Supplementary Data. Charted data extracted from the final sample comprised 389 peer-reviewed articles included to the analysis. The Supplementary Data S1 contains the involved studies' characteristics, abstracts of important results, assessment of exposure to digital technologies as well as mapping of health outcomes by disease category according to the ICD-11 classification.

Supplementary Table 1. Preventive measures – information Box.

Lifestyle changes. Firstly, it involves introducing lifestyle changes involving (self-)control over technology use[139*]. The preventive recommendations include limitations of total screen time length[29,33,39,46,31], attention to content and circadian rhythm considerations. For instance, for prevention of eye diseases it is recommended for up to 5 hours daily[18]. Content wise recommendations include limiting social media use[115,28,33] but also high-quality screen viewing, which include educational content and co-viewing with parents and other caregivers[53]. Strong parent-child relationships[76] and parents' engagement[77] in preventive measures are repeated and relates to monitoring screen time[24, 39], ensuring the age-appropriate and non-violent content, modelling healthy device habits[144], encouraging and promoting physical activities[46,29,139]. Screen free time slots such as meal times[169] and creating screen-free zones and routines[163] are also suggested. Circadian rhythm prevention means limiting exposure to blue light around bedtime[37].
Health education. Secondly, health education, at both individual and population-based levels should be considered[78]. The latter includes educational programmes and campaigns[73] to raise awareness about the digital technologies' hazardous effects[32,104] but also including such topics like ocular hygiene[32], sleep hygiene[35], digital literacy classes[29], increase social media literacy[28] and parents' education[43]. Public health interventions should target multiple behaviours, particularly in adolescents, to mitigate long-term health risks caused by digital technology use[108].
Work hygiene and ergonomic changes. Thirdly, preventive measures also include optimizing the work environment, work hygiene and ergonomic changes[11]. Adjustments of work and living environment like improving indoor air quality by increasing humidity, decreasing the intensity of air conditioning may prolong safe screen time[18]. The same applies to ergonomic interventions, such as avoiding screen reflections[18], positioning the screen lower than the eyes[18], adjusting screen brightness for digital devices[104] or using anti-glare filters[104,18]. Adequate viewing distance, use blue light filtering glasses[102], use of larger screen size font, switching to e-paper or widescreen images displayed within high-definition television are advised, as well as appropriate refractive correction[18]. Next, visual hygiene practices are recommended like frequent and complete blinking, avoiding poor screen resolution and glare[150], increasing contrast of digital device[59] or frequent breaks from screen and the 20-20-20 rule, meaning a screen break every 20 minutes by looking at an object 20 feet (6 m) away for 20 seconds[138]. Ergonomic position while using computers and physical therapy can greatly alleviate already symptoms of diseases like text neck[225]. Furthermore, podcasts and audiobooks should be preferred instead of long hours spent in front of a screen[201].
Medical and dietary preventive interventions. Prevention of diseases caused by exposure to digital technologies may also involve application of certain pharmaceutical or dietary products like supplementation of omega-3 fatty acids and berry extracts[11,18], artificial tears, secretagogues, warm compress, humidity goggles[11,60]as a prevention of eye adverse health effects. Digital detox programmes, reducing or abstaining from digital media use, have been developed as a way to prevent certain adverse health effects of an excessive use of digital technologies[41].
Regulations and guidelines. Relevant guidelines, issued by professional and international organizations, aim to address prevention of diseases resulting from exposure to digital technologies. Guidelines issued by the American Academy of Paediatrics and the WHO[56] limit daily screen time in adolescents to 2 hours[86]. The American Academy of Pediatrics has recommended limitations of technology usage in youth less than six years of age[172] and no screen time for children under 2 years of age[193]. The European Paediatric Association Union of National Paediatric Societies and Associations warns that social media may play an important role in functional gastrointestinal disorders development. These recommendations addressing screen time length should be complemented by more nuanced guidance e.g. regarding content like regulating social media activity[83]. Both American Academy of Pediatrics and WHO[59] propose family media plan, a comprehensive approach describing the approach and ways of use of digital media by the members of a family[31] and appropriate screen media types and behaviours for each child, placing consistent limits on the duration of screen media use; designating media-free times, including mealtimes, parent−child playtimes, and an hour before bedtime; removing screen media devices from children/adolescents' bedrooms[230].

* - citations numbers refer to the column A of the Supplementary Data S1

Supplementary Table 2. Databases search terms.

Database	Search string
Medline	("screen time" OR "digital technology" OR "digital environment") AND (disorder OR disease OR syndrome OR "problematic use" OR "health problem")
Scopus	TITLE(("screen time" OR "digital technology" OR "digital environment") AND (disorder OR disease OR syndrome OR "problematic use" OR "health problem")) AND PUBYEAR > 2018
APA PsycInfo	("screen time" OR "digital technology" OR "digital environment") AND (disorder OR disease OR syndrome OR "problematic use" OR "health problem")

Using the SCOPUS platform, only titles were searched for all search terms. For Medline, the text word search was prioritized to broaden the coverage for the emerging topic of diseases resulting from exposure to digital technologies.

Supplementary Table 3

RELEVANCE SCREENING FORM ON BASIS OF BIBLIOGRAPHIC DATA (TITLE AND ABSTRACT)				
Authors, title, Year of publication, DOI/PMID, journal and other bibliographic data:				
No	**Question**	**Options**	**Exclusion if**	**Additional notes**
1	What type of source is the result?	Journal Paper (go to question 2)	Result of category "others"	
		Conference Paper (go to question 2)		
		Book Section (go to question 2)		
		Unpublished Work (go to question 2)		
		Commentary (go to question 2)		
		Editorial (go to question 2)		
		Others (e.g. press article)		
2	Is an abstract available?	Yes (go to question 3)	No	
		No		Please use existing links and try to find the abstract using search engines
3	It can be concluded from the title and abstract that the article addresses the diseases resulting from the use of digital technologies.	Yes	No	
		No		

ELIGIBILITY SCREENING FORM ON BASIS OF FULL-TEXT SCREENING				
Authors, title, Year of publication, DOI/PMID, journal and other bibliographic data:				
No	**Question**	**Options**	**Exclusion if**	**Additional notes**
1	Is the full text available?	Yes (go to question 2)	No	via available university libraries, network of friends, addressing the authors
		No		
2	Is the full text in English?	Yes (go to question 3)	No	
		No		
3	Again: What type of source is the result?	Journal Paper (go to question 4)		The aim of this question is to verify type of source in case
		Conference Paper (go to question 4)		
		Commentary	Commentary	
		Editorial	Editorial	
		Others (e.g. press article)	Others (e.g. press article)	
4	The article is focused on human health, it is not an animal model nor in vitro study.	Yes (go to question 5)		
		No	No	
5	The article addresses the diseases/disorders resulting from the use	Yes		
		No	No	

CHARACTERIZATION FORM ON BASIS OF FULL-TEXT ANALYSIS			
Authors, title, Year of publication, DOI/PMID, journal and other bibliographic data:			

No	Question	Options	Additional notes
1	The article comes from which region and country?	Europe	
		N. America	
		Asia	
		S. America	
		Africa	
		Australia & Oceania	
2	The article comes from which domain?	clinical study - cross sectional	
		clinical study - cohort	
		clinical study - other (explain in "additional notes" on the right)	
		review	
3	If clinical setting - sample size	< 100	
		100 – 200	
		200 – 500	
		> 500	
4	If clinical setting - population studied	children	
		adolescents	
		adults	
		general population	
		seniors / aged individuals	
		other or unspecified	
5	Goals of the article		
6	Description of the article content focused on diseases resulting from the use of digital technologies.		
7	Digital technology / digital environment analysed in the article.		
8	Clinical settings addressed (enumerated names, description if values added)		
9	Clinical settings addressed: ICD-11 [diseases groups] / diseases names (as per https://icd.who.int/browse/2024-01/mms/en)		
10	Clinical settings addressed: SNOMED CT name and code (as per https://browser.ihtsdotools.org/?)		
11	Clinical settings addressed, which are NOT mentioned neither ICD-11 nor in SNOMED CT		
12	Important results of an article regarding the diseases resulting from the use of digital technologies, including i) etiopathogenesis of these diseases mentioned in the article and ii) a contribution to defining diseases resulting from the use of digital technologies.		

Supplementary Table 4. Inclusion and exclusion criteria based on the PICOS (population, intervention, comparison, outcome and study design) framework.

	Inclusion	Exclusion
Population	All human populations (no restrictions on age, sex, or location)	Non-human studies (animal models) and in vitro (laboratory) studies
Intervention	Any exposure to digital technologies (e.g., screen time, internet use, mobile device use, social media use, etc.)	Studies not involving a digital technology exposure
Comparison	Not applicable – no specific comparator required (studies with or without comparison groups are eligible)	No exclusion based on comparator
Outcome	Any health-related outcomes, including diagnosed diseases, clinical symptoms, or behavioural effects linked to exposure to digital technology	Studies that do not report relevant health outcomes i.e. no disease, symptom, or behavioural effects related to exposure to digital technology
Study design	Any research focused on human health, including observational studies (cross-sectional, cohort etc.), interventional trials, case reports/series, and relevant review articles Full text available Peer-reviewed	Animal model In vitro study Only abstract available Commentaries Letters, letters to editor Others (e.g. press articles)
Language	English	Non-English full-text
Time frame	Published from 1st January 2019 until 29th June 2024	Published outside the indicated date range

PRISMA 2020 Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	-
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	-
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	-
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	-
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Results: Rows 91-100, Figure 1
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	-
Study characteristics	17	Cite each included study and present its characteristics.	Supplementary Data S1
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	-
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	-
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	-
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	Results: Rows 91-167
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	-
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	-
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	-
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	-
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	Discussion: Rows 173 - 177, 300-304
	23b	Discuss any limitations of the evidence included in the review.	Discussion: Rows 292 - 299
	23c	Discuss any limitations of the review processes used.	Discussion: Rows 292 - 299
	23d	Discuss implications of the results for practice, policy, and future research.	Discussion: Rows 305-310
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Methods: Rows 322-323
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Methods: Rows 322-323
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	-
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	Acknowledgments: Rows 388-391
Competing interests	26	Declare any competing interests of review authors.	Conflicts of Interest: 393-395
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms (A); data extracted from included studies (B); data used for all analyses (C); analytic code; any other materials used in the review.	Ad A and B: Supplementary Material S4; Ad C: Supplementary Data S1