SECURITY OF HEALTH & ENVIRONMENT

Protecting People, Products, and the Planet in an Age of Invisible Risks

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What Is the

Prime Need of Society?

The most urgent requirement for **survival, stability & progress**

→ *Dynamic · Time-Dependent · Ever-Evolving*

SHAPED BY

Population Growth

Health & Environment

Technological

Political & Economic

Knowledge Systems

Needs Change Over Time

Human society evolved across millions of years — so did its prime needs.

PRIMITIVE ERA	AGRARIAN–INDUSTRIAL	MODERN ERA
Basic Survival	**Order & Economy**	**Quality & Sustainability**
• Food, shelter, and physical safety were the only imperatives	• Organization, trade, governance, and security became central	• **Health, well-being**, and **environmental balance** define progress

As society grows more complex, its prime needs grow more complex — and urgent.

The Progressive Arc of Societal Prime Needs

	Six Era	Timelines	Core Philosophy	Needs
01	**Prehistoric Era** *(Palaeolithic, Mesolithic, Neolithic, Bronze Age, Iron Age)*	*~2.5M – 3000 BCE*	Survival → Community → Power	Food, Safety, Agriculture, settlement, Warfare
02	**Ancient Era**	*3000 BCE – 500 CE*	Order · Civilisation · Culture	Governance & Law, Urbanization, Trade
03	**Medieval Era**	*500 – 1500 CE*	Security + Faith + Hierarchy	Religious authority, Crusade, land Ownership
04	**Early Modern Era**	*1500 – 1800 CE*	Knowledge + Innovation	Renaissance, Scientific revolution, Global exploration, printing press
05	**Modern Era**	*1800 – 1970s*	Productivity + Economic Power	Industrial revolution, Nation-states, Capitalism, socialism, Globalization
06	**Contemporary Era**	***1970s – Present***	**Quality of Life + Sustainability**	**Health, Environment,** Technology, Equity

Health & Environment are now the twin core of societal priority

SO WHAT?

Modern risks — lifestyle diseases, pandemics, climate change — have made health security inseparable from environmental security. Societies that decouple these will fail both.

LOGICAL FRAMEWORK

ENVIRONMENT
Drives health outcomes through air, water & ecosystem quality

↓

HEALTH
Determines individual & workforce productivity capacity

↓

PRODUCTIVITY
Fuels economic output, innovation & national competitiveness

↓

SUSTAINABLE GROWTH
The only durable model for long-term civilisational advance

SUPPORTING EVIDENCE

Epidemiological Shift
Rise of chronic & lifestyle diseases (diabetes, cardiovascular disease) now the #1 global burden

Environmental Degradation
Air, water, and soil pollution directly cause 9M+ premature deaths annually — a public health crisis

Global Vulnerabilities
Pandemics (COVID-19) and climate-driven health risks (heat stress, vector-borne disease) are accelerating

Economic Burden
Poor population health reduces labour productivity by 15–20%, increasing national healthcare expenditure

The Outperformance Insight
Nations investing in preventive health + environmental protection consistently outperform peers

Human survival has shifted from “living” to “living sustainably”

Two Pillars of Health Systems

PILLAR 1 • PRIMARY PRIORITY

Preventive Health

- Lifestyle management — nutrition & exercise
- Hygiene, sanitation & vaccination
- Pollution reduction & environmental protection
- Clean air & water access
- Lifestyle awareness programs

IMPACT

Reduces disease burden • Lowers long-term costs • Strengthens workforce productivity

PILLAR 2 • SUPPORT SYSTEM

Diagnostic Health

- Early detection via screenings & tests
- Timely clinical intervention
- Monitoring chronic conditions
- Precision diagnostics & biomarkers
- Coordinated specialist referrals

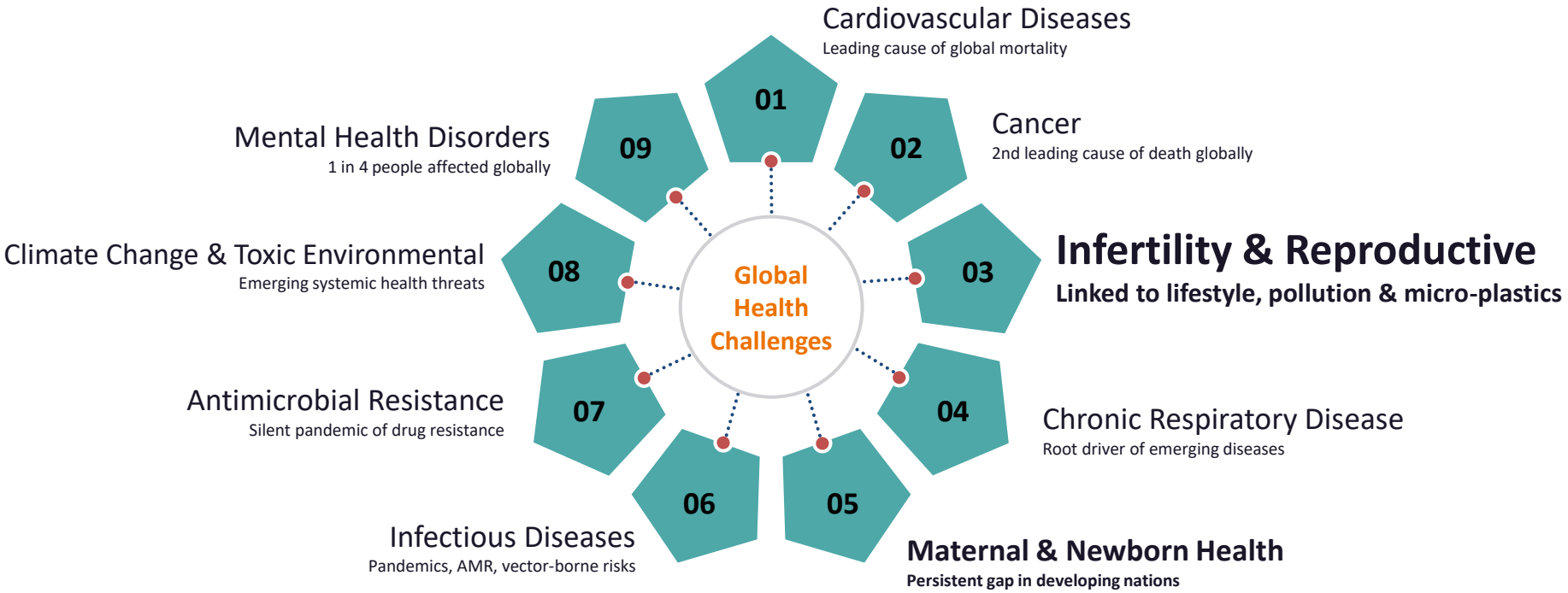
IMPACT

Minimizes severity • Improves treatment outcomes • Enables early intervention

Prevention reduces long-term risk, cost, and societal burden — making it the cornerstone of modern health strategy

Global Health Challenges: A Multi-Dimensional Shift

Core Insight: Health challenges today are driven by intersecting chronic diseases, infections, environmental risks, lifestyle, and system gaps.



Shift from single diseases → interconnected risks requiring integrated, systems-level solutions

Emerging Focus: Infertility & Microplastics Impact

Infertility: A Rising Global Health Challenge

Failure to conceive after 12 months; affects millions globally across both genders

Key Causes:

- Ovulation disorders, endometriosis, and tubal blockages
- Male factors: low sperm count and poor motility
- Lifestyle factors: obesity, smoking, delayed parenthood
- Environmental exposures (Plastics Use, Pollutions etc.)

Why Rising?

- Delayed childbearing
- Lifestyle & metabolic disorders
- Environmental pollutants
- Improved awareness & diagnosis

Microplastics: Emerging Health Risk

Tiny plastic particles found in water, air, food, and human tissues — detected in semen, placenta, and blood.

Health Impact Pathways:

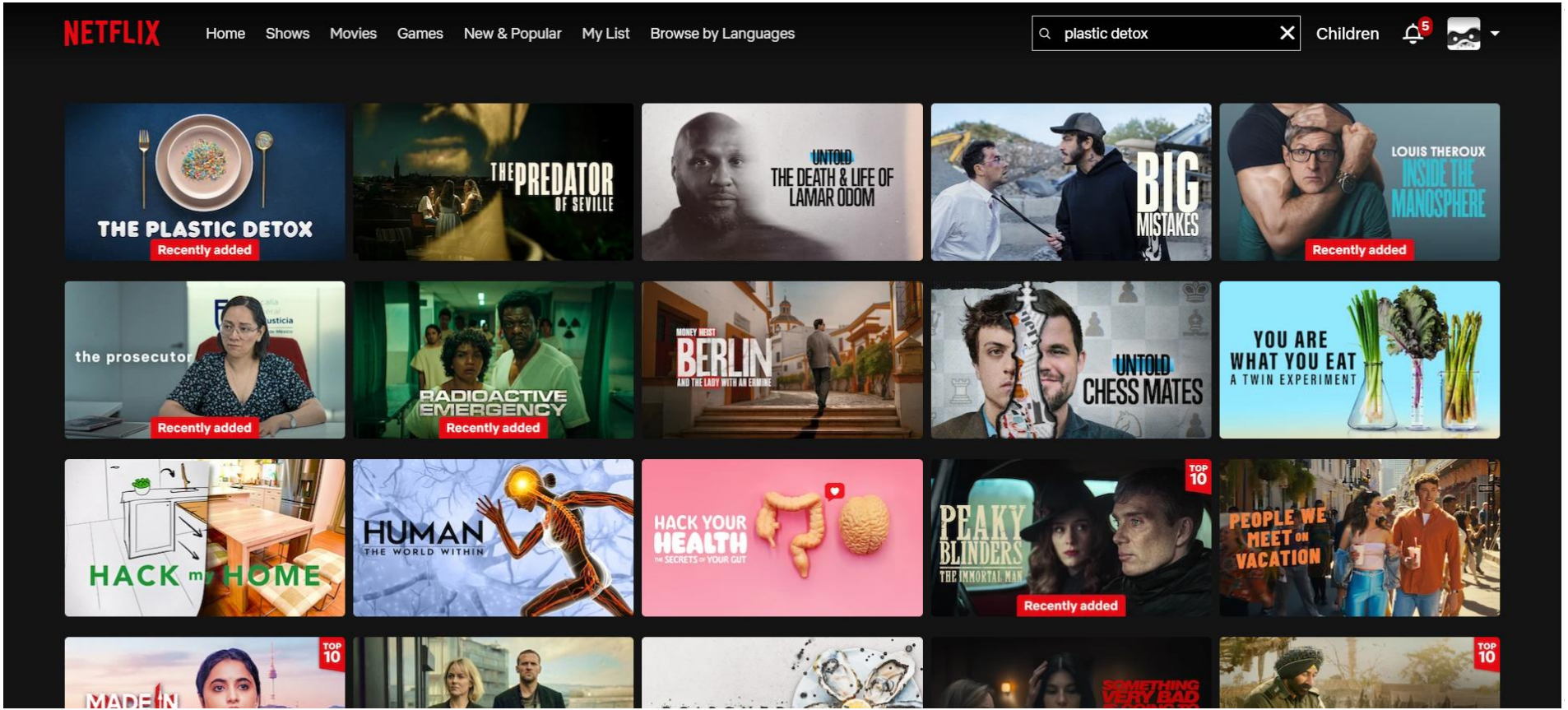
- Cancer Risk: Inflammation, oxidative stress, toxin transport
- Reproductive: Sperm dysfunction, hormonal disruption
- Fertility: Endocrine disruption, gamete damage
- Pregnancy: Placental exposure, preterm risk
- Systems: Digestive, respiratory, cardiovascular, immune

Key Message:

- Evidence growing but evolving — intersection of lifestyle, environment & biology.

Future health risks: lifestyle + environment + biology—infertility & microplastics exposures as key threats.

01- THE DOCUMENTARY: NETFLIX



This documentary moves the conversation on plastic pollution from visible waste to hidden biological exposure pathways

01- THE DOCUMENTARY:

About 'The Plastic Detox' — 2026

NETFLIX

Directed by Louie Psihoyos & Josh Murphy · Released March 2026

Directors:
Louie Psihoyos (The Cove, Racing Extinction) & Josh Murphy

Platform:
Netflix Global — available in 190+ countries

Focus:
Six couples with infertility challenges across Florida, California & Idaho

Duration:
90-day plastic-reduction experiment; feature-length documentary

Lead Scientist:
Dr. Shanna Swan — Environmental & Reproductive Epidemiologist

Key Chemicals:
Phthalates, Bisphenols (BPA/BPS), PFAs, endocrine disruptors

Official Netflix Synopsis

*"Strange symptoms. **Unexplained infertility**. Human extinction? Six couples cut back on plastics while trying to conceive in this absorbing documentary."*

Audience Reaction

- *"I was not prepared to be so enraged and disgusted."*
- *"Everyone needs to watch this. It's a wake-up call."*
- *"Watch at your own risk — this changes everything."*

This documentary moves the conversation on plastic pollution from visible waste to hidden biological exposure pathways

The Key Chemicals of Concern

Phthalates, Bisphenols, and PFAs — found in everyday products

Phthalates

Found in: PVC pipes, flooring, food packaging, cosmetics, fragrances, medical tubing

Health impact: Lower testosterone & oestrogen; linked to reduced sperm quality, preterm birth, neurodevelopmental disorders

Bisphenols (BPA/BPS)

Found in: Canned food linings, plastic bottles, till receipts, dental sealants, baby bottles

Health impact: Mimic oestrogen; disrupt reproductive development; BPA fell to undetectable levels in film couples after 90 days

PFAS ('Forever Chemicals')

Found in: Non-stick cookware, stain-resistant fabrics, food packaging, firefighting foam

Health impact: Persist indefinitely in environment & body; linked to thyroid disruption, immune suppression, certain cancers

Source: Geographical Magazine / NYU Grossman School of Medicine / Netflix Tudum — March 2026

Phthalates, bisphenols, & PFAS are not waste issues- they are systemic health risks embedded in everyday products.

How Plastics Disrupt the Human Endocrine System?

The mechanism linking everyday plastics to long-term health consequences

EXPOSURE Sources	ABSORPTION Routes	DISRUPTION Mechanism	HEALTH Consequences
Food wrap, cosmetics, clothing, bottles, receipts, baby products	Ingestion, skin contact, inhalation of fibres & dust	EDCs mimic / block hormones; interfere with endocrine signalling	Infertility, developmental harm, cancer risk, metabolic disorders

Prof. Leo Trasande (NYU): "These exposures begin before birth and continue throughout life — creating a womb-to-tomb chemical burden."

Real-World Evidence: The 90-Day Plastic Detox Experiment

Dr. Shanna Swan **guided six couples through a structured chemical-reduction protocol**

1 Baseline Assessment

› Urine & blood tests for BPA, phthalates, PFAS.

› Fertility metrics recorded.

2 Plastic Elimination

› Replace plastic food containers, cooking tools, personal care products.
› Switch to glass, stainless, organic.
› Switched from canned foods to fresh or glass-jarred

3 Progress Check

› Mid-point re-testing.
› Diet & environment audited.
› Behaviour changes reinforced.
› Bio-chemical monitoring — measurable BPA reduction

4 Final Outcomes

› Chemical levels fell dramatically.
› BPA undetectable for many. Sperm quality improved.
› Up to 70% reduction in phthalate levels
› Participants reported better energy & hormonal balance

KEY OUTCOMES

✓ **BPA levels fell to undetectable in most participants**

✓ **3 of 6 couples achieved pregnancy post-experiment**

✓ **Measurable sperm count & concentration improvements**

✓ Results will support Dr. Swan's application for a formal government-funded study

When chemical exposure is reduced, human biology responds-fast.

A womb-to-Tomb Chemical Burden:

Plastic-derived chemical exposure affects every stage of the human lifecycle

Pre-Birth
In Utero

- Phthalates & BPA cross placenta;
- microplastics in human placenta;
- hormone disruption in foetal development

Infancy
0–2 years

- Microplastics in breast milk & infant stools;
- exposure via baby bottles & mattresses

Childhood
3–12 years

- Neurodevelopmental effects; behavioural impacts;
- IQ & attention disruption noted in studies

Reproductive
Teens–40s

- Reduced sperm quality & count;
- ovarian disruption; lower fertility;
- increased miscarriage risk

Midlife
40s–60s

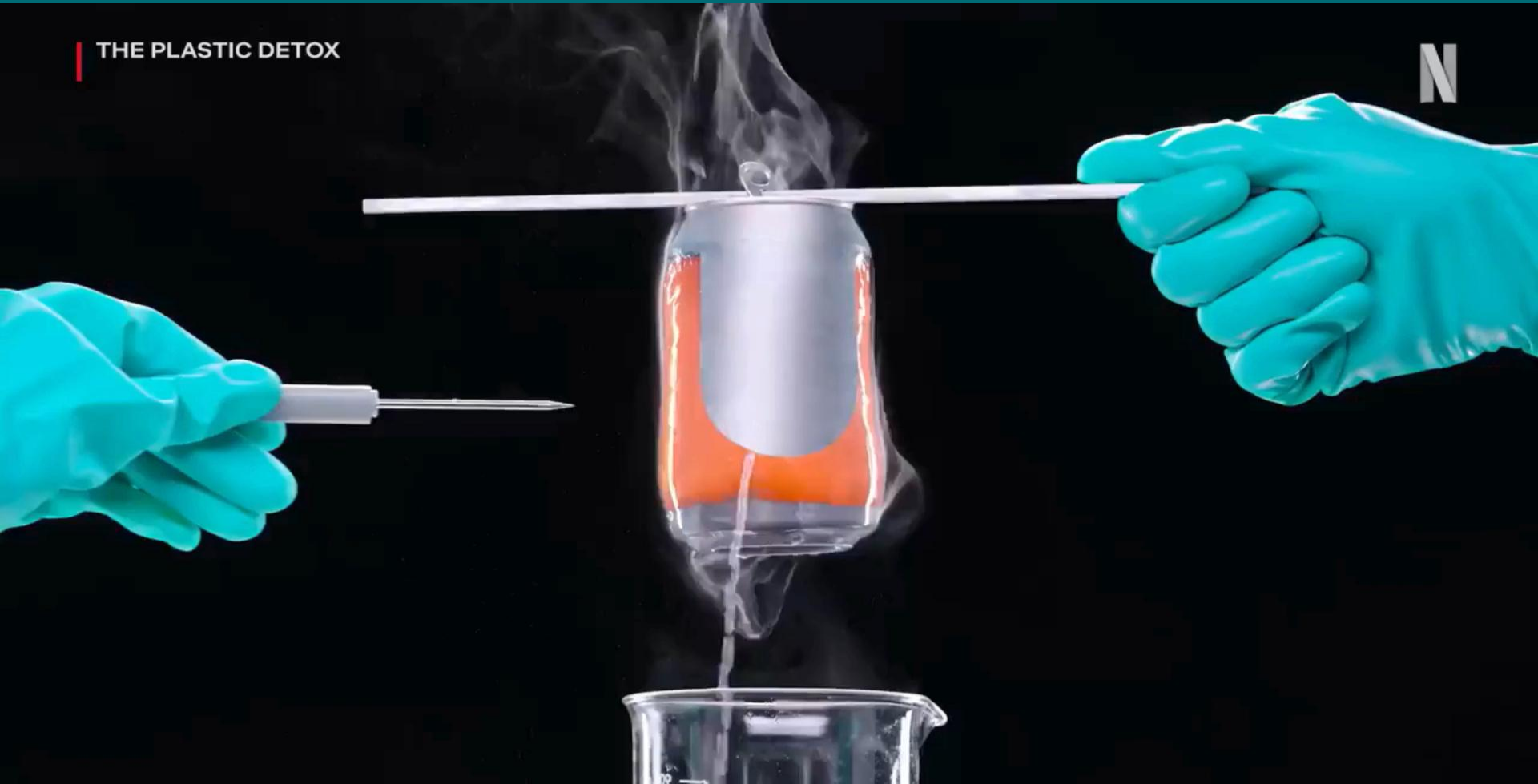
- Heightened cancer risk (breast,
- prostate); metabolic disorders;
- thyroid & immune system disruption

Later Life
60s+

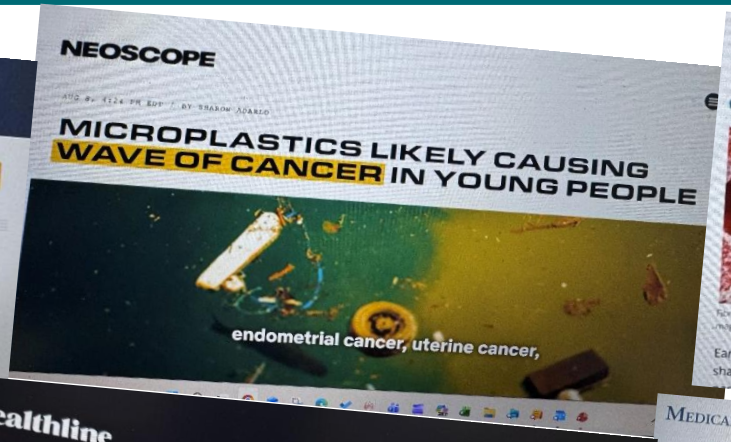
- Cumulative toxic burden;
- cardiovascular risks linked to PFAS & BPA exposure

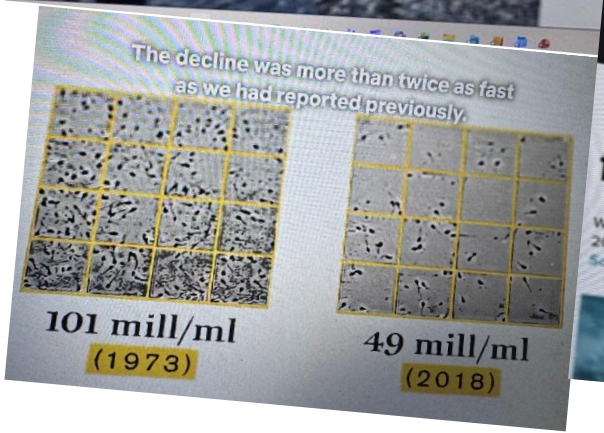
Plastic-derived chemicals affect humans from before birth to the end of life.

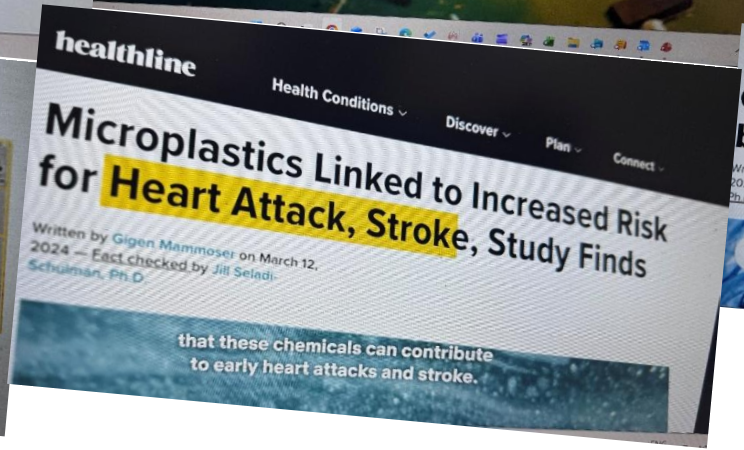
Plastic Detox Digital Snippet



HEALTH EFFECTS DUE TO PLASTIC EXPOSURE:







Scientific studies link plastic derived chemicals & microplastics with increased risks of neurodevelopmental, reproductive, metabolic, and chronic health disorders.

MICROPLASTICS POLLUTING OUR RIVERS AND ENVIRONMENT:

A year long studies in the India's National Capital reveals high presence of microplastics in the rivers and ground water.

Container Glass: Nature's Safest Packaging

Glass is inert, impermeable, and infinitely recyclable. It is the only packaging material rated GRAS (Generally Recognised As Safe) by the US FDA for all food and beverage contact — directly addressing the concerns raised in Plastic Detox.

Chemically Inert

Glass contains no BPA, phthalates, or any leaching chemicals. Zero migration into food or beverage — ever.

Infinitely Recyclable

Glass is 100% recyclable without quality degradation. Every tonne of cullet recycled saves 1.2 tonnes of raw materials.

Carbon Neutral Pathway

Green glass manufacturing uses cullet extensively — reducing furnace temperature, energy, and CO_2 emissions by up to 25%.

Impermeable Barrier

Glass provides a hermetic seal — protecting contents from oxygen, moisture, and contaminants without chemical additives.

Preserves Quality

No flavour, odour, or colour transfer. Glass maintains product integrity longer — reducing food waste across the supply chain.

FSSAI & Global Safe

Fully compliant with FSSAI, EU Food Contact Regulations, and US FDA GRAS classification for all food applications.

Glass is not only about strength against impact- it is about protection against contaminations, leakages, and long term exposure.

GREEN GLASS vs PLASTIC:

The Case Is Clear: Glass Wins on Every Health & Sustainability Dimension

DIMENSION	🍾 CONTAINER GLASS	🧴 PLASTIC (PET/PVC)
Chemical Migration	✅ ZERO — fully inert	❌ BPA, phthalates leach into content
Food Safety Rating	✅ GRAS (FDA) — all food categories	⚠️ Conditional — not for hot/acidic food
Recyclability	✅ 100% infinite recyclability	❌ Degrades; most recycled only 2–3 times
Fertility Risk	✅ No known endocrine disruption	❌ Directly linked to hormonal disruption
Carbon Footprint	✅ Falling with cullet content rise	❌ Fossil-fuel derived; non-biodegradable
Circular Economy Fit	✅ Perfect closed-loop material	❌ Linear economy — ends in landfill/ocean
Consumer Perception	✅ Premium, safe, trusted	⚠️ Growing public concern, regulatory risk

On health, safety, & circularity- glass outperforms plastic on every critical dimension.

AIGMF's Commitment: Leading Transition to Safe Packaging - Glass

WHAT AIGMF COMMITS TO

1. Launch a national #GreenGlassForHealth campaign — aligning with the Plastic Detox narrative for mass awareness
2. Develop and promote a voluntary Green Glass Code of Practice for sustainable, low-carbon production
3. Formally petition FSSAI, MoEFCC & Ministry of Health with this briefing for regulatory dialogue
4. Invest in modern glass furnace tech and expanded cullet use — targeting 60%+ recycled content by 2028
5. Co-sponsor Indian biomonitoring research to quantify EDC exposure — building India-specific evidence

PROPOSED ACTION TIMELINE

Q2 2025	Submit policy brief to FSSAI & MoEFCC; launch AIGMF Green Glass Charter
Q3 2025	Pilot #GreenGlassForHealth campaign in 5 metro markets with documentary screening events
Q4 2025	Release India EDC Awareness White Paper; engage Parliamentary Standing Committee
2026	Seek GST rationalisation through Finance Ministry pre-Budget submissions
2027–30	Scale cullet infrastructure; achieve 75% recycled content industry average

POLICY RECOMMENDATIONS:

Six Policy Imperatives: What Government Must Do Now

01

BPA & Phthalate Regulation

Mandate FSSAI testing and labelling for BPA/phthalate content in all food-grade packaging. Set enforceable migration limits.

02

Mandatory Glass for Sensitive Categories

Require glass packaging for baby food, infant formula, pharmaceutical liquids, pickles & acidic beverages — mimicking EU standards.

03

Green Packaging GST Incentives

Reduce GST on glass packaging from 18% to 5% and levy a plastic packaging health cess to level the economic playing field.

04

Awareness & Labelling

Introduce a national 'Chemical-Free Packaging' certification mark. Mandate consumer-facing disclosure on EDC risk in plastic packaging.

05

Cullet Collection Infrastructure

Fund a national glass cullet collection network integrated into SWM systems. Target 75% cullet use in glass manufacturing by 2030.

06

Research & Surveillance

Commission ICMR-led biomonitoring programme to track phthalate/BPA blood levels in India — creating an evidence base for action.

Packaging regulation is healthcare prevention in disguise.

5 STEPS EVERYONE CAN TAKE TODAY:

From The Plastic Detox — practical actions endorsed by Dr. Shanna Swan

Ditch the Plastic Wrap & Containers

Switch food storage to glass, stainless steel or silicone. Never microwave food in plastic — heat dramatically increases chemical leaching.

Upgrade Your Kitchen & Cookware

Replace non-stick (PFAS-coated) pans with stainless steel or cast iron. Avoid plastic utensils, cutting boards, and water bottles.

Rethink Personal Care Products

Check labels for "fragrance", parabens, or phthalates. Opt for unscented, glass-packaged, or certified organic personal care products.

Refuse Thermal Receipts

Thermal receipt paper is coated with BPA/BPS. Opt for email receipts. Wash hands after handling paper receipts when unavoidable.

Filter Your Water & Food Choices

Use a quality water filter certified for PFAS. Choose fresh, unpackaged food over canned or plastic-wrapped options where possible.

The Time for Action Is Now

"The evidence on plastic chemicals is becoming impossible to ignore. These exposures begin before birth and continue throughout life."

— Prof. Leo Trasande, NYU Grossman School of Medicine

"Plastic is a health catastrophe in slow motion. Glass is the cure we already have."