORE HARMFUL THAN ITS DEFICIENCY
- AVOID COMBINING IRON WITH DIETARY FIBER, COFFEE AND TEA, EGGS, DAIRY PRODUCTS, LEGUMES, HIGH-FAT PRODUCTS, CALCIUM, MAGNESIUM, ZINC, MANGANESE AND PHOSPHATE PREPARATIONS (E.G. THOSE FROM COLA AND PEPSI)
- WE DO NOT GIVE UP THESE PRODUCTS, WE ONLY TAKE QUITE LONG BREAKS BETWEEN TAKING IRON.
- PREPARATIONS WITH IRON ARE BEST TAKEN ON AN EMPTY STOMACH OR MINIMUM 30-60 MINUTES BEFORE A MEAL



REFLECTION

I LEARNED A LOT ABOUT IRON SALTS. NOW I KNOW WHAT IRON CONTENT IS IN A GIVEN DRUG AND I FOUND OUT THAT IRON DRUGS ARE NOT ONLY AVAILABLE AS TABLETS.

I HOPE THAT MY PROJECT WILL HELP SOMEONE AND FIND OUT WHY THEY ARE TIRED ALL THE TIME OR OTHER AILMENTS.



THANKS FOR YOUR ATTENTION!



THANK YOU FOR YOUR ATTENTION
ANY QUESTIONS SEARCH IN GOOGLE

BIBLIOGRAPHY

• IKULAWIK J., KULAWIK T., LITWIN M., CHEMIA NOWEJ ERY, PODRĘCZNIK DO CHEMII DLA KLASY ÓSMEJ SZKOŁY PODSTAWOWEJ

• [2 HTTPS://WWW.MEDONET.PL/ZDROWIE.CHLOREK-AMONU---WLACSIWOSCI--ZASTOSOWANIE-W-LECZNICTWIE.ARTYKUL.1728401.HTML](https://www.medonet.pl/zdrowie/chlorek-amonu---wlasciwosci--zastosowanie-w-lecznictwie.artykul.1728401.html)

• 3 LITWIŃCZUK A., LITWIŃCZUK Z., BARLOWSKA J., FLOREK M., SUROWCE ZWIERZĘCE, OCENA I WYKORZYSTANIE

• 4 [HTTPS://WWW.MP.PL/PACJENT/LEKI/SUBST.HTML?ID=661A](https://www.mp.pl/pacjent/leki/subst.html?id=661A)

• 5 [HTTPS://FILES.SUPPLE.PL/UPLOADS/LEAFLET/918/ULOTKA-14850-20160610000000-80_S-20160624000450.PDF](https://files.supple.pl/uploads/leaflet/918/ULOTKA-14850-20160610000000-80_S-20160624000450.PDF)

• 6 [HTTPS://WWW.DOZ.PL/LEKI/W102-AZOTAN_SREBRA](https://www.doz.pl/leki/w102-azotan_srebro)

• 7 [HTTPS://PL.GSK.COM/MEDIA/7132/VENTOLIN_ROZTWOR_DO_NEBULIZACJI_CHPL_MAHTRANSFER-09_01_2019.PDF](https://pl.gsk.com/media/7132/VENTOLIN_ROZTWOR_DO_NEBULIZACJI_CHPL_MAHTRANSFER-09_01_2019.PDF)

• 20 [HTTPS://WWW.MP.PL/PACJENT/LEKI/SUBST.HTML?ID=858](https://www.mp.pl/pacjent/leki/subst.html?id=858)

• 21 [HTTPS://WWW.MP.PL/PACJENT/LEKI/LEK/96304,SIDERAL-KAPSULKI](https://www.mp.pl/pacjent/leki/lek/96304,Sideral-Kapsulki)

• 22 [HTTPS://WWW.TERMEDIA.PL/NIEDOKRWISTOSC-Z-NIEDOBORU-ZELAZA-POSTEPOWANIE-W-PRAKTYCE-LEKARZA-RODZINNEGO.98.36126.1.0.HTML](https://www.termedia.pl/Niedokrwistosc-z-niedoboru-zelaza-postepowanie-w-praktyce-lekarza-rodzinnego.98.36126.1.0.html)

• 23 MONIKA CHEŁSTOWSKA, KRZYSZTOF WARZOCHA, PRACA PRZEGLĄDOWA VIA MEDICA, ONKOLOGIA W PRAKTYCE KLINICZNEJ TOM 2, NR 3, 105–116

19 <https://rejestrwymedyczne.ezdrowie.gov.pl/api/rpl/medicinal-products/2416/leaflet>

20 <https://www.mp.pl/pacjent/leki/subst.html?id=858>

21 <https://www.mp.pl/pacjent/leki/lek/96304,Sideral-kapsulki>

22 <https://www.termedia.pl/Niedokrwistosc-z-niedoboru-zelaza-postepowanie-w-praktyce-lekarza-rodzinnego.98.36126.1.0.html>

23 Monika Chelstowska, Krzysztof Warzocha, praca przeglądowa Via Medica, Onkologia w Praktyce Klinicznej Tom 2, nr 3, 105–116

• 8 [HTTPS://REJESTRYMEDYCZNE.EZDROWIE.GOV.PL/API/RPL/MEDICINAL-PRODUCTS/766/LEAFLET](https://rejestrwymedyczne.ezdrowie.gov.pl/api/rpl/medicinal-products/766/leaflet)

• 9 [HTTPS://WWW.MP.PL/PACJENT/LEKI/LEK/74712,ACTIFEROL-FE-PROSZEK](https://www.mp.pl/pacjent/leki/lek/74712,ACTIFEROL-FE-PROSZEK)

• 10 ULOTKA DOŁĄCZONA DO OPAKOWANIA: INFORMACJA DLA PACJENTA FEROPLEX, 40 MG/15 ML, ROZTWÓR DOUSTNY FERRI PROTEINATOSUCCINAS

• 11 [HTTPS://REJESTRYMEDYCZNE.EZDROWIE.GOV.PL/API/RPL/MEDICINAL-PRODUCTS/11201/LEAFLET](https://rejestrwymedyczne.ezdrowie.gov.pl/api/rpl/medicinal-products/11201/leaflet)

• 12 [HTTPS://REJESTRYMEDYCZNE.EZDROWIE.GOV.PL/API/RPL/MEDICINAL-PRODUCTS/2365/LEAFLET](https://rejestrwymedyczne.ezdrowie.gov.pl/api/rpl/medicinal-products/2365/leaflet)

• 13 [HTTPS://REJESTRYMEDYCZNE.EZDROWIE.GOV.PL/API/RPL/MEDICINAL-PRODUCTS/24679/LEAFLET](https://rejestrwymedyczne.ezdrowie.gov.pl/api/rpl/medicinal-products/24679/leaflet)

• 14 [HTTPS://REJESTRYMEDYCZNE.EZDROWIE.GOV.PL/API/RPL/MEDICINAL-PRODUCTS/24699/LEAFLET](https://rejestrwymedyczne.ezdrowie.gov.pl/api/rpl/medicinal-products/24699/leaflet)

• 15 ULOTKA DLA PACJENTA IA FER, 50 MG FE3+/ML, ROZTWÓR DO WSTRZYKIWAŃ

• 16 [HTTPS://REJESTRYMEDYCZNE.EZDROWIE.GOV.PL/API/RPL/MEDICINAL-PRODUCTS/12340/LEAFLET](https://rejestrwymedyczne.ezdrowie.gov.pl/api/rpl/medicinal-products/12340/leaflet)

• 18 [HTTPS://REJESTRYMEDYCZNE.EZDROWIE.GOV.PL/API/RPL/MEDICINAL-PRODUCTS/22025/LEAFLET](https://rejestrwymedyczne.ezdrowie.gov.pl/api/rpl/medicinal-products/22025/leaflet)