HURDLE

Epigenetic Health

The Future of Preventative Healthcare

Preventative healthcare benefits everyone

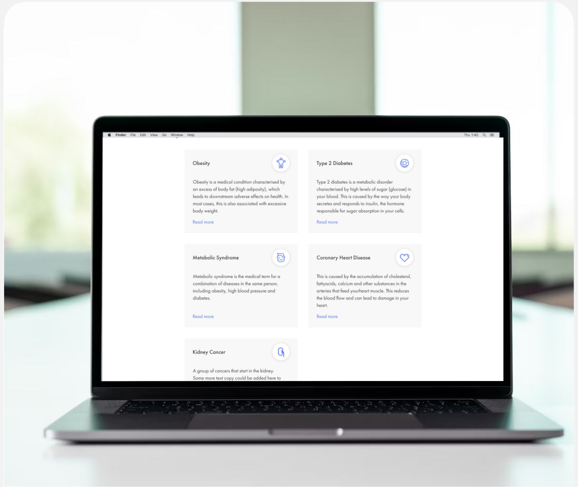
People want to **live healthier lives for longer.**

But they need an **objective and scientifically-validated way** to quantify if their prevention efforts are working.

With **clear recommendations** and actions on the next steps in their journey.

We have designed a platform suited for the prevention journey

Accessibility. A simple saliva test that can be done from the comfort of your own home, accessing this information has never been easier.



Obesity

Obesity is a medical condition characterised by an excess of body fat (high adiposity), which leads to downstream adverse effects on health. In most cases, this is also associated with excessive body weight.

Read more

Type 2 Diabetes

Type 2 diabetes is a metabolic disorder characterised by high levels of sugar (glucose) in your blood. This is caused by the way your body secretes and responds to insulin, the hormone responsible for sugar absorption in your cells.

Read more

Metabolic Syndrome

Metabolic syndrome is the medical term for a combination of diseases in the same person, including obesity, high blood pressure and diabetes.

Read more

Coronary Heart Disease

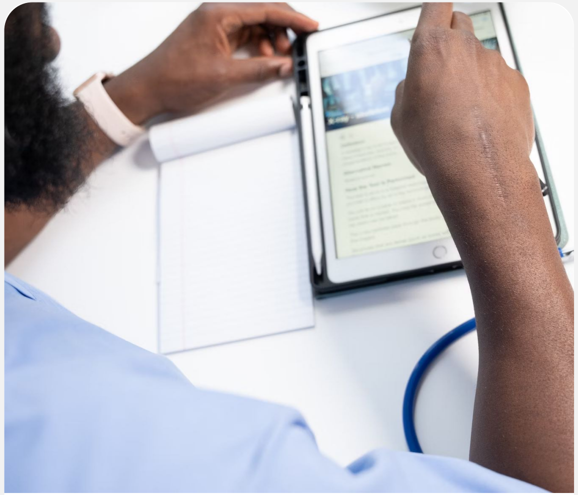
This is caused by the accumulation of cholesterol, fattyacids, calcium and other substances in the arteries that feed yourheart muscle. This reduces the blood flow and can lead to damage in your heart.

Read more

Kidney Cancer

A group of cancers that start in the kidney. Some more text copy could be added here to

Technology. A comprehensive view of health with all risk factors in one place. Using thousands of biomarkers that reflect your genetics and lifestyle, allowing for a personalised multi-disease prevention platform.



Actionability. A powerful tool to promote positive behavioral change based on results. Employers and doctors can use this technology to personalise and effectively engage with patients, maximising better health outcomes.

Epigenetics:
The Platform for Preventative Healthcare

Epigenetics is like the operating system of our genes. **It controls how our DNA is read and expressed**, determining which genes are turned on or off, and ultimately **influencing our risk of developing age-related and chronic diseases.**

Unlike genetics, epigenetics can ...

Repeatable

Change over time, so patients **can see progress.**

Measurable

Integrate the effects of **both genetics and lifestyle/environmental** factors.

Actionable

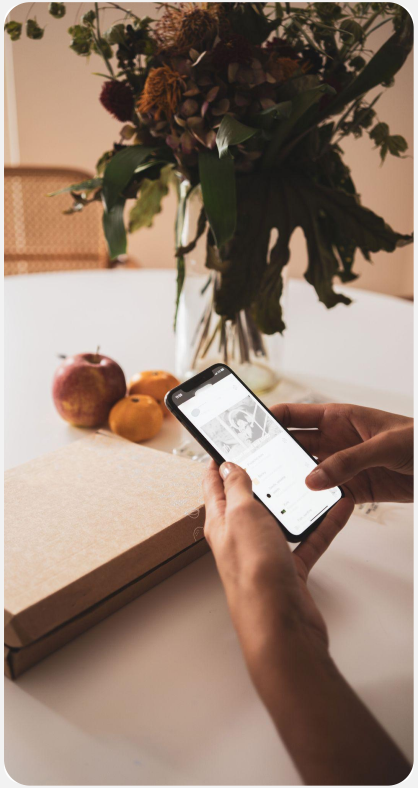
It is **the most accurate way** to simultaneously quantify the risk of developing many age-related diseases.

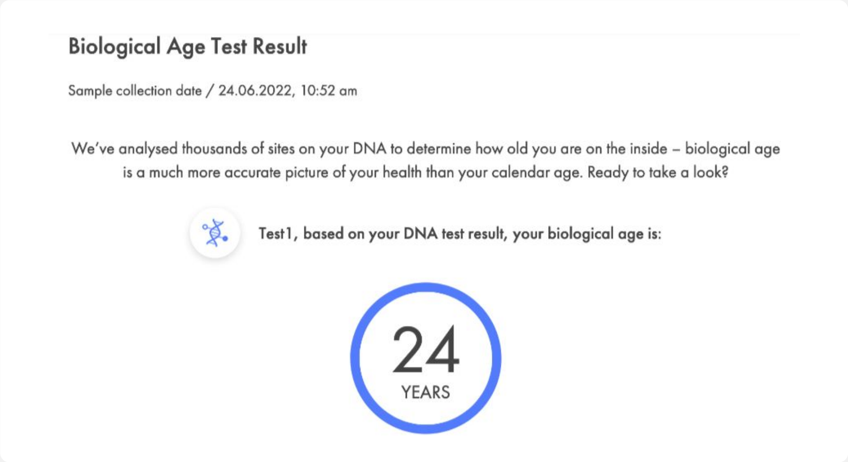
The Entry point for personalised preventative care

	1	2	3	4
	Prevention	Screening and early detection	Diagnosis	Treatment selection and monitoring
Cardiovascular disease	Epigenetic Health	Polygenic risk score for cardiovascular disease. Lipids and cholesterol test.	ECG and troponin blood test (myocardial infarction). CT or MRI (stroke).	Lipids and cholesterol test. Coagulation screening to monitor antiplatelet and anticoagulant therapies.
Type 2 diabetes		HbA1c test	HbA1c test	HbA1c and glucose test
Cancer		FIT stool test (colorectal cancer) Mammography (breast cancer) Galleri test (multi-cancer)	Colonoscopy (colorectal cancer) Tissue biopsy	Companion diagnostic to select drug. cfDNA test to monitor recurrent or residual disease.
And much, much more...				

Simple entry, guided follow-up, seamless experience

State-of-the-art experience





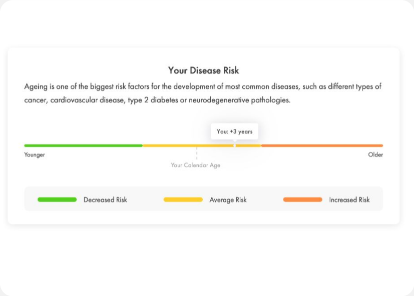
Biological Age Test Result

Sample collection date / 24.06.2022, 10:52 am

We've analysed thousands of sites on your DNA to determine how old you are on the inside – biological age is a much more accurate picture of your health than your calendar age. Ready to take a look?

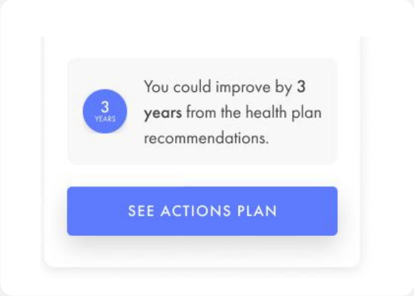
Test1, based on your DNA test result, your biological age is:

24 YEARS



Your Disease Risk

Ageing is one of the biggest risk factors for the development of most common diseases, such as different types of cancer, cardiovascular disease, type 2 diabetes or neurodegenerative pathologies.



3 YEARS You could improve by 3 years from the health plan recommendations.

Epigenetic Health Advancements

35
YEARS

BioAge - Unlocking today’s potential

The Future Biomarkers - Expanding our impact

- Smoke and pollution exposure
- Alcohol consumption
- Sleep
- Metabolic risk
- Chronic inflammation
- Stress

Proven Innovation

Founded in science
Founded by esteemed scientists and the leading experts from Oxford and Cambridge University

Peer-reviewed publications
10+ publications on epigenetics of ageing, computational biology and novel omics technologies

Patents
Novel age calculation method
Novel reprogramming method
Epigenetic platform for ML

Novel biomarkers & IVDs Created
First saliva-based NGS epigenetic biomarker for biological age
First CE-marked saliva-based COVID-19 PCR test

Making epigenetics more accessible since 2017
We have reduced the cost to **1/5th** (from ~1000 GBP to ~200 GBP at low volumes)

Security and Quality. Built right in.
We design our hardware and software products with global standards at the forefront.

#1

Unrivaled Usability, Unbeatable Price.
Scientifically-backed innovations, we deliver unparalleled accessibility, user-friendly experiences and cost-effective solutions for all.

HURDLE

Epigenetic health.

Join the revolution that is creating a healthier tomorrow.

Selected Scientific Publications - Management Team

Single cell DNA methylation ageing in mouse blood. Bonder MJ, Clark SJ, Krueger F, Luo S, de Sousa JA, Hashtroud AM, Stubbs TM, Stark A, Rulands S, Stegle O, Reik W, von Meyenn F. bioRxiv 2023.01.30.526343 https://doi.org/10.1101/2023.01.30.526343

Multi-omic rejuvenation of naturally aged tissues by a single cycle of transient reprogramming. Chondronasiou D, Gill D, Mosteiro L, Urdinguio RG, Berenguer A, Aguilera M, Durand S, Aprahamian F, Nirmalathasan N, Abad M, Martin-Herranz DE, Stephan Otto-Attolini C, Prats N, Kroemer G, Fraga MF, Reik W, Serrano M. Aging Cell 2022 21, e13578; doi: https://doi.org/10.1111/acel.13578

Multi-omic rejuvenation of human cells by maturation phase transient reprogramming. Gill D, Parry A, Santos F, Hernando-Herraez I, Stubbs TM, Milagre I, Reik W. eLife 2022 11:e71624; doi: https://doi.org/10.7554/eLife.71624

Remote Consultations Handbook Edition 2: Strategies to ensure a safe and effective consultation via video or telephone. Abbs A, Hyams A, Ahmed Z. Independent 2020 2nd ed., pp.0–72 https://www.amazon.co.uk/Remote-Consultations-Handbook-Strategies-consultation-ebook/dp/B09NP9VJC9

Ageing affects DNA methylation drift and transcriptional cell-to-cell variability in mouse muscle stem cells. Hernando-Herraez I, Evano B, Stubbs TM, Commere PH, Jan Bonder M, Clark S, Andrews S, Tajbakhsh S, Reik W. Nat Commun 10, 4361 .2019. https://doi.org/10.1038/s41467-019-12293-4

Screening for genes that accelerate the epigenetic aging clock in humans reveals a role for the H3K36 methyltransferase NSD1. Martin-Herranz DE, Aref-Eshghi E, Bonder MJ, Stubbs TM, Choufani S, Weksberg R, Stegle O, Sadikovic B, Reik W, Thornton JM. Genome Biol. 2019 Aug 14;20(1):146. doi: 10.1186/s13059-019-1753-9.

Hepatic gene body hypermethylation is a shared epigenetic signature of murine longevity. Hahn O, Stubbs TM, Reik W, Grönke S, Beyer A, Partridge L. PLoS Genet. 2018 Nov 21;14(11):e1007766. doi: 10.1371/journal.pgen.1007766. eCollection 2018 Nov.

scNMT-seq enables joint profiling of chromatin accessibility DNA methylation and transcription in single cells. Clark SJ, Argelaguet R, Kapourani CA, Stubbs TM, Lee HJ, Alda-Catalinas C, Krueger F, Sanguinetti G, Kelsey G, Marioni JC, Stegle O, Reik W. Nat Commun. 2018 Feb 22;9(1):781. doi: 10.1038/s41467-018-03149-4.

cuRRBS: simple and robust evaluation of enzyme combinations for reduced representation approaches. Martin-Herranz DE, Ribeiro AJM, Krueger F, Thornton JM, Reik W, Stubbs TM. Nucleic Acids Res. 2017 Nov 16;45(20):11559-11569. doi: 10.1093/nar/gkx814.

Multi-tissue DNA methylation age predictor in mouse. Stubbs TM, Bonder MJ, Stark AK, Krueger F; BI Ageing Clock Team, von Meyenn F, Stegle O, Reik W. Genome Biol. 2017 Apr 11;18(1):68. doi: 10.1186/s13059-017-1203-5.

Dietary restriction protects from age-associated DNA methylation and induces epigenetic reprogramming of lipid metabolism. Hahn O, Grönke S, Stubbs TM, Ficz G, Hendrich O, Krueger F, Andrews S, Zhang Q, Wakelam MJ, Beyer A, Reik W, Partridge L. Genome Biol. 2017 Mar 28;18(1):56. doi: 10.1186/s13059-017-1187-1.

Gender Differences in Global but Not Targeted Demethylation in iPSC Reprogramming. Milagre I, Stubbs TM, King MR, Spindel J, Santos F, Krueger F, Bachman M, Segonds-Pichon A, Balasubramanian S, Andrews SR, Dean W, Reik W. Cell Rep. 2017 Jan 31;18(5):1079-1089. doi: 10.1016/j.celrep.2017.01.008.

MERVL/Zscan4 Network Activation Results in Transient Genome-wide DNA Demethylation of mESCs. Eckersley-Maslin MA, Svensson V, Krueger C, Stubbs TM, Giehr P, Krueger F, Miragaia RJ, Kyriakopoulos C, Berrens RV, Milagre I, Walter J, Teichmann SA, Reik W. Cell Rep. 2016 Sep 27;17(1):179-192. doi: 10.1016/j.celrep.2016.08.087.

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