



REDUCING UNNECESSARY MEDICAL TESTS

Overuse of medical tests refers to performing tests that are unnecessary for patients. This can create risks for patients, such as overdiagnosis, unnecessary treatments, extra costs, as well as significant energy consumption and pollution. It is therefore important to establish clear medical recommendations and actively involve patients in decisions regarding their care.



What do we mean by medical tests?

Diagnostic imaging (like X-rays, MRI scans) and blood tests.

Some examples

Comprehensive and regular health check-ups for asymptomatic patients provide **no benefit**.¹

Lipid tests, prostate-specific antigen (PSA) tests, and vitamin D tests are **only useful in specific cases**.



Spinal imaging is unnecessary for lower back pain lasting less than six weeks without any warning signs.¹



A knee MRI is equivalent to driving approximately 80-150 km in a gasoline-powered car and emits around 22 kg of CO₂ equivalent (CO₂eq).



A stress echocardiography produces around 1-2 kg of CO₂eq, whereas a cardiac MRI produces 100 to 200 times more!

About

30%

of medical tests are unnecessary because they do not alter patient management.²

Over

50%

of tests performed in emergency departments are unnecessary.³

About

40%

of knee MRIs are unnecessary or of little clinical value.⁴

BENEFITS FOR THE PLANET

- ➔ Reduced energy consumption
- ➔ Less medical waste
- ➔ Lower emissions from patient transportation and lab test logistics
- ➔ Decreased water usage (for cooling systems and cleaning)

BENEFITS FOR HEALTH

- ➔ Reduced overdiagnosis of benign or insignificant conditions
- ➔ Fewer unnecessary treatments
- ➔ Less unnecessary radiation exposure
- ➔ Lower stress and emotional burden
- ➔ Fewer undesirable side effects¹

THE SUSTAINABLE PRESCRIPTION



Encourage a **discussion between doctor and patient** before prescribing a test to determine whether the result will impact medical management.

Always weigh **the risk-benefit balance** before ordering a test.

Refer to the **Top 5 list of generally unnecessary medical tests** for each specialty at [Smartermedicine.ch](https://www.smartermedicine.ch)

When should we address the issue of unnecessary medical tests?

Before prescribing any test, consider whether the result will change patient management.

* To align with the Paris Agreement, the annual environmental impact per Swiss citizen should not exceed 1-2 tons of CO₂eq. Currently, in Switzerland, the average is around 12-16 tons of CO₂eq per person per year.⁵



REFERENCES

1. Basel SG für AIM (SGAIM) 4002. Smarter medicine - Against Overmedicalization and Inappropriate Care. 2024 [cited February 17, 2024]. <https://www.smartermedicine.ch/fr/page-daccueil>

2. Prescott B. Unnecessary Testing? Harvard Medical School. November 18, 2013. [Accessed February 17, 2024]. Available at: <https://hms.harvard.edu/news/unnecessary-testing>

3. Bertrand J, Fehlmann C, Groscurin O, Sarasin F, Kherad O. Inappropriateness of Repeated Laboratory and Radiological Tests for Transferred Emergency Department Patients. J Clin Med. August 29, 2019;8(9):1342.

4. Solivetti FM, Guerrisi A, Salducca N, et al. Appropriateness of knee MRI prescriptions: clinical, economic, and technical issues. Radiol Med. April 2016;121(4):315-22.

5. Swiss federal office for environment OFEV. Paris agreements. Swiss confederation ; 2023 June 23, (consulted 1 April 2024) <https://www.bafu.admin.ch/bafu/fr/home/themes/climat/info-specialistes/climat-affaires-internationales/Laccord-de-paris-sur-le-climat.html>