

Tests, treatments and procedures at risk of inappropriateness in Italy
that Health Professionals and Patients should talk about.

Five Green Recommendations from the International Society of Doctors for the Environment – ISDE Italian section

1	<p>Air: do not consume fuels of "fossil" origin (coal, oil, gas). Whenever possible, use renewable energy (solar, photovoltaic, wind, geothermal, energy-saving buildings) and reduce the use of private vehicles in the city by encouraging the use of: bicycles, public transport, shared private vehicles, pedestrian mobility. Limit travel by plane as much as possible by favoring the use of the train, not necessarily at High Speed. Try to oppose against the fashion of cruise tourism.</p>
	<p>Air pollution is the basis of many respiratory (bronchial asthma, COPD) cardio-circulatory (heart attack, thrombosis, stroke) and neoplastic (lung cancer) diseases. The main causes of air pollution are industrial activity, domestic heating and unsustainable ways of mobility. The doctor must direct the patient towards healthier lifestyles: physical activity (less use of cars and mechanical means of transport such as lifts, etc.) and smoking cessation. Citizens must also favor the use of "clean" energies that improve air quality and lead a life inspired by sobriety to reduce the impact on climate change.</p>
2	<p>Water: Do not drink bottled water, but whenever possible favor tap water, which is safe and controlled.</p> <p>Bottled mineral water might have compounds not suitable for everybody or for all stages of life and should be used for particular needs or for the specific treatment of some pathologies. The use of bottled mineral waters represents an unjustified cost and an enormous source of pollution due to plastic bottles and transport. Tap water legally defined as "meant for human use or drinkable" has the physical and chemical characteristics defined by WHO and by European and national laws. Drinkable water has a fundamental role in giving mineral nutrients: many studies have demonstrated that the harder waters are the less people are exposed to the risk of cardiovascular and kidney disease. The use of mineral waters is not useful for the primary prevention of kidney stones. Water is a precious common good and must not be wasted: both leaks along the aqueduct pipes and all domestic waste must be eliminated.</p>
3	<p>Biodiversity. Antibiotics: only when indispensables! For common respiratory infections (colds, rhinosinusitis, cough/bronchitis, flu syndromes) and bacteria in the urine without symptoms, do not prescribe antibiotics, because generally they are useless, and expose patient and family to risks, both present and future. The rule is to avoid them, leaving to doctors' autonomy the assessment of any exception.</p> <p>Microrganisms are always important, and in particular in the early years of development. Few germs are pathogenic: most of them make us live and grow in health. The above infections are mainly from viruses, against which antibiotics (AB) are useless. Even when caused by bacteria, the prognosis is usually good and AB are not needed. Doctors must discourage self-administration, and kindly resist to pressures to prescribe them, showing the results of the scientific literature. A possible alternative is the deferred prescription, to be limited to patients trained to use it only in case of exacerbation. Once an AB cycle has started, if there is a clear improvement, patients should talk to their doctors, who may decide whether to anticipate the interruption. The improper use of antibiotics, as well as ineffective and with long-term adverse effects, causes antibiotic resistance, able to persist and be transmitted to family members, with serious risks in fragile individuals and during pregnancy. In Europe, Italy has the highest consumption of overall antimicrobials (humans + animals) in mg per biomass. 30% of consumption is for human use, on which the doctor has a direct impact, 70% for animal husbandry, on intensive farms. Doctors should advise on the reduction of meat consumption, in the interest of health and the ecosystem. In any case meat must come from animals bred in open air. It is demonstrated that intensive breeding of animals is really responsible of so called "spillover" that is responsible of many pandemic diseases like Ebola virus, SARS, COVID-19.</p>
4	<p>Ionizing Radiation: X-rays should not be carried out unless a specific clinical indication.</p> <p>Radiological examinations are a valuable diagnostic aid but the possible damage they can cause to the patient, future generations and the environment must be taken into account. In particular, given the mutagenicity and carcinogenicity of ionizing radiation, radiographs and CT scans of any body area should not be requested without a precise clinical indication: for example, the routine execution of preoperative chest radiography does not appear appropriate. The execution of inappropriate diagnostic tests can lead to false positive results, as well as the identification of cases that would never have occurred (overdiagnosis), which require additional diagnostic tests, including invasive ones, and often unnecessary and potentially harmful therapeutic interventions. It therefore appears necessary to re-dimension the expectations placed on technology, also through the direct involvement of citizens, patients and the Associations that represent them. In any case, the doctor must always point out to his patient the toxicity of nuclear radiations (diagnostic tests of the scintigraphic type) and of electromagnetic ones (cell phones). Citizens must also be aware of the risks, for the environment and for their health, that are associated with the diffusion of 5G technology.</p>
5	<p>Nutrition: Limit the foods of animal origin and industrial production. Give preference to fruits, vegetables, whole cereals and legumes, better if fresh, from your local area, and cultivated according to current season and in a biological way.</p> <p>The diet must be healthy, varied, balanced and moderate following the general guidelines of the so-called "Food Pyramid", which involves less use of resources and less pollution ("Ecological footprint"). A vegetarian change would not only reduce overall mortality by 6-10%, but would be able to act on climate change with a 25% decrease in CO2. Limiting the consumption of ultra-processed industrial foods is also a healthy and environmentally friendly choice. The citizen, as a responsible consumer, must be aware of the fact that the agro-food production chain, in all its phases, from production to distribution to consumption, is responsible for important consequences also at a social level (from food sophistication to illegal hiring, from intensive monocultures to drought in large areas of the planet). Limiting the consumption of meat, for example, represents both an advantage in terms of health for humans beings and an advantage for the environment (about 15,000 liters of water are consumed to produce one kg of beef).</p>

How this list was created

A restricted working group, appointed by the Executive Committee of ISDE-Italian, drafted a proposal for 9 at risk of inappropriate practices: into account the special nature and purpose of institutional ISDE, some have turned to the role of the doctor, other for citizens. After extensive discussion were selected 5 Practices at risk of appropriateness, which, even after consultation and suggestions of the responsible of the project "Doing more does not mean do better", have been definitively approved by the National Executive Board of Italy section of ISDE. Recommendations 3 and 5 were revised in October 2018. The recommendations were all revised in April 2021. Recommendations 2 and 5 were revised in February 2024 too.

Sources

1	<ol style="list-style-type: none"> 1. Tamburlini G, von Ehrenstein OS, Bertolini R: La salute dei bambini e l'ambiente: una rassegna delle conoscenze, Ed. italiana, ARPAT, ISDE, 2003. 2. Cori L: Se fossi una pecora verrei abbattuta, Scienza Express edizioni Milano, 2011. 3. Ridolfi R: Progetto ambiente e tumori, Edizioni AIOM Milano, 2011. 4. Haines A, Dora C: How the low carbon economy can improve health. <i>BMJ</i> 2012; 344: 344:e1018 doi: 10.1136/bmj.e1018. 5. Di Ciaula A., Murgia V., Petronio M.G. Inquinamento ambientale e salute, Aboca Edizioni, 2019
2	<ol style="list-style-type: none"> 1. United Nations Environment Programme (2021). From Pollution to Solution: A global assessment of marine litter and plastic pollution. Nairobi. 2. Muhib MI, Uddin MK, Rahman MM, Malafaia G. Occurrence of microplastics in tap and bottled water, and food packaging: A narrative review on current knowledge. <i>Sci Total Environ.</i> 2023 Mar 20;865:161274. doi: 10.1016/j.scitotenv.2022.161274. Epub 2022 Dec 29. PMID: 36587673. 3. Aggazzotto G, Agodi A, Carreri V, Conversano M, De Donno A, Fallico R, Faggioli A, Ferrante M, Francia F, Monarca S, Petronio MG, Sciacca S, Signorelli C, Vinceti M. (A cura del gruppo di lavoro Ambiente e salute della Società Italiana di Igiene). Gestione delle risorse idriche in Italia, Società Editrice Universo, Roma, 2013. 4. Bottled water for all, all the time? Doctors should follow some US cities in discouraging bottled water consumption. Douglas Kamerow. <i>BMJ</i> 2016;352:i1214 doi: 10.1136/bmj.i1214 Published 29 February 2016. 5. Ciao Fossili, Luca Lombroso, Edizioni Arte Stampa 2016
3	<ol style="list-style-type: none"> 6. ECDC/EFSA/EMA second joint report on the integrated analysis of the consumption of antimicrobial agents and occurrence of antimicrobial resistance in bacteria from humans and food-producing animals. <i>EFSA J</i> 2017;15(7):4872 - https://bit.ly/2vLISmL 7. Butler CC. Variation in antibiotic prescribing and its impact on recovery in patients with acute cough in primary care in 12 countries. <i>BMJ</i> 2009; 338:b2242. 8. Uranga A, et al. Duration of Antibiotic Treatment in Community-Acquired Pneumonia. <i>JAMA Intern Med</i> 2016;176:1257-65. 9. Bezakova N, et al. Recurrence up to 3.5 years after antibiotic treatment of acute otitis media in very young Dutch children. <i>BMJ</i> 2009;339:b2525. 10. Llewelyn MJ, et al. The antibiotic course has had its day. <i>BMJ</i> 2017;358:j3418.
4	<ol style="list-style-type: none"> 1.. Dimonte M. L'abuso di esami radiologici: metafora della società post-moderna, dei nuovi media e dei consumi. <i>Recenti Progressi in Medicina</i>, 99, 3, 2008 2.. Cristofaro M, Busi Rizzi E, Schininà V et al: Appropriateness: analysis of outpatient radiology requests. <i>Radiol Med</i> 2012;117:322-32. 3. Chioloroa A, et al: How to prevent overdiagnosis. <i>Swiss Med Wkly.</i> 2015;145: w14060. 4. Rao TM, Levin DC: The Choosing Wisely Initiative of the American Board of Internal Medicine Foundation: What Will Its Impact Be on Radiology Practice? <i>AJR</i> 2014; 202:358-361. 5..Di Ciaula A., I campi elettromagnetici in: Di Ciaula A., Murgia V., Petronio M.G. Inquinamento ambientale e salute, Aboca Edizioni, 2019 6.Porcile G., Radiazioni ionizzanti a scopo diagnostico: luci e ombre, <i>Decidere in Medicina</i> n. 2, pag 11-13, 2019
5	<ol style="list-style-type: none"> 1.McDermott C: Essential fruit, vegetables, and lists for health <i>BMJ</i> 2014; 349 doi: https://doi.org/10.1136/bmj.g4906 (Published 31 July 2014) 2. Shulze MB et al.: Food based dietary patterns and chronic disease prevention. <i>BMJ</i> 2018; 361: k2396.doi: 10.1136/bmj.k2396 3. Position Paper Pesticidi, Pratiche Agricole, Ambiente e Salute http://www.isde.it/unaltra-agricoltura-e-possibile-il-position-paper-di-isde-italia/ 4. Ciot M., Consumare carne. Problematiche ambientali, sociali, salutistiche, Editore ICU, 2016 5. Bevilacqua P., Il cibo e la terra. Agricoltura, ambiente e salute negli scenari del nuovo millennio, Donzelli Editore 2018 6. Gentilini P., Pesticidi: pratiche agricole, ambiente e salute in: Di Ciaula A., Murgia V., Petronio M.G. Inquinamento ambientale e salute, Aboca Edizioni, 2019 7. CREA. Linee guida per una sana alimentazione, revisione 2018. https://www.crea.gov.it/web/alimenti-e-nutrizione/-/linee-guida-per-una-sana-alimentazione-2018

Slow Medicine ETS, an Italian Third Sector organization of health professionals, patients and citizens promoting a Measured, Respectful and Equitable Medicine, launched the campaign "**Doing more does not mean doing better- Choosing Wisely Italy**" in Italy at the end of 2012, similar to Choosing Wisely in the USA. The campaign aims to help physicians, other health professionals, patients and citizens engage in conversations about tests, treatments and procedures at risk of inappropriateness in Italy, for informed and shared choices. The campaign is part of the Choosing Wisely International movement. Partners of the campaign are the National Federation of Medical Doctors' and Dentists' Orders (FNOMCeO), that of Registered Nurses' Orders (FNOPI), the Academy of Nursing Sciences (ASI), National Union of Radiologists (SNR), Tuscany regional health agency, PartecipaSalute, Altroconsumo, the Federation for Social Services and Healthcare of Aut. Prov. of Bolzano, Zadig.

www.choosingwiselyitaly.org; www.slowmedicine.it

ISDE (International Society of Doctors for the Environment) is an international association: its members, not only medical doctors, intend to defend the environment and protect the health, in the belief that environment-health is inseparable. The main activities of ISDE include: information, training, health education, lobbying towards decision makers, advocacy of citizens' requests, policy directives and Good Practices. The Italian section, ISDE-Italy, has national headquarters in Arezzo. For more details: www.isde.org; www.isde.it