

# The future of health is digital

Muhdo 2020

**MUHDO**  
YOUR HEALTH MATTERS  
GENETIC PROFILING

# Worker Vs Employer Risks and Benefits

## Real-life Problem

I would really like to tailor my lifestyle to maintain a healthy weight, improve my energy levels and boost my immune system. Understanding how to do this at the genetic level and tracking my improvements is important to me.

## Perfect Solution

The provision of a non-intrusive, inexpensive, health benefit accessible by all which requires minimal employer maintenance or intervention. Empowering users with the knowledge to put them in control of their own health.

## Muhdo's Solution

Following a saliva test, workers discover their personal genetic predispositions and adopt positive lifestyle changes to improve their overall health. Internal health changes are monitored periodically on the Muhdo mobile app.



## Real-life Problem

We understand the importance of our employee benefits offering but monitoring the potential ROI of these benefits can be challenging. Improving the health and productivity of our workforce at the same time is a bonus!

## Perfect Solution

A benefit that provides your workforce with hyper-personalised health recommendations through genetic science. A benefit that monitors the user's inner health with fully customisable BI and MI reporting to calculate a ROI.

## Muhdo's Solution

Muhdo provides an opportunity to engage your workforce in a way that promotes improvements in inner health with minimal organisational input. ROI can be monitored through Muhdo's comprehensive BI & MI web portal.

Worker

Employer

# Your Challenge

## Overview

Poor health is becoming an epidemic - we must start to focus on prevention, rather than just clinical solutions which are costly and may not address an underlying health issue.

The focus on inner health over external appearance sits at the heart of preventative healthcare. Through genetic science, Muhdo Health can help at every stage of life from pregnancy, infancy, adolescence, adulthood to old age.

## The problem

The decision problem that Muhdo addresses lies within what leads a person to be absent from work and/or having to make a claim on their private medical insurance. These include:

- Stress, depression and anxiety
- Ailments and non-critical illness
- Non-contact (i.e. avoidable) physical injury

## Facts

- 30% of absenteeism in the workplace is caused by stress, anxiety or depression – of which 92% have weight issues, are inactive or have a poor diet.
- 40% suffer from a musculoskeletal disorder (i.e. lower back pain, lower limb problems, neck and shoulder problems). The higher the weight, the greater the prevalence.
- Nutrition is very important and yet few people understand exactly what is good for them, often making food choices based on habit or convenience.
- Digestive problems rank high in short term absenteeism. The underlying issues are often the same as those for cardiac, diabetes and cancer.
- Increased strength and conditioning and flexibility are particularly important for the ageing workforce (+40 yrs).

## Concerns employers aim to address

1. Improve workplace safety
2. Improve employee morale and engagement
3. Improve productivity by reducing employee absences and raising job performance
4. Attract and retain employees

Employers aim to create a workforce health strategy that will:

- Improve productivity
- Save money; and
- Attract and retain talent

Investing in personalised, technology-based healthcare solutions while fostering a culture of wellbeing, will help set employers apart. Enabling them to build a more engaged, productive and loyal workforce.

## The solution

The science of genetics is helping us to understand what the small differences in your genetic makeup mean.

Research has shown that your genes affect how you respond to your surroundings and experiences.

Tiny variations can affect how your muscles form and behave, how your body uses the major food groups and whether you are likely to lack certain vitamins or minerals.

This is why genetic testing is becoming increasingly popular and useful. A genetic test is very easy to do. All that Muhdo requires is a saliva sample.

Your whole genetic story will be in your sample. The sample is analysed by our laboratory and then experts in sports science, nutrigenomics and health, who understand all the current research, interpret the results for you.

If you are interested in further details, you can find out more at: <https://www.ncbi.nlm.nih.gov/snp/>



# Embracing Digital Health

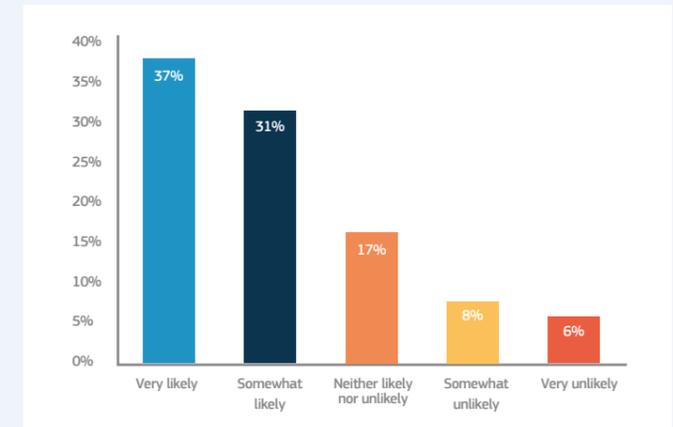
## Investing in your workforce

When asked specifically about digital health solutions, more than three-quarters of the senior decision makers surveyed believe the solutions will have a positive impact on staff energy levels, and nearly six out of 10 believe they will help them retain staff.

Nearly a third of HR decision makers consider themselves to be innovators when it comes to technology adoption, while another third classify themselves as early adopters.

Employers are increasingly recognising that wellbeing apps and tools can improve the experience, health and happiness of their workers.

How likely is your company to invest more than it does today in digital health for employees in the next 5 years?



## Employer concerns - answered

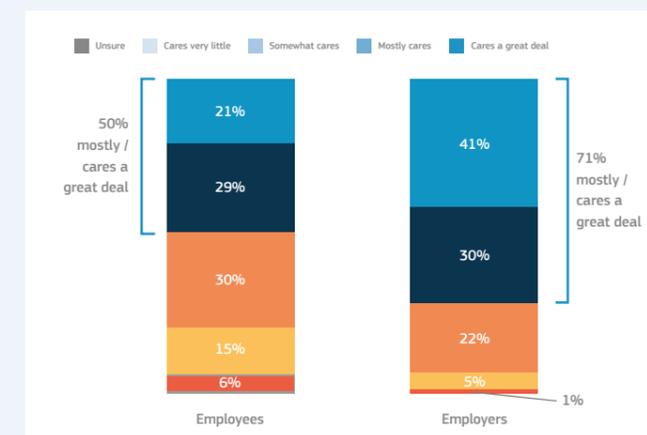
Employers cited the following for not investing in digital health:

- More important priorities
- Difficulty in calculating ROI
- Data security
- Complexity of administration

The Muhdo solution effectively answers the perceived issues employers face with digital health.

## Bridging the gap

How much do you feel your company cares about the health and wellbeing of its employees generally?



## Worker attitudes

Two-thirds of workers reported being more confident in digital health and wellbeing solutions that are promoted by their employer.

Nearly two-thirds of workers say they are willing to share their personal health information if this will ensure that they receive the highest quality medical care.

Workers can be clustered into four distinct segments based upon their attitudes towards health innovations and their likelihood of staying with an employer offering these solutions.



**"Affordable, convenient, effective and customised"**

n.b. All the statistics observed on this page are from the Mercer Marsh Benefits 'Health On Demand' Global Report February 2020.

# Why Muhdo?

## How is Muhdo the answer?

Muhdo can boast an array of extensive scientific research papers to back up our recommendations.

Outlined below is the list of peer reviewed medical papers, published by the top universities and research institutions in the world that have been used in our research and algorithms to generate genetic outcomes and health recommendations:

- Over 1,500 Genetic Research papers
- Over 600 Nutritional Research papers
- 80 Training, Strength & Conditioning papers
- 20 Epigenetics & Biological Age papers that are used in our epigenetics product, with an additional 2,992 published medical papers on the importance of biological age as an early indication to poor health

## How can Muhdo help your business?

Muhdo integrates health and wellbeing at the organisational level. While at the personal level, Muhdo considers all the following risk factors that can lead to poor worker health:

- Physical
- Psychological
- Social
- Occupational
- Lifestyle

Muhdo provides a fully interactive solution, available 24/7 with no requirement for internal management. We avoid the trap of a 'one-off' perk, so the worker is able to measure results and deliver real outcomes in real time.

A genetic health profile addresses a range of personal risk factors that include excess weight, inactivity, issues associated with ageing, nutrition and emotions.

Our engaging genetic health insights provide motivation for reduced reliance on clinical interventions and medication, together with lessening the pressure of worker sickness absence and associated costs.

## How it helps the worker

Make a positive difference to people by enabling them to take control of their health and improve their wellbeing. Their genetic profile is completely personalised to them and they can process the results at their time and pace.

Generate an autonomous and motivated culture by empowering workers to be in control of their own health while also providing a platform for social engagement that workers can use to discuss, compare and even compete through.

Let the product work for your employees and let them address health issues before they arise, or rectify areas of concern. The Muhdo genetic profile helps individuals live younger for longer.

## How it effects the bottom line

The data we provide is fully transparent and measurable, giving you a unique insight into your genetic health. Hyper-personalised genetic information answers the problem of intervention to promote prevention.

Management processes are simplified by incorporating the decision problem of health at an organisational level – allowing more efficient use of staff time.

Positive ROI is achievable when supported by Muhdo's BI and MI to address business concerns on productivity improvement, lost work time, sourcing cover, sick pay, demotivated workforce and the cost of presenteeism.



# About Muhdo Health

Muhdo is a genomics company that offers DNA and epigenetic profiling. While you are born with a fixed genetic makeup which can be analysed using our simple DNA saliva test, we can also analyse your epigenetic gene expression over time through periodic saliva testing. This enables us to calculate an extensive range of trackable areas including your biological age, hearing, memory, eyesight and inflammation.

## DNA and Epigenetics combined with lifestyle markers

Muhdo is able to understand how your day-to-day diet affects your body at a cellular and genetic level through the science of nutrigenomics. We do this by combining your DNA profile, which stays the same over time, together with a process called epigenetics, which refers to the changes in your gene expression. This is impacted by changes in your lifestyle, diet and environment

By utilising your mobile phone to collect key lifestyle data and periodic saliva samples, we can measure your epigenetic gene expression. We can then both monitor and improve your inner health over time by providing you with hyper-personalised health, nutrition and lifestyle recommendations aligned to your genetic profile and your health goal.

Understanding your genetics can help improve your mental health enabling you to enhance your cognitive function, creativity, working memory and reading comprehension. Muhdo can also help reduce stress, anxiety, depression, illness and even prevent injury based on your genetic code.

## Why choose Muhdo?

At Muhdo we're committed to giving you the most comprehensive DNA profile available with our accurate, state-of-the-art laboratories and science. We do this by analysing 1,000 snips (genetic variants) and providing you with over 300 reports tailored to your DNA.

We don't look at your ancestry as we believe that your future health is more important. Whatever your health objective is our interactive app will give you all the information you need right at your fingertips!

Muhdo is with you every step of the way, helping you reach your health goal; from weight loss, building muscle, fitness & endurance to general health & wellbeing.

- Technology based digital health solution
- Affordable, easy to use, effective and customisable
- BI and MI data available to support ROI
- 300 reports on 1,000 snips (genetic variants)
- Hyper-personalised nutrition and training plans
- Use your genetic make-up to meet your health goals



**Our vision is the mass personalisation of preventive and curative healthcare through DNA and epigenetics.**

Prevention is better and cheaper than cure and inspiring people to develop healthy long-term habits is good for them and good for society. We need to focus more on internal health and democratise genetic knowledge so people can make informed decisions about their wellbeing.

**Nathan Berkley**  
CEO OF MUHDO

# The Muhdo App

## Hyper-personalised reports and functionality

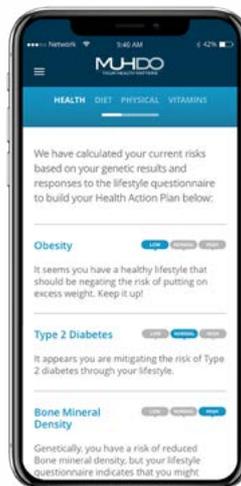
The Muhdo app takes the user on a journey through their genetic health. From the home screen, which highlights the pollution index in their exact location, the user is led towards their Genetic Action Plan. The Action Plan provides the user with an easy-to-follow snapshot presenting areas of concern and how to combat them. The next step on the journey is for the user to discover their DNA results in more detail, before accessing the genetically-aligned Workout Planner and Meal Planner with 100s of recipes.

Accessible 24/7/365, the Muhdo app is an always-on digital health tool for optimal engagement.

Muhdo Home



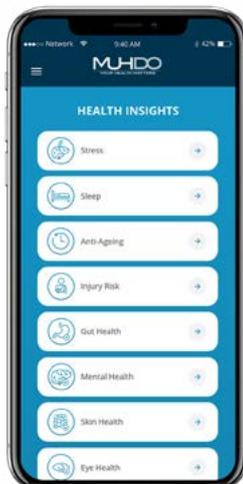
Action Plan



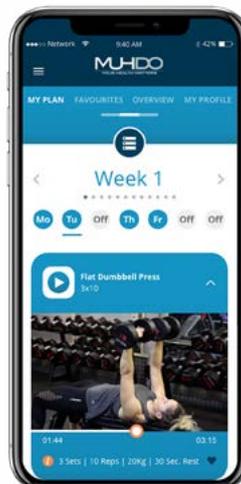
DNA Results



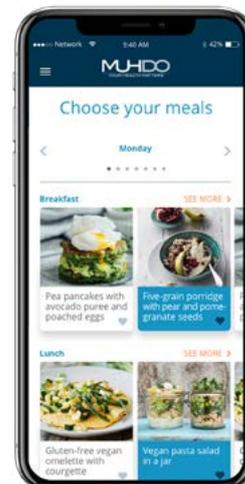
Health Insights



Workout Planner



Meal Planner



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