EMPOWER YOUR HEALTH

AN ACTION-ORIENTED WORKBOOK FOR MANAGING TYPE 2 DIABETES NUTRITION AND LIFESTYLE

This Manual Belongs To:

Name

Your Diet & Exercise Coach:

Name

Phone Number

Email

biomea FUSION™ We Aim to Cure™

The Purpose of this Coaching Manual

All type 2 diabetes medications in the market today require that they be taken along with the implementation of healthy diet and exercise behaviors. This requirement reflects the fact that while medications can be helpful in managing type 2 diabetes, they are typically most effective when used in conjunction with lifestyle modifications such as dietary changes and increased physical activity.

By emphasizing the importance of diet and exercise alongside medication, we want to provide a comprehensive approach to diabetes management that includes not only the required medicine but also proper lifestyle interventions which may help you address your diabetes more effectively.

> **There is no failure except in no longer trying.**
>
> *Chris Bradford, English author of children's books*

WE AIM TO CURE

- Thomas Butler, CEO & Chairman

Our mission is to change the diabetes treatment paradigm and cure the disease. Our name, Biomea, is derived from the Greek word "bios," meaning "life," and the Latin word "mea," meaning "my," as nothing is more important to us than improving the life of the individual.

Biomea Team

Introduction

Agreement:

I agree to work together with my Diet & Exercise Coach as often as required, to learn and apply standard diet and exercise routines to conquer and address my type 2 diabetes.

Signature


biomea
FUSION
We Aim to Cure™

Getting to Know Each Other 01

During your initial session with your diet and exercise coach, take some time to get to know each other. The questions provided are a jumping off point but feel free to include your own questions and learn more about one another.

You

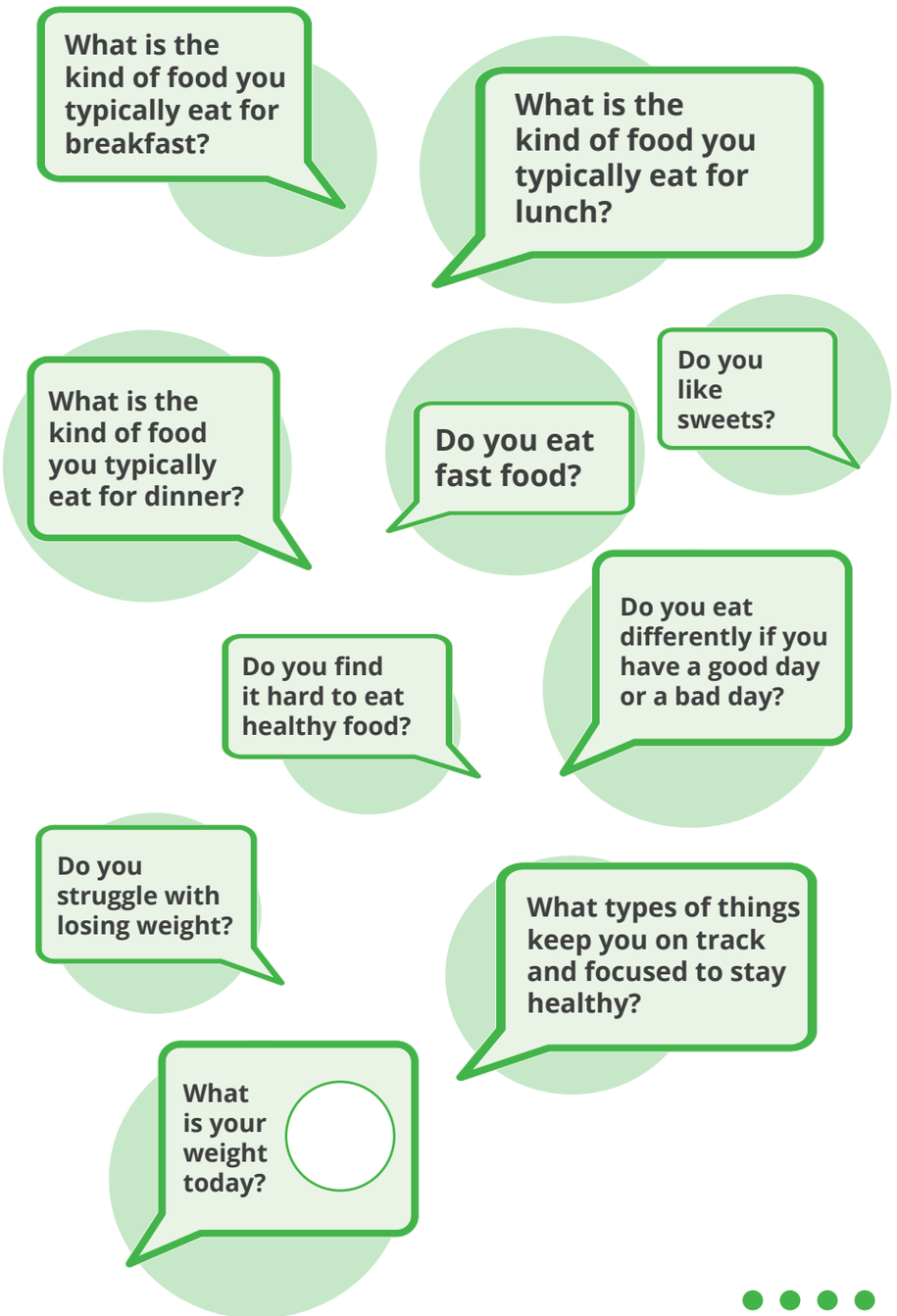
- What is your name?
- What is your age?
- How long have you lived in the area?
- Who do you live with?

Your Youth

- Where did you grow up?
- What sports did you engage in when you were younger?
- What was your diet like when you were a kid? A teenager? An adult?
- What life goals did you have as a child?

Getting to Know You

Your Diet



01

Getting to Know You

Your Future

What goals do you have for exercising?

What are your diet and weight goals?

What do you want to achieve 10 years down the road?

What types of physical activities are you interested in doing?

What are your goals related to healthy eating?

Your Diabetes Journey

Tell me about your diabetes journey.

Have you ever had diabetes education before?

What have been wins and losses along the way?

What was your weight when you first learned about your diabetes?

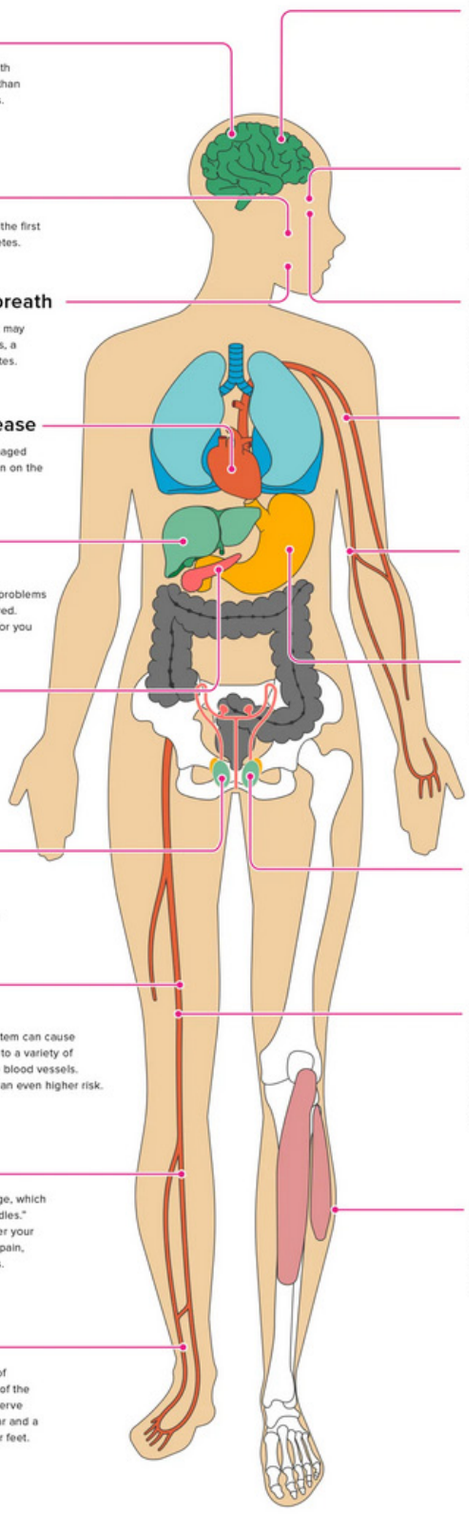
Where is it now?

Getting to Know You

Your Diet & Exercise Coach

Let's find out who your Diet & Exercise Coach is, please ask him or her the following key questions:


Do you exercise and how much?
Why did you become a diet and health coach?
What goals do you have for the next 10 years?
What are your eating habits?
Give me your best advice to remain healthy.



risk of stroke

Risk of stroke for someone with diabetes is four times higher than for someone without diabetes.

extreme thirst

Extreme thirst is often one of the first noticeable symptoms of diabetes.

sweet-smelling breath

Breath that has a sweet scent may indicate high levels of ketones, a serious complication of diabetes.

risk of heart disease

High blood pressure and damaged blood vessels put added strain on the heart, increasing the risk of cardiovascular disease.

fatigue and lack of energy

Overall kidney and pancreas problems can cause you to feel more tired. This can also make it harder for you to concentrate.

pancreas malfunction

A poorly functioning or nonfunctioning pancreas won't produce the insulin your body needs to convert glucose into energy.

excessive urination

Having to urinate frequently may be an early warning sign of diabetes.

damaged blood vessels

Too much glucose in your system can cause restricted blood flow, leading to a variety of symptoms and damage to the blood vessels. Smokers with diabetes are at an even higher risk.

nerve damage

Diabetes causes nerve damage, which often feels like "pins and needles." Damaged nerves can also alter your perception of heat, cold, and pain, increasing your risk of injuries.

foot problems

Diabetes increases your risk of calluses, infections, or ulcers of the foot. This can be caused by nerve damage from high blood sugar and a decrease in circulation to your feet.

loss of consciousness

Without treatment, diabetic ketoacidosis can lead to loss of consciousness.

visual disturbances

Damaged blood vessels in the eyes can cause visual disturbances like floaters. If left untreated, this can lead to blindness.

cataracts and glaucoma

If you have diabetes you have an increased risk of cataracts and glaucoma compared with people who don't have diabetes.

risk of infections

Diabetes can also raise your risk of bacterial, fungal, and yeast infections. Your feet are the most vulnerable to infection.

high blood pressure

If you have diabetes, you're at increased risk of developing high blood pressure.

gastroparesis

Poor blood sugar management can cause delayed emptying of food from the stomach. This can cause bloating, heartburn, and nausea.

protein in the urine

High levels of protein in your urine may mean your kidneys have some damage and aren't functioning well.

ketoacidosis

To make up for the lack of insulin, your body uses other hormones to turn fat into energy. This produces high levels of toxic acids called ketones, which can be life-threatening.

dry, cracked skin

Uncontrolled, high blood sugar causes the body to lose fluids at a faster rate. This can lead to dry, cracked skin, especially on the feet.

What is Diabetes? 02

Diabetes is considered a chronic health condition that affects how our bodies turn food into energy, resulting in too much sugar in the bloodstream. Normally after we eat or drink, our bodies break food down into sugars to be stored and used as energy for our cells. To accomplish this, our pancreas needs to produce a hormone called insulin. Insulin is what facilitates the process of pulling sugar from the blood and putting it in the cells for use, or energy. If we have diabetes, our pancreas produces too little insulin or none. This allows blood glucose levels to rise while the rest of our cells are deprived of much-needed energy, which can lead to various problems affecting nearly every major body system. Most people with diabetes have a shorter life expectancy than people without this disease.

The Centers for Disease Control (CDC) estimates that 2 in 5 of the adult population in the USA are now expected to develop diabetes during their lifetime. More than 37 million people of all ages (about 11% of the US population) have diabetes today *(National Diabetes Statistics Report | Diabetes | CDC, n.d.)*. Currently, 96 million adults (more than 1 in 3) have prediabetes, which occurs when blood sugar levels are higher than normal but not high enough to be classified as diabetes. Diabetes is also one of the largest economic burdens on the United States health care system with $1 out of every $4 in US health care costs being spent on caring for people with diabetes *(Health and Economic Benefits of Diabetes Interventions | Power of Prevention, n.d.)*. Despite the availability of current standard-of-care medications, diabetes remains a largely uncontrolled disease.

The Effect of Diabetes on our Bodies

Blood sugar is an often-underestimated component of your health. When it's out of balance over a long period of time, it can develop into diabetes which can cause serious health threats. Diabetes can be effectively managed when diagnosed early. However, when left untreated, it can lead to potential complications that include heart disease, stroke, kidney damage, nerve damage, depression, infections, Alzheimer's, and many others

(Preventing Diabetes Problems - NIDDK, n.d.).

What is Type 2 Diabetes?

Type 2 diabetes, the most common type of diabetes, is a disease that occurs when your blood glucose, also called blood sugar, is too high. Blood glucose is your primary source of energy and comes mainly from the food you eat. Insulin, a hormone made by the pancreas, helps glucose get into your cells to be used for energy. In type 2 diabetes, your body is no longer able to make enough insulin or doesn't use insulin well. The excess glucose stays in your blood, and not enough reaches your cells.

The good news is that you can take steps to prevent or delay the development of type 2 diabetes.

All the conditions we thought were problems – obesity, insulin resistance, and beta cell dysfunction – are actually the body's solutions to a single root cause – too much sugar.

Jason Fung,
renowned nephrologist

biomea FUSION™ We Aim to Cure™

What is the Root Cause of Type 2 Diabetes?

In order to understand what may cause diabetes, we need to understand the role of our pancreas. Here we make a very important hormone - insulin. We all need insulin to help our bodies take the glucose (sugar) we get from food and use it as energy. The cells that produce insulin are our beta cells. These cells unfortunately do not reproduce easily; they get exhausted over time, lose their function, and die. We then end up with too little insulin production and too much glucose in our blood. This will cause side effects over time and depending on the severity, will lead to diabetes.

Addressing Type 2 Diabetes

The first step in addressing type 2 diabetes is changing your lifestyle.

Lifestyle contributes to the onset of this condition. Identifying behaviors that support the development of type 2 diabetes is a first step in addressing it.

There are some things you may need to limit – such as eating too many simple carbohydrates and sugary products, and some things you may need to start – like exercising. Overall, you may need to change your lifestyle and adjust your diet and exercise habits. This booklet is designed to provide you with an understanding and background to both of these very critical components of healthy living.

> **Everyone gains when we understand the root cause and consequences of diabetes.**
>
> *Barbara Engebretsen, PhD*

Important Health Facts About Diabetes

Diabetes is one of the largest economic burdens on the US health care system and the 7th leading cause of death in the US.

(Health Topics - Diabetes - POLARIS, 2021)

80% of people with diabetes will die from this disease. Premature mortality caused by diabetes results in an estimated 12-14 years of life lost.

(Tabish, 2007)

According to the CDC, worldwide 537 million adults have diabetes. In the United States alone, 37.3 million adults have diabetes, 11.3% of the population. 96 million adults (more than 1 in 3) in the US have prediabetes.

(By The Numbers: Diabetes in America, 2022)

Diabetes is the leading cause of blindness and amputation in adults.

(What Is Diabetes?, 2023)

With type 2 diabetes you are 4 times as likely to develop heart disease and 7 in 10 people with diabetes will die of cardiovascular issues.

(Damaskos et al., 2021)

In the last 20 years, the number of adults diagnosed with diabetes has more than doubled as the American population has aged and become more overweight or obese .

(What Is Diabetes?, 2023)

In 2019, diabetes and kidney disease due to diabetes caused an estimated 2 million deaths.

(WHO, 2023)

Diabetes causes more deaths per year than breast cancer and AIDS combined and having diabetes nearly doubles your chance of having a heart attack.

(Know Your Facts About Diabetes | ADA, n.d.)

Being overweight is a risk factor for developing diabetes, but other risk factors such as how much physical activity you get, family history, ethnicity, and age also play a role.

(Know Your Facts About Diabetes | ADA, n.d.)

Knowledge Check

1. What is Diabetes?

A condition where the body produces too much insulin.	A
A chronic health condition resulting in high blood sugar levels due to insufficient insulin production or utilization.	B
A temporary imbalance after meals.	C

2. What is the root cause of Type 2 Diabetes?

Overproduction of insulin by the pancreas.	A
Exhaustion and loss of function of insulin producing beta cells in the pancreas, leading to decreased insulin production.	B
Dysfunction of the liver in regulating blood sugar levels.	C

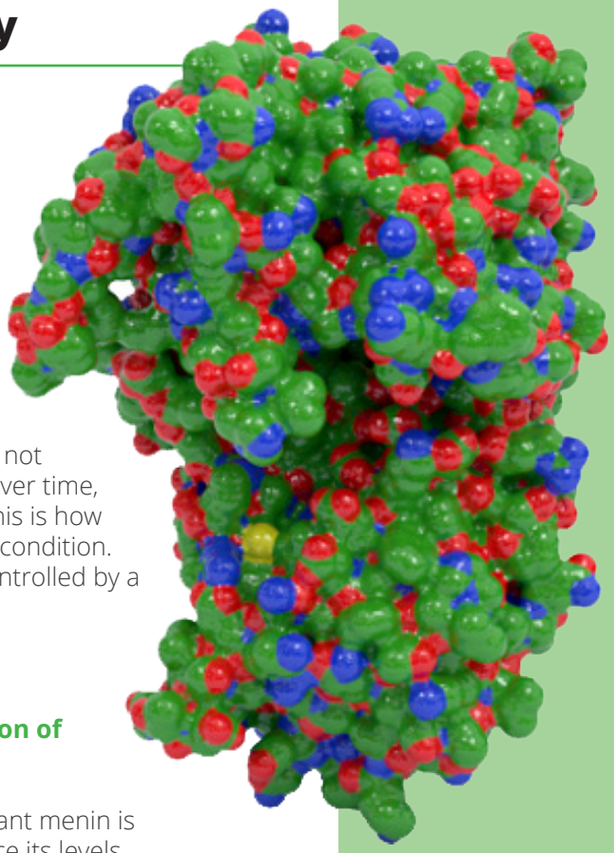
3. Why are beta cells important?

They are responsible for insulin production.	A
They help release enzymes for digestion.	B
They help regulate body temperature.	C

Answers: 1:B; 2:B; 3:A

For Reference Only

What is Menin?



When we get diagnosed with diabetes, or even with pre-diabetes, it is an indication that our bodies are not producing sufficient insulin, which is a very important hormone that helps take the glucose (sugar) we get from food and use it as energy. The cells that produce insulin are our beta cells. They do not reproduce easily, get exhausted over time, lose their function, and die out. This is how we end up with a diabetes health condition. Beta cells and their growth are controlled by a protein called menin.

Menin is a scaffold protein in the pancreas that acts as a control for the regeneration of insulin-producing beta cells.

Nature has shown us how important menin is and how the body seems to reduce its levels naturally to re-balance the pool of beta cells, aiding in the prevention of diabetes during pregnancy and also obesity.

02

For Reference Only

What is BMF-219

When we are diagnosed with diabetes, our bodies produce insufficient insulin, a very important hormone that helps take the glucose (sugar) we get from food and use it as energy. The cells that produce insulin are our beta cells. They do not reproduce easily, get exhausted over time, lose their function, and die out which leads to the development of diabetes. Beta cell growth is controlled by a protein called menin. If there were no menin proteins around, beta cells could freely turnover, supporting the notion that the inhibition of menin potentially could lead to the reactivation, regeneration and even protection of beta cells.

BMF-219 was designed to specifically target menin and inhibit/degrade its function for a short period of time, so beta cells can potentially grow again, allowing them to rebalance and effectively restore natural insulin production - to control and normalize sugar levels again.

The Clinical Trial - COVALENT-111

We are actively researching an investigational drug (BMF-219) that may improve the body's response to blood sugar for people living with type 2 diabetes and potentially halt or reverse progression of the disease. The total study duration is up to 52 weeks, during which time we will have regular meetings and require your participation. The study drug will be administered orally (taken by mouth) daily for a specified period of time. Thereafter we will measure the effect of the study drug and how effective it is towards addressing type 2 diabetes. You can read a lot more about this study on the government website: https://classic.clinicaltrials.gov/ct2/show/NCT05731544

Counseling during the COVALENT-111 Study

You will receive counseling to manage your diabetes from a trained counselor at all visits, either in person or remotely, starting at your baseline visit. Additional counseling visits will be required which can be done either in person or remotely. Counseling will focus on personalized behavioral strategies for diabetes management in person and remotely. You will be instructed to follow an individualized weight maintaining diet for the duration of the study COVALENT-111 and to record food intake daily for counseling purposes. During the study, you should not start any other new diets, supplements, or intensive exercise programs.

(see the INFORMED CONSENT FORM – Phase 2: T2DM Expansion Cohorts COVALENT-111 Study Protocol 14 Jul 2023)

Knowledge Check

1. What is the purpose of the COVALENT-111 Study?

To test the effectiveness of an over-the-counter diabetes medication.	A
To evaluate the impact of lifestyle changes on diabetes management.	B
To investigate the potential of an investigational drug (BMF-219) to improve the body's response to blood sugar and potentially halt or reverse the progression of type 2 diabetes.	C

2. What is Menin?

Menin is a hormone that increases blood sugar levels.	A
Menin is a scaffold protein that acts as a control for the regeneration of insulin-producing beta cells in the pancreas.	B
Menin is a neurotransmitter involved in the transmission of signals between nerve cells.	C

3. What is the function of BMF-219?

BMF-219 stimulates the production of hormones in the body.	A
BMF-219 targets a protein, menin, to inhibit its function temporarily, potentially allowing for beta cell regeneration and thereby the restoration of natural insulin production.	B
BMF-219 directly increases glucose levels in the bloodstream.	C

Answers: 1:C; 2:B; 3:B

Who is BIOMEA?

We are a biopharmaceutical company founded in 2017 and focused on the discovery and development of oral covalent small molecule medicines to treat patients with metabolic diseases and genetically defined cancers. We are a company of over 100 scientists, medical doctors, PhDs, and biopharmaceutical-trained business executives dedicated to finding and developing cures for the disease we target, in fact, our corporate mission is “we aim to cure”.

A covalent small molecule drug is a synthetic compound that forms a permanent bond to its target protein and offers several potential advantages over conventional non-covalent drugs, including greater target selectivity, lower drug exposure, and the ability to drive a deeper, more durable response. Leveraging our extensive expertise in covalent binding chemistry and development, we built our proprietary FUSION™ System discovery platform to advance a pipeline of novel covalent small molecule product candidates.

As a sponsor of clinical research studies, we are committed to working to improve the options for people with diabetes. Biomea Fusion is the inventor and sponsor of clinical studies with BMF-219. Our name, Biomea, is derived from the Greek word “bios,” meaning “life,” and the Latin word “mea,” meaning “my,” as nothing is more important to us than improving the life of the individual.

Without goals, and plans to reach them, you are like a ship that has set sail with no destination.

Fitzhugh Dodson, American Psychologist

biomea FUSION™ | We Aim to Cure™

Setting Goals 03

We will learn a lot about diet, food, physical exercises and how to improve all these, but just to kick things off, please answer these questions:

Do you want to be fit in old age?

MAYBE I HOPE I WILL DO MY BEST YES

Do you want to be pain free in years to come?

MAYBE I HOPE I WILL DO MY BEST YES

Goals at Week 52

Minutes of exercise per week in average:

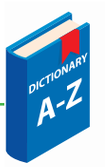
Number of steps per day in average:

Weight:

Quality of Food Improved by X%

My Ideal Physical Activities

Definition: Habits



"a usual way of behaving; something that a person does often in a regular and repeated way."

Derivation: From Latin "habere", which means "have, consist of".

Also, "a habit is something one does without consulting his awareness."

"A habit can lead to irrational behaviors like 'I have to have a cigarette.'"

It can also be "simply something one cannot stop".

biomea FUSION™ We Aim to Cure™

Habits 04

Practical Assignment

Let's identify all your dietary, exercise and sleep habits. The better we analyze them, the more we will be able to recognize unhealthy patterns and break them. Please discuss each of them with your Diet and Exercise Coach so he or she can take good notes. Write down summaries for yourself, here in this booklet.

Diet

What is your daily eating routine, what do you typically eat for breakfast/lunch/dinner, and when?

What foods do you eat for pleasure, fast foods, salty snacks, baked goods, and candy?

How often do you skip cooking and go for quick fast meals purchased on the go?

What are your snack and beverage habits?

Exercise

What is your daily/weekly exercise routine, or do you have none?

When do you normally exercise?

For how long do you typically exercise?

Sleep

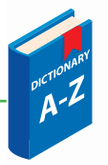
What is your sleeping routine?

How much sleep do you typically get?

How often do you get less than 7 hours?

KRC 05

Definition: Knowledge

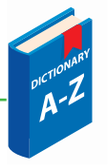


"Facts, information, and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject."

Derivation: From Old English *oncnawan* "understand, come to recognize".

Also, "Knowledge is observation and is given to those who would look".

Definition: Responsibility

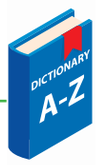


"The state or fact of having a duty to deal with something or of having control over someone".

Derivation: From Latin respons-, "answerable" or "offered in return".

Also, "One is unable to control something for which he has not accepted responsibility."

Definition: Control



"The power to influence or direct people's behavior or the course of events".

Derivation: From Latin contrarotulus, "a register, counter, or record of something". Also, "In order to control things, you have to start, change and stop them".

Greater knowledge can lead to higher responsibility and consequently to more control, but also higher responsibility can lead to more knowledge and more control, or even more control can lead to higher knowledge and responsibility. All three aspects of KRC should be developed.

We will start with knowledge then build up your responsibility and finally improve your control.

Practical Assignment

Provide a few examples to your Diet & Exercise Coach, showing how you, or someone you know, increased knowledge and thereby achieved greater control of an area of work or their private life.

Knowledge is of no value unless you put it into practice.

Anton Chekhov, Russian Playwright and Physician

biomea FUSION™ We Aim to Cure™

Knowledge 06

Food As Fuel

Our bodies, much like car engines, rely on fuel to function optimally. Food serves as the fuel for our body's engine, with the digestive system acting as the mechanism that breaks it down into usable components.

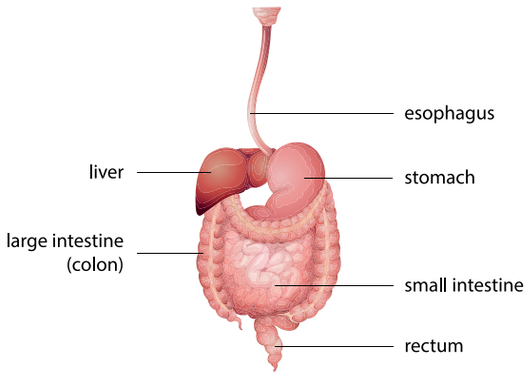
Just as different types of fuel power a car engine, various nutrients obtained from food —such as carbohydrates, proteins, fats, vitamins, and minerals—play specific roles in maintaining our health and bodily functions. However, consuming processed foods, comparable to very low-quality fuel, can harm our health. Processed foods made with unhealthy fats, sugars, and additives can lead to weight gain, elevated cholesterol and blood sugar levels, inflammation, and an increased risk of chronic diseases like heart disease and diabetes.

A diet rich in real, whole, minimally processed foods is like choosing clean, high-quality fuel for our bodies, providing us the necessary nutrients for energy production, cellular repair, and overall well-being.

Digestion

When we eat food, it goes through a process called digestion, where it's broken down into smaller parts our bodies can use. It starts in our mouth, where we chew food, and saliva begins breaking it down. Then, it moves down our esophagus into our stomach, where stomach acids and enzymes further break down the food. Next, it enters our small intestine, where key nutrients like carbohydrates, proteins, fats, vitamins, and minerals are absorbed into our bloodstream and used by our body for energy, growth, and repair. The remaining waste moves into our large intestine and eventually leaves our body as stool.

Human Digestive System



Making sure your car gets the right fuel is like making sure you eat the right food for your body. Imagine your body as a high-performance sports car—it needs good fuel to run well, just like the car ideally needs premium gas instead of regular or diesel. Eating whole, organic, and real food is like giving your body the right fuel. If you keep putting the wrong fuel in a sports car, it'll mess up the engine and eventually, the car won't work. That's similar to how eating too much processed food can hinder your digestion and lead to significant health problems.

Processed foods, like fast foods, chips, cookies, and cakes, are all made with added sugars, unhealthy fats, and artificial additives. These foods are often referred to as "ultra-processed" because they're heavily modified from their natural state. When we eat processed foods, they can lead to real problems in our bodies. For example, they can cause spikes in blood sugar levels, leading to energy crashes and weight gain over time. Additionally, processed foods can lack important nutrients our bodies need to function properly, like fiber, vitamins, and minerals. Over time, after eating too much processed food, your body will break down.

Processed Food vs. Unprocessed Food

Higher consumption of processed foods is associated with increased risks of developing type 2 diabetes as well as high blood pressure, cardiovascular disease and early death.

Research has shown that a higher intake of ultra-processed foods is linked to a 50% higher risk of death from cardiovascular disease, a 53% increase in anxiety, and a 20% higher risk of premature death from any cause (BMJ, 2024). Also, studies in the UK, France, and Spain found that people who consumed the most ultra-processed foods had a 44–65% higher risk of developing type 2 diabetes, compared to those who consumed the least *(Levy at al., 2020., Srour et al., 2020., Llavero-Valero et al., 2021).*

When we eat whole or real foods, our bodies release hormones that help regulate our hunger and fullness. One important hormone is leptin, which signals to our brain that we're full and should stop eating. However, processed foods (like chips, candy, cookies, and other food stored in some plastic wrapper) often contain additives and chemicals that don't trigger the release of these hormones the same way whole or real foods do. This means that even if we've eaten enough calories, our brain might not get the signal to stop eating, leading us to overeat on foods we really do not want and use for energy. We do not realize that we are full. It's like our body's hunger signals are being outsmarted by the additives in processed foods.

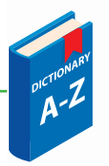
(Mendoza-Herrera et al., 2021).

Practical Assignment

Go through your daily diet and list out all the foods you eat that you believe are beneficial to your body and those that are not beneficial. Show the list to your Diet & Exercise Coach.

Beneficial	Not Beneficial

Key Terms



Calorie

A calorie is a unit of measurement for energy. In the context of nutrition, calories refer to the energy content of food and beverages and are provided by carbohydrates, proteins, and fats in our diet. Consuming more calories than the body needs can lead to weight gain, while consuming fewer calories can lead to weight loss. It's important to maintain a balanced diet that provides the necessary calories to support overall health and energy needs.

Proteins

They are essential for building and repairing tissues, making enzymes and hormones, and supporting immune function. Examples of protein-rich foods include: meat (beef, chicken, fish), eggs, dairy products (milk, yogurt, cheese), legumes (beans, lentils, tofu), nuts and seeds.

Fiber

Fiber is a type of carbohydrate found in plant-based foods that supports digestive health and helps regulate bowel movements. It also slows down the absorption of sugar, which helps stabilize blood sugar levels. Examples of fiber-rich foods include: fruits (apples, pears, berries), vegetables (broccoli, carrots, spinach), whole grains (oats, barley, quinoa), legumes (beans, lentils, chickpeas).

Carbohydrate

They are the body's primary source of energy. They provide fuel for the brain, muscles, and other organs. Examples of carbohydrate-rich foods include: grains (rice, wheat, oats), bread and pasta, fruits (apples, bananas, oranges), vegetables (potatoes, carrots, broccoli), Legumes (beans, lentils, chickpeas).

Fats

They are necessary for providing energy, insulating body organs, maintaining cell membranes, and aiding in the absorption of fat-soluble vitamins. Examples of fat-rich foods include: oils (olive oil, coconut oil, avocado oil), butter, nuts and seeds, fatty fish (salmon, mackerel, trout), avocados.

Macronutrients

Macronutrients provide calories and are the main nutrients that make up the food we eat: carbohydrates, proteins and fats. They are called "Macro" because we need large quantities of them and "Nutrients" because these are the important substances we get from food that help us survive and also grow.

What is Whole or Minimally Processed Food?

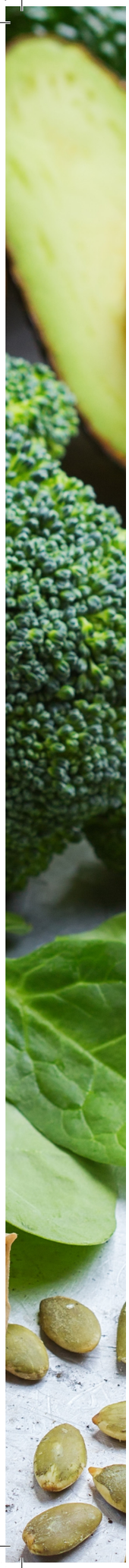
Food you can find on a tree, in the ground, food that is ideally unprocessed, maintaining its natural state with minimal alteration. Whole foods include fresh fruits and vegetables, whole grains (such as oats, brown rice and barley), nuts, beans, meat, fish, shellfish and eggs. If food has a shelf life that is increased with the use of additives etc., the food is less 'whole' and more 'processed'.

Your diet should focus ideally on whole foods.

Did You Know That...

DID YOU KNOW ?

Studies showed that people who ate 5 to 7 servings of fruits and vegetables per day had a 36% lower risk of dying from any cause; 3 to 5 servings was associated with 29% lower risk while 1 to 3 servings was linked with a 14% lower risk *(Oyebode et al., 2014)*.

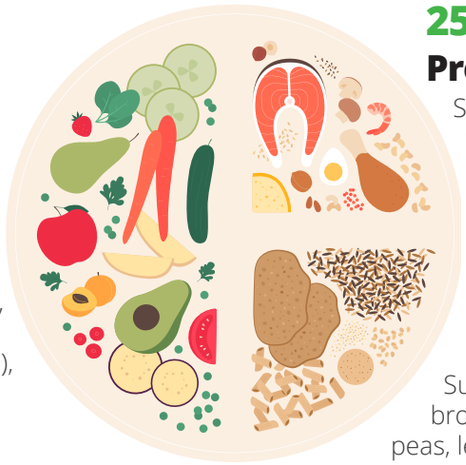


The Plate Method of Structuring Your Meals

50%

Non-starchy vegetables

Such as broccoli, brussels sprouts, carrots, cucumber, celery, leafy greens, (spinach, arugula, collard greens, kale), and zucchini



25%

Proteins

Such as eggs, lean meats and poultry, nuts and seeds, fish and shellfish, dairy products, beans, peas, and lentils paired with grains

25%

Carbohydrates

Such as whole grains (quinoa, oats, brown rice, farro, buckwheat), beans, peas, lentils, starchy vegetables (sweet potatoes, potatoes, squash, beets), and fruits

What Should You Be Eating Less Of?

- Sugary beverages (any sodas, sweetened juices)
- Processed snacks (chips, etc.)and sweets (cakes, cookies, candies)
- Sweet teas, sweet coffees and coffee creamers
- Foods with added sugar or sugar replacements.
- Partially Hydrogenated/Processed Vegetable Oils
- Fast Foods/Restaurant Foods
- Refined carbohydrates
  (white bread, white rice, sugary cereals, granola bars)
- High-fat, processed meats (e.g., bacon, sausage)
- Excessive alcohol

What Should You Be Eating?

- Non-starchy vegetables (e.g., leafy greens, broccoli, bell peppers)
- Whole grains (e.g., quinoa, brown rice, oats)
- Lean proteins (e.g., chicken breast, fish, tofu)
- Healthy fats (e.g., avocado, nuts, olive oil)
- Low-sugar fruits (e.g., berries, apples, citrus fruits)
- Low-fat dairy, unsweetened milk and yogurt

For Your HEALTH

Reduce your processed food and sugar intake, include vegetables in every meal, aim for 5+ servings of fruit/ vegetables per day, increase consumption of real food, use the plate example to structure your meals and portion sizes, hydrate with water.

Knowledge Check

1. What happens with your general sense of being full and satisfied as you eat processed foods vs whole/real food?

You know when you are full even when you eat processed foods.	A
When we eat processed foods (like chips, candy, cookies, and other food stored in some plastic wrapper) they often contain additives that don't trigger the release of these hormones that signal to us that we are "full."	B
There is no difference between processed foods and whole foods.	C

2. What are some potential effects of eating processed foods?

Decreased appetite.	A
Lower risk of cardiovascular disease and high blood pressure.	B
Spikes in blood sugar levels, leading to energy crashes and weight gain.	C

3. What is one significant finding regarding the consumption of processed foods?

Consuming ultra-processed foods reduces the risk of cardiovascular disease.	A
Processed foods have no effect on overall health outcomes.	B
Higher consumption of processed foods is associated with increased risks of high blood pressure, cardiovascular disease, and early death.	C

Answers: 1:B; 2:C; 3:C

Did You Know That...

DID YOU KNOW ?

Physical inactivity, a sedentary lifestyle, is the 4th leading risk factor for global mortality. Approximately 3.2 million deaths each year are attributable to inadequate physical activity *(WHO, 2019)*.

> **Take care of your body. It's the only place you have to live.**
>
> *Jim Rohn, American Entrepreneur*

Practical Assignment

Try to add daily walking into your routine each week, aim for 30 minutes, and keep track of how you feel. Walk brisk, do not stop and look around. Let your coach know how it felt!

Why Movement Matters for Diabetes?

Movement and physical activity play a crucial role in managing diabetes and improving overall health. Here's why:

- **Improves Insulin Sensitivity**
  Regular physical activity helps your body become more sensitive to insulin, allowing it to better regulate blood sugar levels.

- **Controls Blood Sugar Levels**
  Exercise helps lower blood sugar levels by increasing the uptake of glucose, sugar, by muscles for energy, even without the need for insulin.

- **Manages Weight**
  Being overweight or obese increases the risk of further developing type 2 diabetes and can make blood sugar control more challenging. Regular physical activity, along with a healthy diet, can aid in weight management.

- **Reduces Cardiovascular Risk**
  Diabetes is a major risk factor for cardiovascular disease. Exercise helps improve heart health by lowering blood pressure, improving cholesterol levels, and reducing the risk of heart attacks and strokes.

- **Enhances Overall Well-being**
  Physical activity can boost mood, reduce stress, improve sleep quality, and increase energy levels, leading to better overall quality of life for individuals with diabetes.

Practical Assignment

Write down physical exercises that you enjoy doing and that you can implement into your lifestyle.

Incorporating Movement Into Your Daily Routine

- **Set Realistic Goals**
  Start with achievable goals and gradually increase the duration and intensity of your workouts over time. Aim for at least 150 minutes (5 days each with 30 minutes) of moderate-intensity aerobic exercise per week, spread out over several days.

- **Find Activities You Enjoy**
  Choose activities that you enjoy and that fit into your lifestyle. This could include walking, swimming, cycling, dancing, gardening, or playing sports.

- **Create a Habit / Routine**
  Schedule physical activity into your daily routine, just like you would do any other important task. Consistency is key for seeing the benefits of exercise on blood sugar control.

- **Be Active Throughout the Day**
  Look for opportunities to be active, such as taking the stairs instead of the elevator, parking farther away from your destination, or doing household chores.

- **Listen to Your Body**
  Pay attention to how your body feels during and after exercise. If you experience any discomfort or unusual symptoms, adjust your activity level accordingly and consult with your healthcare provider if needed.

Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserves it.

Plato, Greek Philosopher

Knowledge Check

1. What is the 4th leading risk factor for death?

Insufficient physical activity	A
Swimming with sharks	B
Bungie jumping	C

2. How can you incorporate more movement into your daily routine?

Sit behind your desk during your entire shift	A
Take the bus instead of walking or biking to work	B
Schedule physical activity into your daily routine	C

Answers: 1:A; 2:C

For Your HEALTH

Do something active every day, find a workout that you enjoy, include friends, family, and community members in your workouts, aim for a minimum of 30 minutes a day.

Sleep

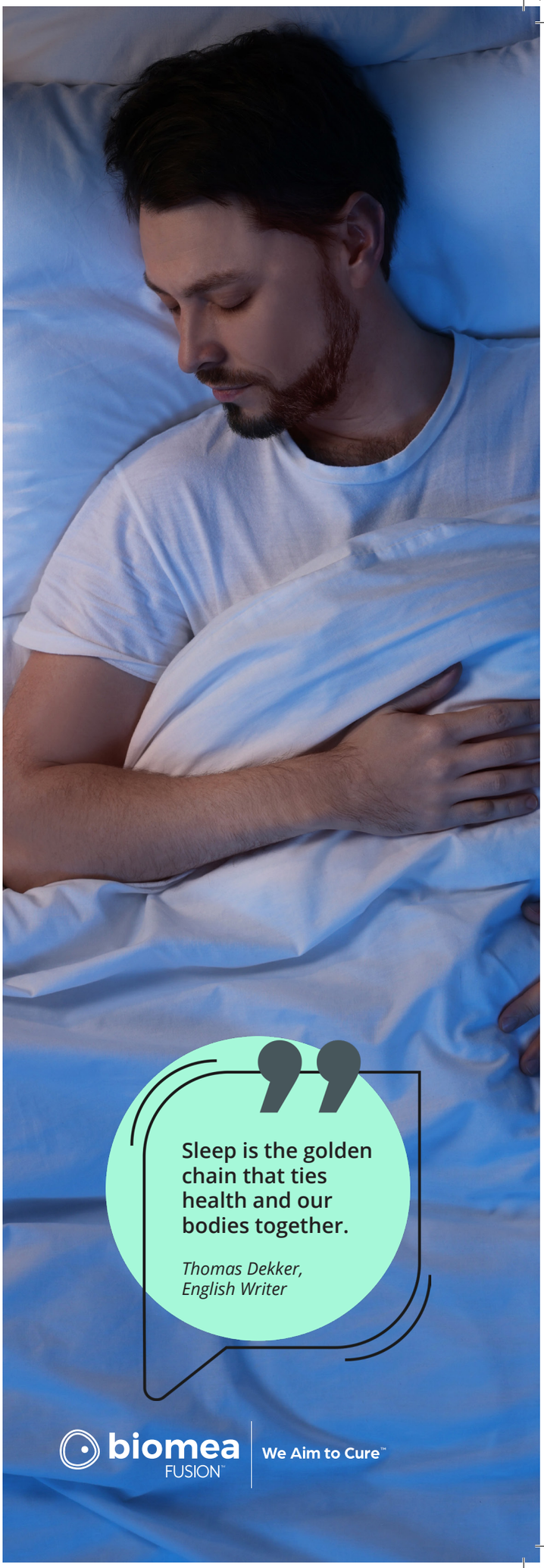
Did You Know That...

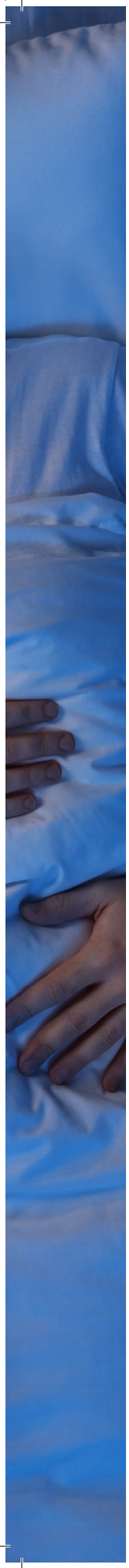
DID YOU KNOW ?

A recent study revealed those sleeping less than seven hours were 1.83 times more likely to be overweight and 1.57 times more likely to be obese than those sleeping seven to nine hours (BMC Public Health, 2021).

For Your HEALTH

Get at least 7 hours of sleep a night, create a bedtime routine so you can easily transition into 'sleep time', avoid phone and TV screens right before bed, go to bed and wake up around the same time.





06

Factors Impacting Your Sleep

- **Stress & Anxiety**
  High levels of stress and anxiety can make it difficult to fall asleep and stay asleep, leading to disrupted sleep patterns.

- **Poor Sleep Environment**
  Factors such as noise, light, temperature, and uncomfortable bedding can interfere with sleep quality and make it challenging to get a restful night's sleep.

- **Unhealthy Lifestyle Habits**
  Poor diet, lack of exercise, excessive consumption of sugar and caffeine, and irregular sleep schedules can all contribute to sleep problems.

- **Medical Conditions**
  Certain medical conditions, including diabetes, can disrupt sleep and contribute to sleep disturbances.

How You Can Improve Your Sleep Habits

- **Establish a Consistent Sleep Schedule**
  Go to bed and wake up at the same time every day, even on weekends. Aim for 7-9 hours of sleep per night and avoid sleeping-in excessively on weekends to maintain a consistent sleep-wake cycle.

- **Create a Relaxing Bedtime Routine**
  Engage in relaxing activities before bedtime, such as reading, taking a warm bath, or practicing relaxation techniques like deep breathing or meditation. Aim to start winding down at least 30 minutes before bedtime.

- **Optimize Your Sleep Environment**
  Make sure your bedroom is quiet, dark, and cool, and invest in a comfortable mattress and pillows that support healthy sleep posture. Consider using blackout curtains, earplugs, or eye coverings to minimize disturbances.

- **Limit Consumption of Sugar and Caffeine**
  Avoid consuming sugary snacks and drinks, as well as caffeinated beverages, close to bedtime. Limit intake of caffeine and avoid consuming caffeine within 6 hours of bedtime to prevent interference with falling asleep.

- **Limit Stimulants Before Bed**
  Avoid stimulating activities close to bedtime, such as intense exercise or screen time. Exposure to blue light from electronic devices can disrupt melatonin production, try to limit screen time at least 1-2 hours before bed.

Knowledge Check

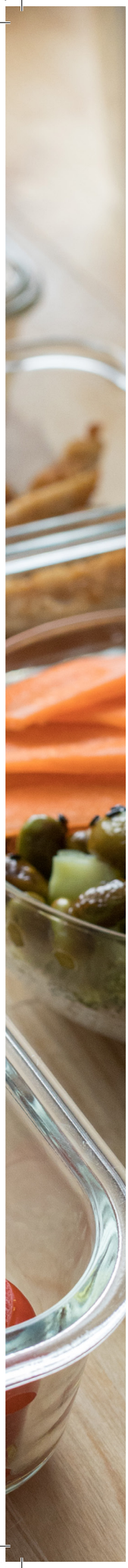
1. True or False: Avoid stimulating activities close to bedtime, such as intense exercise or screen time to enhance or improve your sleep.

True	A
False	B

2. What is a factor that will help support your sleep cycle?

Stress and anxiety	A
Excessive consumption of sugar and caffeine	B
Relaxation techniques	C

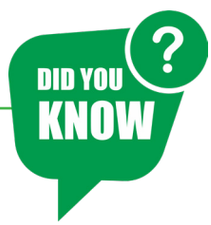
Answers: 1:A; 2:C



Exercise

How many hours of sleep do you get on average per night? Do you feel rested upon rising? How many nights a week do you sleep less than 7 hours? How is your energy level throughout the day?

Did You Know That...



A 2018 study found that people who bought minimally-processed foods (organic foods) were 20% less likely to have type 2 diabetes compared to those who didn't, after adjusting for various factors *(Sun et al., 2018).*

For Your HEALTH

Inform yourself about the products you are purchasing, limit smoke exposure, choose organic, minimally processed options and avoid plastic.

It is health that is real wealth. And not pieces of gold and silver.

Mahatma Gandhi,
Indian Lawyer

biomea FUSION™ | We Aim to Cure™

Practical Assignment

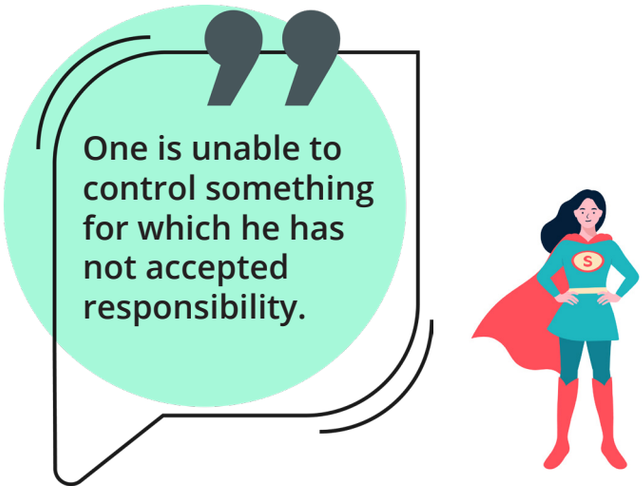
Describe a Healthy Lifestyle

Describe an Unhealthy Lifestyle

Let's Now Examine How Each of These Lifestyles May Include Diet and Exercise

Practical Assignment

With the comprehensive knowledge you now have, look at your HABITS from Section 4 and write down which habits you should break. What should be your new habits? Make a list for both, old habits to break and new habits to adopt.



Practical Assignment

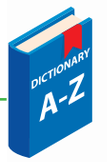
In your life, work out how this quote "One is unable to control something for which he has not accepted responsibility" may apply to you. What can you be responsible for? Have an honest look.

Practical Assignment

Let's now go over your HABITS from Section 4, write down for which one can you be responsible for?

07 Responsibility

Definition: Responsibility



The state or fact of having a duty to deal with something or of having control over someone. Comes from Latin "respons", which means "offered in return".

After accumulating knowledge, you can now apply it to your daily life and address areas where you can take more responsibility.

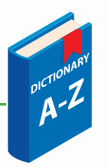
Practical Assignments

Now let's work out what food intake you can be responsible for?

Practical Assignments

Now let's work out what physical exercises and health conditions you can be responsible for?

Definition: Control



"The power to change, influence, or direct the course of events, situations, or people's behavior."

Control 08

Now that you're equipped with this knowledge and have a greater responsibility for managing your health, we aim to help you maintain control and even enhance your ability to manage your diet and exercise.

Practical Assignments

Find examples in your environment and life that you feel you have the ability to control or not control.

In what parts of your life do you feel you have more or less control? Let's be creative and find ways to make positive changes.

Practical Assignment

Define personal policies you will put in place for yourself to follow in the future to prevent a lack of control with regards to your diet and your physical exercises.

(For example: “I will no longer buy junk food”, “I will plan my meals ahead of time”, “ I will have fruits and vegetables once per day”, “I will take a walking break mid-day”, ”I will work out 5 times a week”, etc.)

> **Everyone can rise above their circumstances and achieve success if they are dedicated to and passionate about what they do.**
>
> Nelson Mandela, First President of South Africa

> **Failure isn’t fatal, but failure to change might be.**
>
> John Wooden, American Basketball Coach

09 Challenges & Responsibilities

How Do I Ensure I Will Stay On Track?

- **Measure**
  Let's ensure you measure your progress and stay honest with yourself. As you see improvements, find out what you did to accomplish them, then strengthen that. As you see small setbacks, follow up on those as well and find out what you changed to correct a possible mistake.

STAY ON TOP OF YOUR KEY STATISTICS:

My Daily/Weekly Exercises

My Diet of Whole or Real Food

- **Routine**
  Establish a routine that works for you and stick to it. This should include your routine on recurring meals, where and what you will eat, it should include daily/weekly exercises, where and what, and many other routine decisions you have worked out with your Diet & Exercise Coach.

- **Support**
  Get the support of friends, family, and those that are in your community. Engage your family to provide encouragement, participate in your activities (such as walks, sports etc.), maybe they even join you in your health journey to improve their own wellbeing.

- **Enhance**
  Look over the habits we isolated earlier in this booklet. Let's identify healthy and unhealthy habits and enhance positive changes in your life. These habits could be the quality of the food you are consuming (e.g. fast food vs. whole food), or the drinks you enjoy (sodas and energy drinks vs. water). Other consideration could be activity habits such as the amount of time spent watching TV, what time you go to bed, choosing to take evening walks, etc.. Let's analyze them and enhance those that have a positive impact.

How Do I Ensure I Will Stay On Track?

- **Policies and Problem Solving**
  Look over the decisions you make every day, and let's sit down and define guard rails that will detect and protect you and your health. What should those be? You already defined them in an earlier exercise, they are the policies that will help detect and prevent you from dropping into poor health. Let's ensure they are complete, and let's implement them with vigor!

- **Own the Future**
  It is always easy to doubt yourself and look at the past to predict the future. But in actuality, the future is a blank canvas, you define the story, and you determine its outcome. The best way to know the future is to own it and create it.

- **Happiness**
  The National Library of Medicine published a study by An et al., 2020 showing that "Higher physical activity was significantly related to better life satisfaction and happiness in young, middle-aged, and older adults." We have all probably experienced that a passive and inactive lifestyle leads to lower satisfaction in life and often to unhappiness.

- **Games, Goals & Planning**
  We have the potential to achieve a lot, as long as we avoid becoming too serious and getting stuck in our way. Let's take a positive and upbeat attitude. Look over the goals you have set for yourself and plan out how to achieve them. Life is a game; with just a bit of planning and a positive attitude you will get there.

We are all here to help you!

The story of the old Cherokee and his grandson

One evening an old Cherokee told his grandson about a battle that goes on inside people. He said, "My son, the battle is between two "wolves" inside us all. One is evil. It is anger, envy, jealousy, sorrow, regret, greed, arrogance, self-pity, guilt, resentment, inferiority, lies, false pride, superiority, and ego. The other is good. It is joy, peace, love, hope, serenity, humility, kindness, benevolence, empathy, generosity, truth, compassion and faith."

The grandson thought about it for a minute and then asked his grandfather:
"Which wolf wins?"

The old Cherokee simply replied, **"The one you feed."**

You Are A Star 10

Please Now Fill In Your Study Goals Here:

Minutes of exercise per week in average: Today — Week 26 — Week 52

Number of steps per day in average: Today — Week 26 — Week 52

Weight: Today — Week 26 — Week 52

Quality of Food Improved by X% Today — Week 26 — Week 52

Achieving all of these goals makes you a DIAMOND STAR

Achieving your weight goal alone but not the others a GOLD STAR

Achieving the exercise goals but not the others a SILVER STAR

Improving your food intake as planned but not the others a BRONZE STAR

biomea FUSION™ | We Aim to Cure™

Resources 11

Grocery Shopping Tips:

- Shop on the outer edge of the grocery store, avoiding the aisles of processed foods.
- MInimally-processed (organic) frozen fruits and vegetables are great options.
- For fresh fruits and vegetables, opt for options that are in season in your area.
- Look out for added sugar in yogurts, milks, cheeses, meat, sauces, etc. Common names include sugar alcohols (-ols), high fructose corn syrup, sucrose, brown rice syrup, maltose, glucose, lactose, barley malt syrup, malt, fructose, mannose, cane juice, etc.
- Check ingredient labels for any additives.
- Choose whole or real foods, when possible.
- Consider using phone applications like Yuka. Yuka is a free mobile app that allows you to scan the barcodes of food products and instantly see their impact on your health.
- Plan your meals for the week ahead of time and make a shopping list based on those meal plans to avoid buying unnecessary items.
- Don't shop when you're hungry to avoid impulse purchases of unhealthy snacks.
- Opt for whole grains such as brown rice, quinoa, and oats instead of refined grains like white rice and white bread.
- Include a variety of colorful fruits and vegetables in your cart to ensure you get a range of nutrients.
- Experiment with herbs and spices to flavor meals without adding extra salt or sugar.

Diabetes-Friendly Grocery Shopping List

Grains:

- Oats
- Whole grain bread
- Farro
- Quinoa
- Barley
- Brown rice
- Bulgur
- Whole wheat pasta
- Buckwheat
- Millet adding extra salt or sugar

Oils & Fats:

- Olive Oil
- Avocado Oil
- Avocados
- Olives
- Almonds
- Walnuts
- Cashews
- Pumpkin seeds
- Flax seeds
- Chia seeds
- Hemp seeds
- Sesame seeds
- Coconut oil
- Tahini

Dairy:

- Greek yogurt
- Cottage cheese
- Grass-fed milk (moderation)
- Unsweetened almond milk
- Unsweetened coconut milk
- Plain kefir
- String cheese
- Ricotta cheese
- Feta cheese
- Parmesan cheese

Fruits:

- **Blueberries**
- **Strawberries**
- **Raspberries**
- **Pears**
- **Apple**
- **Cherries**
- **Grapefruit**
- **Plums**
- **Apricots**
- **Oranges**
- **Kiwi**
- **Peaches**
- **Mangoes**
- **Papayas**
- **Grapes**

Vegetables:

- **Leafy greens (Spinach, kale, Swiss chard)**
- **Broccoli**
- **Cabbage**
- **Cauliflower**
- **Carrots**
- **Onions**
- **Green beans**
- **Tomatoes**
- **Cucumbers**
- **Bell peppers**
- **Mushrooms**
- **Asparagus**
- **Potatoes (moderation)**
- **Sweet potatoes**
- **Squash (Zucchini, butternut squash, acorn squash)**

Diabetes-Friendly Grocery Shopping List

Meat/Alternatives:

- Chicken breast (fresh or frozen)
- Turkey breast
- Fish (salmon, tuna, cod, tilapia)
- Shrimp
- Scallops
- Canned fish (tuna, salmon, sardines)
- Tofu
- Tempeh
- Eggs
- Lean cuts of beef (Sirloin, tenderloin)
- Lean cuts of pork (Tenderloin, loin chops)
- Lean ground meats (90% lean or higher)

Legumes:

- Chickpeas
- Lentils
- Beans (Black beans, kidney beans, pinto beans)
- Peas (Green peas, split peas)
- Edamame
- Hummus
- Black-eyed peas
- Cannellini beans
- Navy beans
- Soybeans
- Red lentils
- Green lentils
- Lima beans
- Mung beans
- Adzuki beans

Herbs & Spices:

- Basil
- Cilantro
- Parsley
- Rosemary
- Thyme
- Mint
- Dill
- Chives
- Sage
- Oregano
- Black pepper
- Cinnamon
- Cumin
- Paprika

- Turmeric
- Garlic powder
- Onion powder
- Chili powder
- Red pepper flakes
- Curry powder

Meal Ideas

Breakfast:

- **Scrambled Eggs with Vegetables:** Scramble eggs with diced bell peppers, onions, and spinach. Serve with a side of roasted sweet potatoes or a slice of whole grain bread.
- **Unsweetened Greek Yogurt:** Layer Greek yogurt with sliced strawberries, raspberries, and a sprinkle of granola or seeds like chia or hemp for added crunch.
- **Chia Pudding:** Mix chia seeds with your choice of milk or unsweetened almond or coconut milk. Let it sit in the fridge overnight until it thickens, then top with fresh fruit or nuts for a nutritious breakfast.

Lunch:

- **Quinoa Salad:** Mix cooked quinoa with diced cucumber, cherry tomatoes, bell peppers, and feta cheese. Dress with a simple vinaigrette made from olive oil, lemon juice, and herbs.
- **Chicken and Vegetable Stir-Fry:** Sauté diced chicken breast with broccoli, carrots, and snap peas in a wok with a splash of soy sauce and sesame oil. Serve over brown rice or cauliflower rice.
- **Greek Yogurt Chicken Salad Wrap:** Mix shredded chicken with Greek yogurt, diced apples, grapes, and a sprinkle of chopped walnuts. Spread onto a whole grain tortilla, add lettuce, and roll up for a satisfying wrap.

Dinner:

- **Baked Salmon with Roasted Vegetables:** Season salmon fillets with lemon juice, garlic, and herbs, then bake until cooked through. Serve with a side of roasted cauliflower, carrots, and zucchini.
- **Turkey and Bean Chili:** Cook ground turkey with onions, garlic, diced tomatoes, kidney beans, and chili powder in a large pot. Simmer until flavors meld, then serve with a dollop of Greek yogurt and chopped green onions.
- **Grilled Chicken and Veggie Salad:** Grill seasoned chicken until cooked through, and combine with salad greens, cherry tomatoes, cucumber slices, bell peppers and red onion. Add a dressing of olive oil, lemon juice, mustard, minced garlic and salt/pepper to the salad. Garnish with fresh herbs and a sprinkle of feta.

Snack:

- **Sliced Vegetables with Hummus: Cut cucumbers, carrots, bell peppers, etc. and dip them in hummus for a crunchy and refreshing snack.**
- **Roasted Chickpeas: Season cooked chickpeas with olive oil, salt, and your choice of spices, then roast until crispy for a savory snack option.**
- **Greek Yogurt with Seeds: Top Greek yogurt with a sprinkle of seeds like sunflower seeds, pumpkin seeds, or flax seeds for added crunch and nutrition.**
- **Sliced Apples with Cheese: Pair sliced apples with slices of cheese for a balanced and satisfying snack.**

Weekly Progress Worksheet

You Get What You Measure

The worksheets are designed to assist you in monitoring and improving your health over the next 12 months. By diligently recording your efforts each week and meeting with your diet and exercise coach bi-weekly, you have the support and accountability so you can achieve your goals and manage your diabetes effectively.

Instructions

- **Weekly Tracking**
  At the end of each week, record the steps you have taken towards your goals in the designated box. Be honest in your entries to accurately gauge your progress.

- **Ideally Bi-weekly Coaching Meetings**
  Schedule a meeting with your diet and exercise coach every two weeks, or if needed, more frequently. During these sessions, review your progress, discuss any challenges or successes, and plan strategies for the upcoming weeks. You will be meeting either in person or via Facetime or Zoom. If you need further help, just contact your coach.

- **Coach Sign-Off**
  During your in person meetings, your coach will review your monthly progress worksheets from this Manual and provide feedback. Your coach will sign off on your monthly worksheet to acknowledge your commitment and progress.

WEEK 1	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 2	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 3	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 4	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 5	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 6	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 7	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 8	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 9	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 10	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 11	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 12	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 13	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 14	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 15	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 16	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 17	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 18	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 19	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 20	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 21	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 22	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 23	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 24	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 25	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 26	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 27	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 28	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 29	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 30	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 31	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 32	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 33	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 34	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 35	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 36	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 37	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 38	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 39	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 40	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 41	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 42	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 43	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 44	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 45	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 46	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 47	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 48	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

WEEK 49	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 50	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 51	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
WEEK 52	Weight	
	Steps Taken	
	Minutes of Exercises	
	Number of Healthy Breakfasts	
	Number of Healthy Lunches	
	Number of Healthy Dinners	
	Coach Sign-Off	

Free Online Resources

Meal Planning

www.eatingwell.com

https://www.diabetesfoodhub.org

Free Meal Tracking App Resources

myfitnesspal
(macro diet &
fitness tracker)

Lose It!
(food tracker
for weight loss)

Diabetes Education

Diabetes.org
(American Diabetes
Association)

diaTribe.org
https://diaTribe.org

References

- An, H. Y., Chen, W., Wang, C. W., Yang, H. F., Huang, W. T., & Fan, S. (2020). The Relationships between Physical Activity and Life Satisfaction and Happiness among Young, Middle-Aged, and Older Adults. International Journal of Environmental Research and Public Health/International Journal of Environmental Research and Public Health, 17(13), 4817. https://doi.org/10.3390/ijerph17134817
- BMJ. (2024, February 29). Consistent evidence links ultra-processed food to over 30 damaging health outcomes | BMJ. https://www.bmj.com/company/newsroom/consistent-evidence-links-ultra-processed-food-to-over-30-damaging-health-outcomes/
- By the Numbers: Diabetes in America. (2022, October 25). Centers for Disease Control and Prevention. https://www.cdc.gov/diabetes/health-equity/diabetes-by-the-numbers.html
- Damaskos, C., Garmpis, N., Kollia, P., Mitsiopoulos, G., Barlampa, D., Drosos, A., Patsouras, A., Gravvanis, N., Antoniou, V., Litos, A., & Diamantis, E. (2021). Assessing Cardiovascular Risk in Patients with Diabetes: An Update. Current Cardiology Reviews, 16(4), 266–274. https://doi.org/10.2174/1573403x15666191111123622
- Health and Economic Benefits of Diabetes Interventions | Power of Prevention. (n.d.). https://www.cdc.gov/chronicdisease/programs-impact/pop/diabetes.htm
- Health Topics - Diabetes - POLARIS. (2021, August 9). Centers for Disease Control and Prevention. https://www.cdc.gov/policy/polaris/healthtopics/diabetes/index.html
- Know your facts about diabetes | ADA. (n.d.). https://diabetes.org/about-diabetes/diabetes-myths
- Levy RB, Rauber F, Chang K, et al. Ultra-processed food consumption and type 2 diabetes incidence: A prospective cohort study. Clinical Nutrition. 2020
- Llavero-Valero M, San Martín JE, MartínezGonzález MA, Basterra-Gortari FJ, de la FuenteArrillaga C, Bes-Rastrollo M. Ultra-processed foods and type-2 diabetes risk in the sun project: a prospective cohort study". Clinical Nutrition. 2021
- Li, Q. (2021). The association between sleep duration and excess body weight of the American adult population: a cross-sectional study of the national health and nutrition examination survey 2015–2016. BMC Public Health (Online), 21(1). https://doi.org/10.1186/s12889-021-10369-9

References

- National Diabetes Statistics Report | Diabetes | CDC. (n.d.). https://www.cdc.gov/diabetes/data/statistics-report/index.html
- Oyebode, O., Gordon-Dseagu, V., Walker, A., & Mindell, J. S. (2014). Fruit and vegetable consumption and all-cause, cancer and CVD mortality: analysis of Health Survey for England data. Journal of Epidemiology and Community Health, 68(9), 856–862. https://doi.org/10.1136/jech-2013-203500
- Preventing Diabetes Problems - NIDDK. (n.d.). National Institute of Diabetes and Digestive and Kidney Diseases. https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems
- Sleep and chronic disease. (2022, September 13). Centers for Disease Control and Prevention. https://www.cdc.gov/sleep/about_sleep/chronic_disease.html
- Srour B, Fezeu LK, Kesse-Guyot E, et al. Ultraprocessed Food Consumption and Risk of Type 2 Diabetes Among Participants of the NutriNetSanté Prospective Cohort. JAMA Internal Medicine. 2020;180(2):283-291
- Sun, Y., Liu, B., Du, Y., Snetselaar, L., Sun, Q., Hu, F. B., & Bao, W. (2018). Inverse Association between Organic Food Purchase and Diabetes Mellitus in US Adults. Nutrients, 10(12), 1877. https://doi.org/10.3390/nu10121877
- Tabish, S. A. (2007, July 1). Is diabetes becoming the biggest epidemic of the twenty-first century? PubMed Central (PMC). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3068646/
- What is Diabetes? (2023, September 5). Centers for Disease Control and Prevention. https://www.cdc.gov/diabetes/basics/diabetes.html
- World Health Organization: WHO. (2019, May 17). Physical activity. https://www.who.int/health-topics/physical-activity#tab=tab_1
- World Health Organization: WHO & World Health Organization: WHO. (2023, April 5). Diabetes. https://www.who.int/news-room/fact-sheets/detail/diabetes
- Mendoza-Herrera, K., Florio, A. A., Moore, M., Marrero, A., Tamacz, M., Bhupathiraju, S. N., & Mattei, J. (2021). The Leptin System and Diet: A mini review of the current evidence. Frontiers in Endocrinology, 12. https://doi.org/10.3389/fendo.2021.749050

EMPOWER YOUR HEALTH

AN ACTION-ORIENTED WORKBOOK FOR MANAGING TYPE 2 DIABETES NUTRITION AND LIFESTYLE

www.BiomeaFusion.com
Biomea_Covalent-111_Diet and Exercise Manual V2.0_29May2024

biomea FUSION™ | We Aim to Cure™

900 MIDDLEFIELD ROAD, 4TH FLOOR
REDWOOD CITY, CA 94063