2024

HIGHRIDGE PRIMARY SCHOOL & HEALTHY LIFESTYLE

In collaboration with Rotterdam University of Applied Science

HIGHRIDGE SCHOOL
STRIVE TO EXCEL

ROTTERDAM UNIVERSITY OF APPLIED SCIENCES

Preface

We are Corien, Frederieke, Mileidys, Renée, and Yvana, students from the Netherlands currently participating in a study program at Highridge Primary School. Through interviews at Mount Meru Hospital and our own research, we have learned that the number of people with Diabetes mellitus type 2 is increasing within the population. Our goal is to help prevent today's children from developing diabetes in the future. To achieve this, we aim to inspire and encourage them to adopt a healthy lifestyle now, so they can maintain it throughout their lives.

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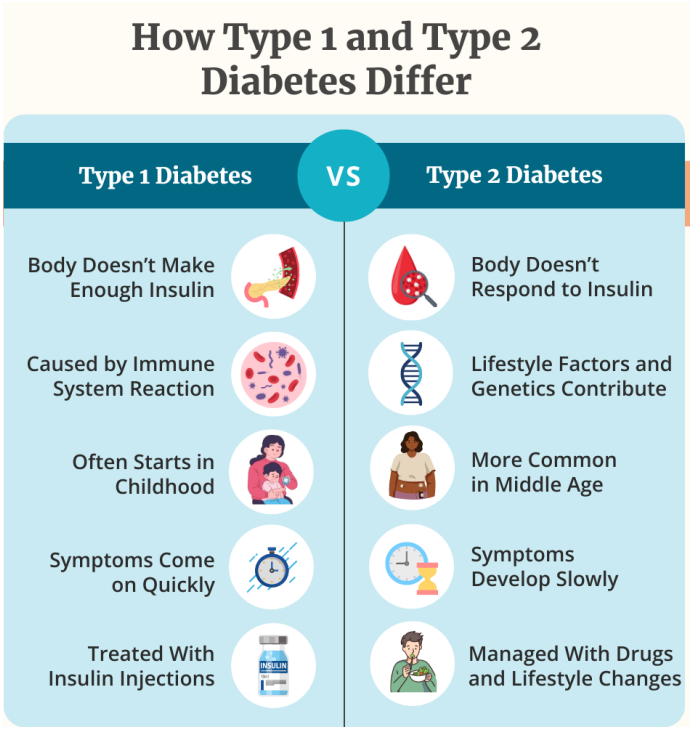
Diabetes

Diabetes type 1

Type 1 diabetes is a condition where your body's immune system mistakenly attacks and destroys the cells in your pancreas that make insulin. Insulin is a hormone that helps control the amount of sugar (glucose) in your blood.

When someone has Diabetes type 1, their body can’t make insulin anymore. Without insulin, the sugar in the blood can't get into cells to be used for energy, so it builds up in the blood instead. This can lead to problems with energy levels, feeling thirsty, needing to pee a lot, blurry vision and you get tired.



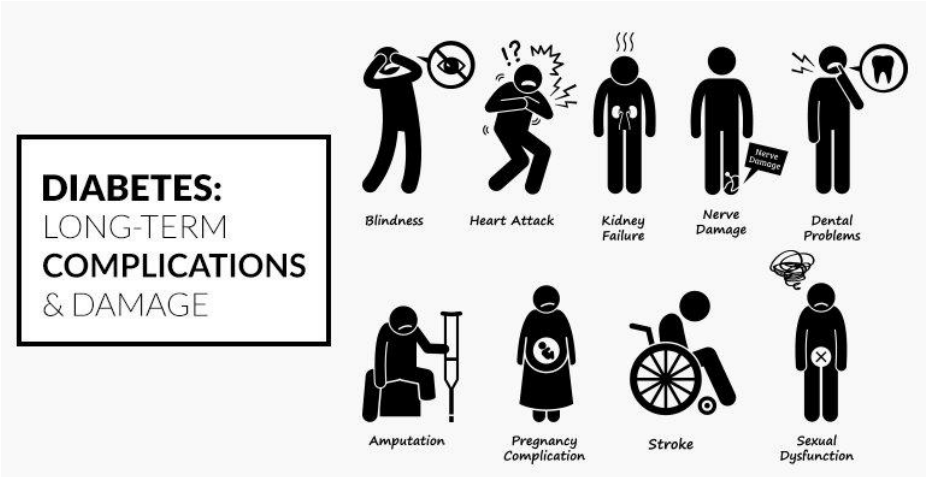
People with diabetes type 1 need to take insulin every day, usually through injections or a pump, to help manage their blood sugar levels. It’s a condition that usually starts in childhood or early adulthood, and it’s not caused by lifestyle or diet, unlike diabetes type 2.

Diabetes type 2

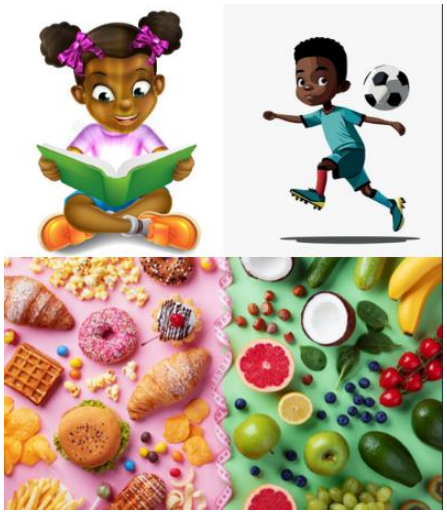
With diabetes type 2, your body can still produce insulin, but either not enough of it or the insulin doesn’t function as effectively as it should. This causes sugar to build up in your blood instead of being absorbed by your cells, leading to high blood sugar levels.

Diabetes type 2 is often associated with lifestyle factors such as being overweight, insufficient physical activity, or an unhealthy diet. While it typically develops later in life, it is becoming increasingly common among younger people.

People with diabetes type 2 can manage the condition through lifestyle changes, such as adopting a healthier diet and exercising regularly. Maintaining stable blood sugar levels is crucial to prevent complications, including heart disease, kidney problems, and eye issues.



Prevention & Focus on healthy food



During our research, we discovered that many people consume large amounts of sugar. It is important to pay attention to proper portion sizes and how food is distributed on your plate. Eating the right portions ensures your body receives the appropriate amount of energy and nutrients. Maintaining a good balance supports a healthy weight, boosts energy levels, and lowers the risk of issues such as diabetes type 2.

This risk can be reduced by adopting a healthier lifestyle, which is why we aim to provide knowledge about healthy living. We've observed that Highridge Primary School is already excelling in promoting physical activity, and we want to complement this by focusing more on healthy eating. Teaching children from a young age about healthy eating and how to make better food choices is crucial. By learning these habits early, they can carry them throughout their lives.

Below is an image illustrating what a balanced plate looks like for healthier eating.



Teachers' role

As teachers, we rely on your expertise to provide children with the knowledge they need to live healthier lives. It's important that we work together to share our ideas and knowledge in a way that's appropriate for their age. Collaboration is the key to make this invention successful. Below is a list of ideas we have collectively agreed upon:

- Children's song
- Drawing/coloring pages
- Games(yummy- and yuckyland, Memory game)
- Show a video and then answer questions
- Brochure
- Poster

Song

Vegetable song singing Walrus- Spotify and YouTube.
Lyrics:

Carrot (carrot) - Cabbage (cabbage) - Broccoli (broccoli) (One - two - three) Let's chop some carrots (Carrots na - na - na) Let's chop some Cabbage (Cabbage na - na - na) Let's chop some Broccoli (Broccoli na - na - na) (Some vegetables for you and me) Carrot - Cabbage - Broccoli (Carrot - cabbage - broccoli) (Some vegetables for you and me) And we sing na - na - na (Na - na - na) And we sing na - na - na (Na - na - na) (Vegetables for you) (You!) (Vegetables for me) (Me!) (Vegetables for you and me) One more time! (Vegetables for you) (You!) (Vegetables for me) (Me!) (Vegetables for you and me) Potato (potato) - Spinach (spinach) - Celery (celery) (One - two - three) Let's chop some potatoes (Potatoes na - na - na) Let's chop some Spinach (Spinach na - na - na) Let's chop some Celery (Celery na - na - na)	(Some vegetables for you and me) Potato - Spinach - Celery (Potato - spinach - celery) (Some vegetables for you and me) And we sing n a - na - na (Na - na - na) And we sing na - na - na (Na - na - na) Vegetables for you and me One more time! (Vegetables for you) (You!) (Vegetables for me) (Me!) Vegetables for you and me Garlic (garlic) - Onion (onion) - Leek (leek) (One- two- three) Let's chop some garlic (Garlic na - na - na) Let's chop some onions (Onions na - na - na) Let's chop some leek (Leek na - na - na) (Some vegetables for you and me) Garlic - Onion - Leek (Garlic - onion - leek) (Some vegetables for you and me) And we sing na- na- na (Na- na- na) And we sing na- na- na (Na- na- na) One more time! (Vegetables for you) (You!) (Vegetables for me) (Me!) (Vegetables for you and me)

Drawings

We have found some drawings of the vegetables. The children can color it in. Afterwards, the teachers can hang the drawings in the classroom. There are also drawings of a plate, where the children can draw what is good to eat. Mister Gunza has the drawings and can print more.

Video's

Search on YouTube the name of the video or click on the link.

English:

The story of sugar:
https://www.youtube.com/watch?v=t6LaASZHDgc&list=PPSV&t=1s
The healthy eating plate.
https://www.youtube.com/watch?v=sZEVHjRgTvQ&list=PPSV
What's in food and why it matters.
https://www.youtube.com/watch?v=64Y28m0o09s&list=PPSV&t=6s
The risk of belly fat
https://www.youtube.com/watch?v=GDfGQPHVffI&list=PPSV
What is diabetes?
https://www.youtube.com/watch?v=AALIanRCzo4

Swahili:

The healthy eating plate (Swahili)
https://www.youtube.com/watch?v=sgMnD758AJQ&list=PPSV
What's in food and why it matters (Swahili)
https://www.youtube.com/watch?v=Dzt57PUrDYI&list=PPSV&t=3s
The risk of belly fat (Swahili)
https://www.youtube.com/watch?v=0xh-fbAH5_4&list=PPSV&t=1s
What is diabetes? (Swahili)
https://www.youtube.com/watch?v=Q9dRays69ss&list=PPSV&t=2s

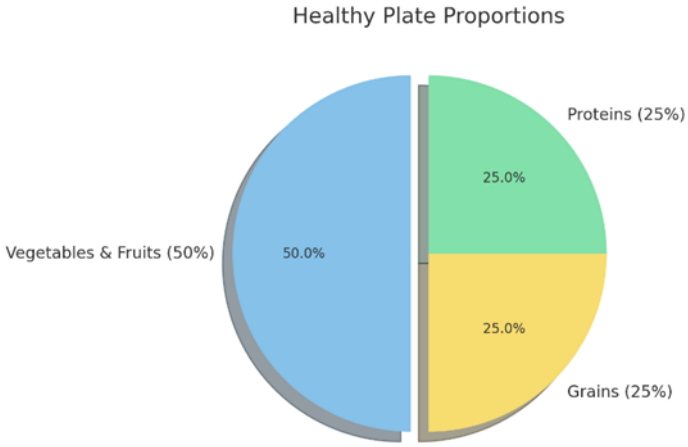
Questions and answers video

Questions video story of sugar with answers:

1. **What disease did the father in the video have?**
   - Diabetic type 2
2. **What caused the father to get this disease?**
   - Less exercise, more fast food, sweets, sugar drinks.
3. **What made the father recover?**
   - Eating homecooked meals with fresh foods, eating less, have a walk every morning.
4. **What were the symptoms of this disease?**
   - Big belly, blurry vision, peeing often, drinks a lot, tired a lot.
5. **Who encouraged the father to get tested for the disease?**
   - The son
6. **What are the complications of diabetic type 2?**
   - Heart attack, strokes, kidney disease, dementia, nerve damage

Questions video: healthy eating plate, with answers.

1. **How big should your plate be?**
   - The size of your hand
2. **Draw the proportions of the plate. And put in vegetables, protein, and healthy stages.**



3. **What are good examples for healthy protein foods?**
   - Beans, Yoghurt, eggs, milk, nuts, poultry, vis
4. **According to the video, what is good to use for cooking?**
   - Sunflower oil, safflower oil
5. **What are foods/ drinks to avoid?**
   - Red meat, margarine, vegetables shortening, sugar, sugary drinks, fruit juice.
6. **When do you have to stop eating?**
   - When you are satisfied and not full.

Questions video: what's food and why it matters, with answers.

1. **What type of food is beans?**
   - Protein and carbohydrates
2. **What type of food is eggs?**
   - Protein and fats
3. **What is best to drink?**
   - Water
4. **What is better to consume? Fruit juice or the fruit?**
   - Fruit
5. **Why is alcohol bad for you according to the video?**
   - Weight gain, Fatty lever, blood sugar level drops

Questions video: what is diabetes?

1. What does diabetes mean?
   Too much sugar in your blood

2. What does insulin?
   Insulin moves the sugar into cells for energy. And keeps your blood sugar level not to low and not to high.

3. What happens if you don't have enough insulin?
   Sugar builds up in the blood and causes damage to the body.

4. What are the symptoms of diabetes type 2?
   Thirsty, tired, blurred vision and having to urinate often.

5. What is the difference between diabetes type 1 and type 2?
   Type 1 comes at a young age; it comes on suddenly. Your body doesn't make insulin.
   Type 2 comes when you're older, and it develops slowly over years. Your body doesn't make enough insulin, or it can't function.

6. What are the long-term effects of diabetes of not treated?
   Damaged to blood vessels, Blindness, kidney failure, foot problems, hart attracts and strokes.

7. How to avoid the long-term effects?
   Keep your blood sugar levels in a healthy range:
   Eat healthy food, healthy portion sizes, and exercise.

Games

Yummy- and yuckyland

Option 1

On one side of the play area is "Yummyland," and on the other side is "Yuckyland." All players start in Yummyland. One player is the tagger, who stands in the middle of the play area. The tagger calls out something to eat (apples, Brussels sprouts, ice cream, pancakes, etc.). The players who don't like it run to Yuckyland, while the others stay in Yummyland. The tagger tries to tag as many players as possible. Anyone who is tagged is out.

Now, some players are in Yummyland, and others are in Yuckyland. The tagger then chooses something else to eat. Everyone moves to the side they belong on, depending on whether they like the food or not. Again, the tagger tries to tag as many players as possible. The last player left wins the game.

Option 2

On one side of the play area is "Yummyland," and on the other side is "Yuckyland." All players start in Yummyland. One player is the tagger, who stands in the middle of the play area. The tagger calls out something to eat (apples, Brussels sprouts, ice cream, pancakes, etc.). The players who don't like it run to Yuckyland, while the others stay in Yummyland. The tagger tries to tag someone. The one who was tagged is the new tagger.

Now, some players are in Yummyland, and others are in Yuckyland. The tagger then chooses something else to eat. Everyone moves to the side they belong on, depending on whether they like the food or not. Again, the tagger tries to tag someone.

Healthy Steps

All the children stand in a line. The teacher names a type of fruit or vegetable. If a child has eaten it before, they take a step forward. This is repeated until a child reaches the other side. That child is the winner.

Memory

Memory is a fun and educational game where kids train their memory. The goal of the game is to find matching pairs of 'food' cards by turning them over one at a time. Here's a simple explanation of how the game works:

Lay out the cards: There are usually several cards (often a set of 16, 24, 36, or 48 cards) placed face down on the table. Each card has a food-related image, and there is exactly one pair for each image.

Take turns flipping cards: Players take turns flipping two cards over at a time to reveal the images. If the cards form a matching pair (the images are the same), the player keeps those cards and gets another turn to try and find another pair. If the cards don't match, they are turned back over, and it's the other player's turn.

Use your memory: It's important to remember where certain images are located so you can find them later when you encounter the same cards again.

Continue playing: The game continues until all the pairs are found. The player with the most pairs at the end of the game wins.

Sort the cards into the right food groups

After all the pairs are found, it's time to sort the cards based on a healthy plate division. The cards should be placed into three main groups:

- **Proteins** (such as meat, fish, eggs, or plant-based proteins like beans)
- **Carbohydrates** (such as rice, pasta, bread, potatoes, or other grain products)
- **Vegetables & fruit** (vegetables like broccoli, carrots, or lettuce) (fruit like banana or watermelon)

This division follows the basic principles of

a balanced meal, where half of your plate should be vegetables, one-quarter should be proteins, and one-quarter should be carbohydrates.

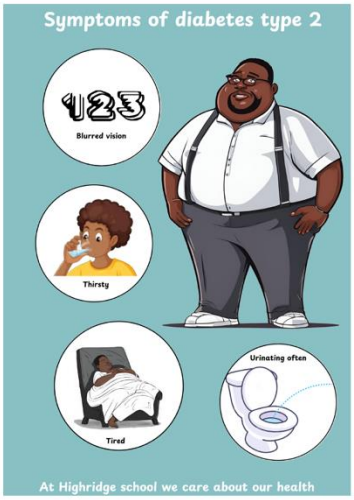
Brochure

A brochure has been created to give to the parents. It provides information about type 2 diabetes and healthy nutrition.

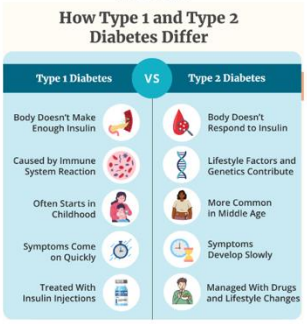
Dalili za Kisukari

Dalili za Kisukari Aina ya Pili (Diabetes type 2):

- Maono hafifu
- Kiu
- Uchovu
- Kukojoa mara kwa mara
- Tumbo kubwa



Kisukari



Aina ya Kwanza (Type 1):

- Kinasababishwa na urithi
- Huathiri watu wa umri mdogo
- Mwili hautengenezi insulini.
- Hutibiwa kwa sindano za insulini.

Aina ya Pili (Type 2):

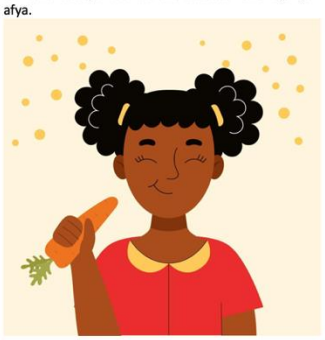
- Husababishwa na mtindo wa maisha
- Mwili hauitikii insulini au hautengenezi ya kutosha.
- Huonekana sana kwa watu wa umri wa kati.
- Dalili huanza taratibu.
- Hudhibitiwa kwa kubadilisha mtindo wa maisha na dawa.

Dawa ni ghali sana.

Mtindo wa Maisha Yenye Afya

Kuwa na afya, ishi kwa muda mrefu.

Watu wa Tanzania wanakula sukari nyingi, wali mwingi, na mboga mboga chache. Ni muhimu kuzingatia ukubwa sahihi wa milo na jinsi ya kugawanya chakula kwenye sahani yako. Unapokula milo kwa uwiano mzuri, unaweza kuhakikisha mwili wako unapata kiwango sahihi cha nishati na virutubisho. Uwiano mzuri husaidia kudumisha uzito wa mwili wenye afya, hukupa nishati zaidi, na hupunguza hatari ya matatizo kama ugonjwa wa kisukari aina ya pili (diabetes mellitus type 2). Hali hii inaweza kuzuilika kwa kuishi maisha yenye afya, ndiyo maana tunataka kuzingatia kutoa maarifa kuhusu mtindo wa maisha wenye afya. Katika kijitabu hiki tunataka kukupa maarifa zaidi kuhusu maisha yenye afya.



Sahani ya Kula kwa Afya



Ni muhimu kula vyakula vyenye afya ili kupata virutubisho vya kutosha na kudumisha sukari ya damu kwa kiwango cha kawaida.

Mboga Mboga:

- Karoti
- Biringanya
- Zukini
- Brokoli

Wanga (Carbohydrates):

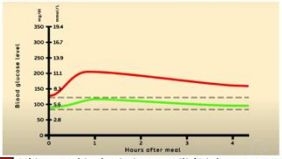
- Wali
- Ugali
- Mkate
- Chapati
- Viazi
- Mihogo
- Maharagwe

Protini:

- Mayai
- Karanga
- Kuku
- Nyama ya ng'ombe
- Maziwa
- Samaki
- Maharagwe

Nini Kipo Kwenye Chakula na Kwa Nini Ni Muhimu:

Karibu kila aina ya chakula huathiri sukari yako ya damu. Unapokula mlo wa kawaida, sukari ya damu itaongezeka.
Angalia mchoro:



Ukiwa na kisukari aina ya pili (Diabetes type 2)
Bila kisukari aina ya pili

Kwa kisukari aina ya pili, kiwango cha sukari ya damu kitaongezeka zaidi na huchukua muda mrefu kushuka. Ikiwa sukari ya damu iko juu kwa muda mrefu, inaweza kusababisha matatizo makubwa.
Wanga huathiri sukari ya damu kwa kiwango kikubwa zaidi.
Mlo wenye mafuta mengi unaweza kusababisha ongezeko la sukari ya damu kwa kuchelewa.
Vinywaji:
Maji ni kinywaji bora. Chai na kahawa bila sukari au zenye sukari kidogo ni bora. Epuka vinywaji baridi (soda) na juisi.

Jinsi ya Kula:
Tumia sahani au bakuli lililo sawa na ukubwa wa kiganja chako.
Acha kula unapojisikia umeshiba, sio ukiwa umeshiba kupita kiasi.



Kupima Tumbo

Vitu Unavyohitaji:

- Kamba
- Ukuta
- Alama ya kalamu

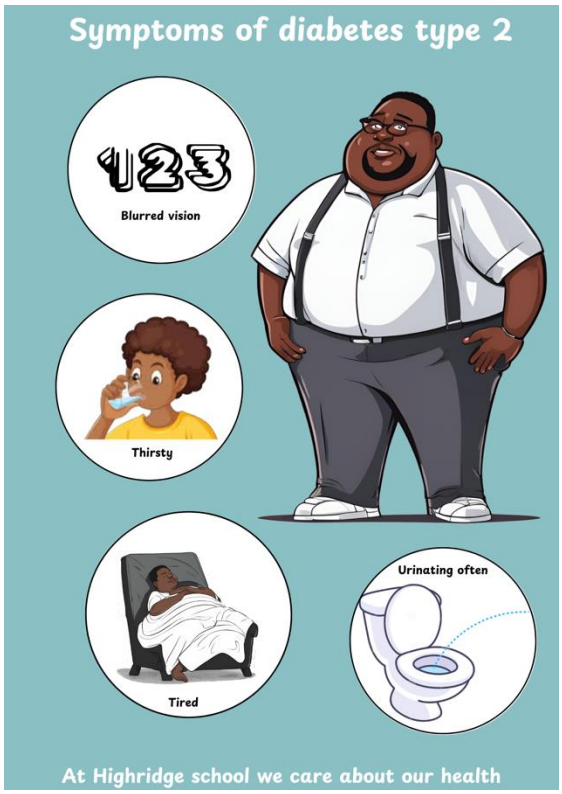


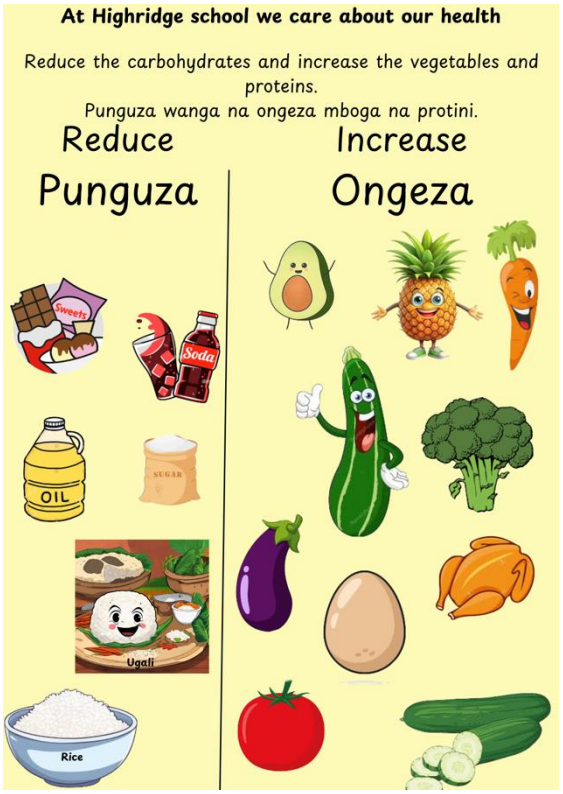
Hatua ya 1: Simama ukiegemea ukuta. Mwombe mtu akusaidie kupima urefu wako.
Hatua ya 2: Chukua kamba na pima kutoka chini hadi juu ya kichwa chako. Weka alama kwenye kamba juu kidogo ya kichwa chako.
Hatua ya 3: Kunja kamba hiyo mara mbili na weka alama katikati.
Hatua ya 4: Weka kamba juu ya mfupa wa nyonga na izungushe kuzunguka tumbo lako.

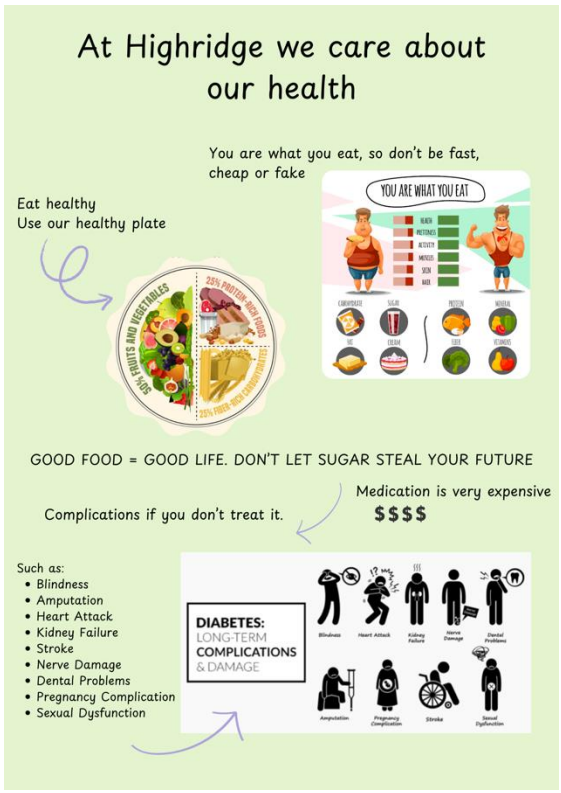
Hitimisho: Ikiwa unahitaji zaidi ya nusu ya kamba kuizungusha kwenye tumbo lako, basi tumbo lako ni kubwa kuliko inavyopaswa kuwa. Ikiwa nusu ya kamba inatosha, basi uko sawa.

Urefu wa mwili / 2 = Kipimo cha Tumbo
Mfano:
160 cm urefu / 2 = 80 cm tumbo

Posters


Symptoms of diabetes type 2
Blurred vision
Thirsty
Tired
Urinating often
At Highridge school we care about our health


At Highridge school we care about our health
Reduce the carbohydrates and increase the vegetables and proteins.
Punguza wanga na ongeza mboga na protini.
Reduce
Punguza
Increase
Ongeza
Sweets
Soda
OIL
SUGAR
Ugali
Rice


At Highridge we care about our health
You are what you eat, so don't be fast, cheap or fake
YOU ARE WHAT YOU EAT
Eat healthy
Use our healthy plate
GOOD FOOD = GOOD LIFE. DON'T LET SUGAR STEAL YOUR FUTURE
Complications if you don't treat it.
Medication is very expensive
$$$$
Such as:
• Blindness
• Amputation
• Heart Attack
• Kidney Failure
• Stroke
• Nerve Damage
• Dental Problems
• Pregnancy Complication
• Sexual Dysfunction
DIABETES:
LONG-TERM
COMPLICATIONS
& DAMAGE

Schedule per class

Plans for the future

Class 7

- Video: What is diabetes?
  - https://www.youtube.com/watch?v=AALIanRCzo4
  - With the questions about the video
- Yucky- and yummyland
- Memory

Class 6

- Video: what's in food and why it matters?
  - https://www.youtube.com/watch?v=64Y28m0o09s&list=PPSV
  - With the questions about the video
- Yucky- and yummyland
- Memory

Class 5

- Videos:
  - The story of sugar
    - https://www.youtube.com/watch?v=t6LaASZHDgc&list=PPSV
  - The healthy eating plate.
    - https://www.youtube.com/watch?v=sZEVHjRgTvQ&list=PPSV
  - With the questions about the videos
- Yucky- and yummyland
- Memory

Class 4

- Videos:
  - The story of sugar
    - https://www.youtube.com/watch?v=t6LaASZHDgc&list=PPSV
  - The healthy eating plate.
    - https://www.youtube.com/watch?v=sZEVHjRgTvQ&list=PPSV
  - With the questions about the video
- Yucky- and yummyland
- Memory

Class 3

- Video: The story of sugar
  - https://www.youtube.com/watch?v=t6LaASZHDgc&list=PPSV
  - With the questions about the video
- Yucky- and yummyland
- Memory with less carts

Class 2

- Vegetable song
  - https://www.youtube.com/watch?v=RE5tvaveVak&list=PPSV

- Coloring pages

Class 1

- Vegetable song
  - https://www.youtube.com/watch?v=RE5tvaveVak&list=PPSV
- Coloring pages

Nursing

- Vegetable song
  - https://www.youtube.com/watch?v=RE5tvaveVak&list=PPSV

Baby

- Vegetable song
  - https://www.youtube.com/watch?v=RE5tvaveVak&list=PPSV





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