

The background is a light beige color with a subtle, mottled texture. It is decorated with various chocolate-related illustrations: a piece of orange-colored chocolate with a grid pattern in the top left; a single cocoa bean in the top left; a branch with green leaves and two red cocoa pods (one closed, one open showing dark beans) in the top right; a piece of dark chocolate with a grid pattern in the bottom right; a rolled-up chocolate ribbon in the bottom right; and several cocoa beans and a piece of dark chocolate with white swirls in the bottom left.

# Healthy Chocolate:

Taste The Goodness; Embrace The Health

By **Asmaa Elsharkawy** &  
**Asma Ahmed**



# Introduction

Chocolate is one of the worlds most beloved treats, In fact 8.13 million tons of chocolate is consumed every year. However chocolate is not very great for our health because is high in added sugar and saturated fat.



# Hypothesis

If we create a healthier type of chocolate , conduct a taste test with a regular chocolate bar , and replace sugar with natural sweetness , we can make a new chocolate bar that is both healthier and more enjoyable.





# Objective

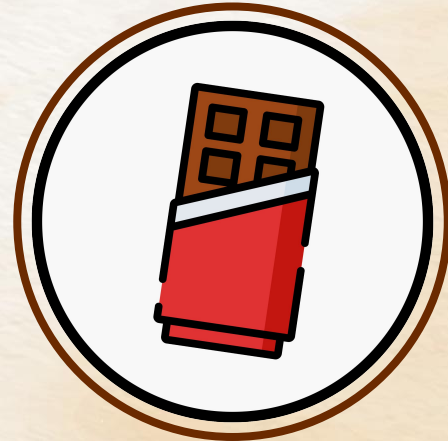
The objective of our project is.....

- To create a healthier chocolate bar
- It will be helpful for people on a diet or with diabetes etc.
- To have a treat without worrying about anything
- It provides people an opportunity to realize that treats can be both delicious and nutritious
- Boosts brain health



# Problem

The problem that we are solving is that since about 8.13 million tons of chocolate is consumed per year none of it is healthy even dark chocolate is unhealthy. Scientifically proven Lead and harmful chemicals were found in dark lead which means that even companies take the easy way out and not clean it properly



# Solution

So to come up with a solution we decided that we are gonna make healthy chocolate and use stevia instead since stevia is healthier and is actually sweeter than regular sugar. Also not use powdered sugar and other unhealthy things the artificial chocolate.





# What Is Stevia?

- Stevia is a healthy sugar substitute
- Stevia is about 200 to 400 times sweeter than Regular sugar
- Stevia is a non-nutritive sweetener, which means it has no carbohydrates, calories, or artificial ingredients.
- People don't use stevia because of its bitter after taste and because it changes the texture.



# Research

- **Origin:** Chocolate comes from the cacao beans that grow on cacao trees. They usually grow in the rainforests of Central and South America.
- **Advantages:** Chocolate is beneficial for your heart and blood circulation and flow. It also protects you from UV rays and keeps your skin glowing and radiant.
- **Disadvantages:** Particularly milk and white chocolate contain high sugar levels and overly consuming these specific kinds of chocolate can contribute to tooth decay, obesity and in severe cases, diabetes.

# Research

## ➤ Types Of Chocolates:

- ❑ **Dark Chocolate:** Rich, intense flavour but can also be very bitter sometimes
- ❑ **Milk Chocolate:** Contains milk powder and condensed milk making it richer and sweeter than dark chocolate
- ❑ **White Chocolate:** Made mostly with cocoa and sugar, making it mostly the unhealthiest option
- ❑ **Ruby Chocolate:** A newer type of chocolate with a reddish-pink color and a berry-like flavour

# Side Effects of chocolate

Chocolate is not very healthy and can affect:

1. Aging
2. Stress in the body
3. Blood pressure
4. Clogging of the blood vessels

People often say chocolate is good because it has a lot of healthy chemicals.

# Is Chocolate Good For You?

Chocolate **can** be good for you, but it depends on the type and how much you eat!

- **Dark chocolate** is the healthiest because it has **less sugar** and **more cocoa** ,
- **Milk chocolate** has more sugar and milk, so it's not as healthy but still has some benefits.
- **White chocolate** doesn't have cocoa solids, so it's mostly sugar and fat—**tasty but not super healthy.**

# Chocolate Around The World

- In Europe:
  - Switzerland and Belgium make some of the best chocolates.
  - France and Italy create delicious desserts.
- In North America:
  - Hershey's is a big name in the U.S.
  - Canada has yummy maple chocolate.



# Future of Chocolate



- New chocolate flavors like ruby chocolate and fruit-based options
- Climate change is making it harder to grow cocoa, so scientists are looking for better ways to grow it
- Lab-grown chocolate and carob-based treats could replace cocoa in the future
- More focus on eco-friendly and fair trade chocolate to help the planet

# How much Chocolate is Too Much?



## Signs You're Eating Too Much Chocolate:

- You feel tired after eating a lot (sugar crash).
- You get headaches from too much sugar or caffeine.
- You start craving chocolate every day and can't stop!
- You have stomach pain or feel sick after eating too much.



# How much Chocolate is Too Much?



## What's the Best Way to Enjoy Chocolate?

- Eat it in moderation – A small piece a day is fine
- Choose dark chocolate – It has more health benefits and less sugar.
- Don't eat it before bed – The caffeine can keep you awake.
- Brush your teeth after – To avoid cavities





# The Cocoa Bean

**Where It Grows** : Cocoa trees thrive in tropical regions near the **Equator** , like Ivory Coast, Ghana, and Brazil.

**Types of Cocoa Beans** :

- **Criollo** : Rare, mild, and expensive.
- **Forastero** : Common, strong flavor, used for most chocolate.
- **Trinitario** : A mix, with a balanced flavor.



**Fun Fact** : One tree produces about **2,500 beans** each year!



# Chocolate Industries

## Industries:

Chocolate manufacturing is an international industry with large corporations like Hershey, Nestlé, Mars, and Lindt. The majority of cocoa beans originate in West Africa, South America, and Asia, but there are problems with fair wages and child labor. Most businesses look for Fair Trade and sustainability.



# Chocolate How its made

## How Chocolate is Made:

**Harvesting:** Cocoa pods are picked from cacao trees, and the beans are dried and fermented.

**Roasting:** The beans are roasted to bring out the chocolate flavor.

**Grinding:** Cracked roasted beans and nibs are ground to chocolate liquor.

**Mixing:** Sugar, milk, and cocoa butter are added.

**Molding:** Chocolate is filled into molds, refrigerated, and is now




# What this project benefits for people lives:

## ❖ Healthier Eating Option:

By removing unhealthy fats in chocolate with natural ingredients, we help reduce the risk of health problems like obesity, diabetes, acne, and heart disease.

## ❖ Reduced Sugar:

This project can shows us how reducing sugar and using natural sweetener like stevia can still result in a tasty chocolate. This could encourage people to choose chocolate which have





# The Difference Between Our Chocolate And Famous Brands

## No White Sugar :

- Our chocolate uses healthier sweeteners like stevia, helping those who want to reduce sugar intake or manage blood sugar levels. This is something that most famous brands can't do because of their high sugar content.



## Nutritional Benefits :

- Our chocolate provides additional health benefits due to ingredients like cinnamon, nuts and protein, while famous brands often focus on taste alone, not caring about nutritional value.





# The Similarities between Our Chocolate And Famous Brands

## Cocoa as the Main Ingredient :

- Both Are chocolate and famous brands use **cocoa** as the main ingredient, ensuring that they both deliver the core flavor and texture that consumers love about chocolate.



## Rich, Decent Flavor :

- Regardless of the focus on health, both your chocolate and famous brands aim to provide a **satisfying, taste** that pleases chocolate lovers.





## Ingredients For Dubai Chocolate

1. Full box Kunafi
2. 6 Tbsp Butter
3. 2 Tbsp Stevia
4. Half a bag Pistachio
5. 3 Spoons Pistachio cream
6. Freeze for 1-2 hours

## Ingredients For Dark Chocolate

1. ¼ cup butter
2. 3 Tbsp Cocoa powder
3. 3 Tbsp Stevia
4. Pour into mould
5. Freeze for 1-2 hours

## Ingredients For Milk Chocolate

1. ¼ Cup Butter
2. 2 Tbsp Stevia
3. ½ Tbsp Milk Powder
4. 1.5 tbsp cocoa powder
5. Pour into mould
6. Freeze for 1-2 hours

## Ingredients For White Chocolate

1. ¼ cup butter
2. 2 Tbsp stevia
3. 2 Tbsp Milk Powder
4. Pour into mould
5. Freeze for 1-2 hours



# Variables

## Variables

### Controlled

Different types of  
sugar substitutes  
(Healthier Versions)

Types of chocolate  
created (e.g., Ruby,  
Dubai, Dark, Milk, etc.)

### Independent

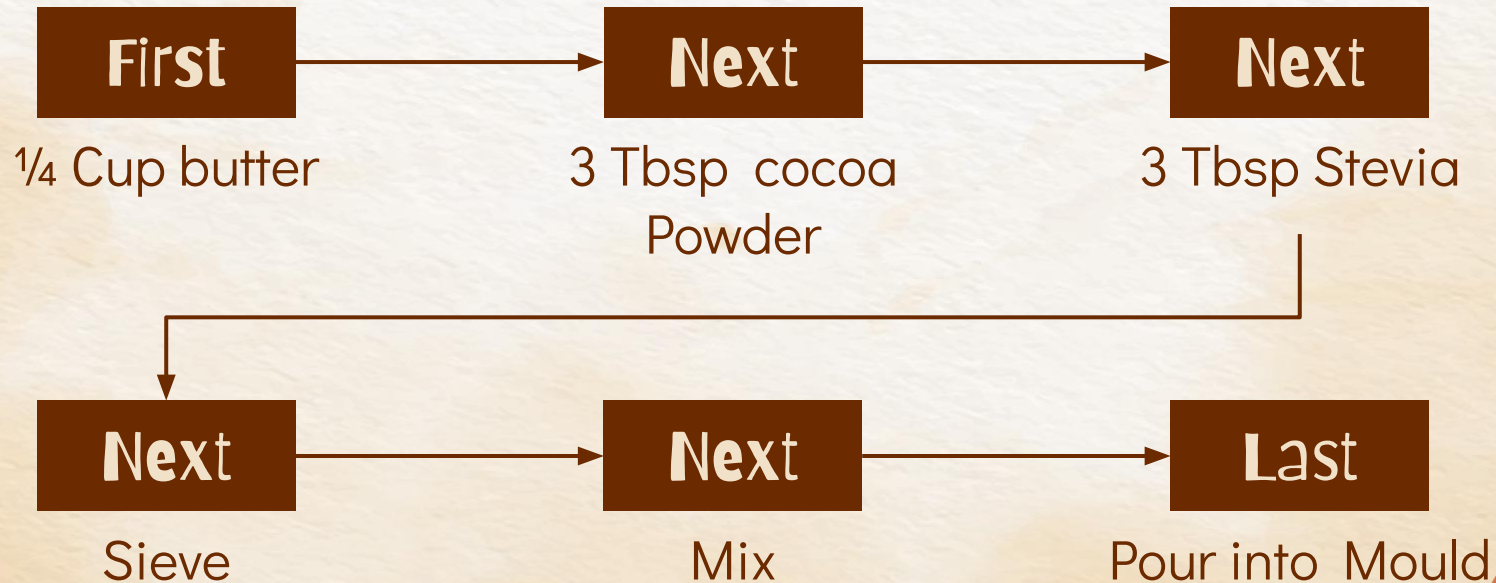
### Dependent

Taste accuracy and  
physical shape exams.



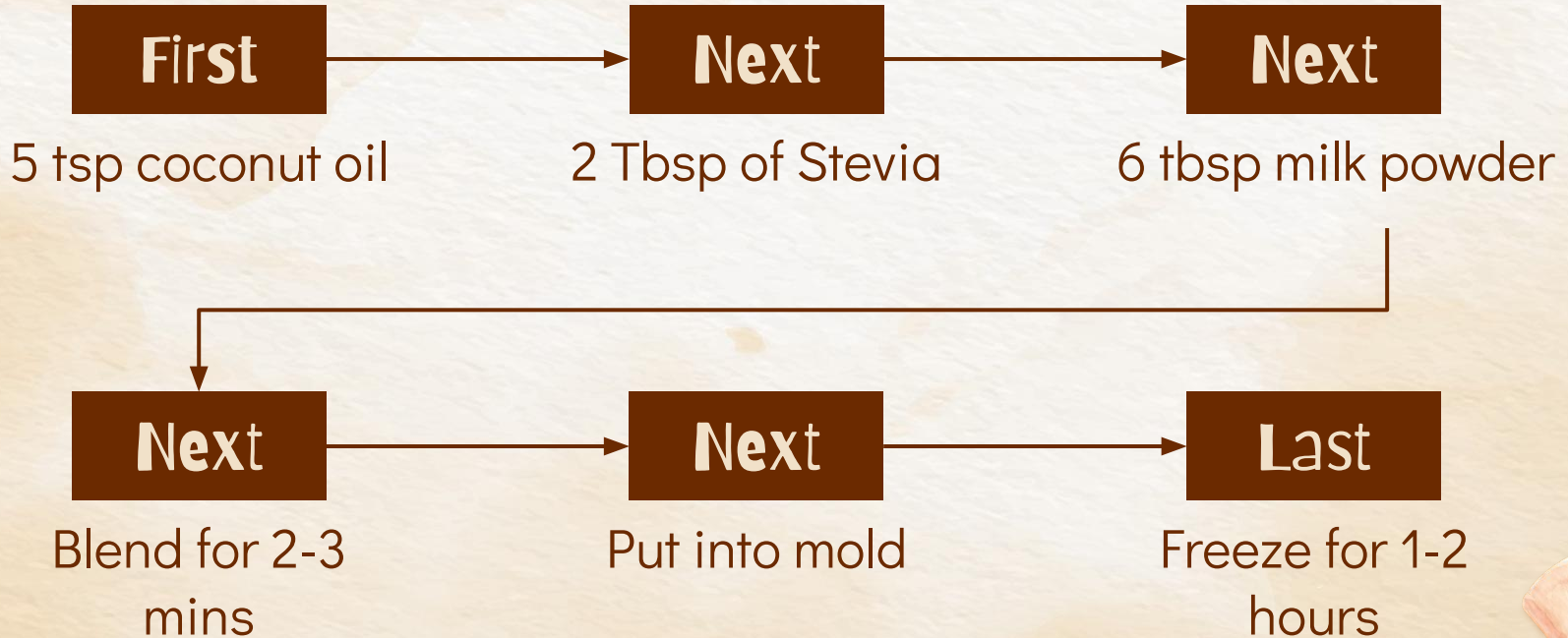
# Procedure

## Dark Chocolate recipe





# White Chocolate recipe



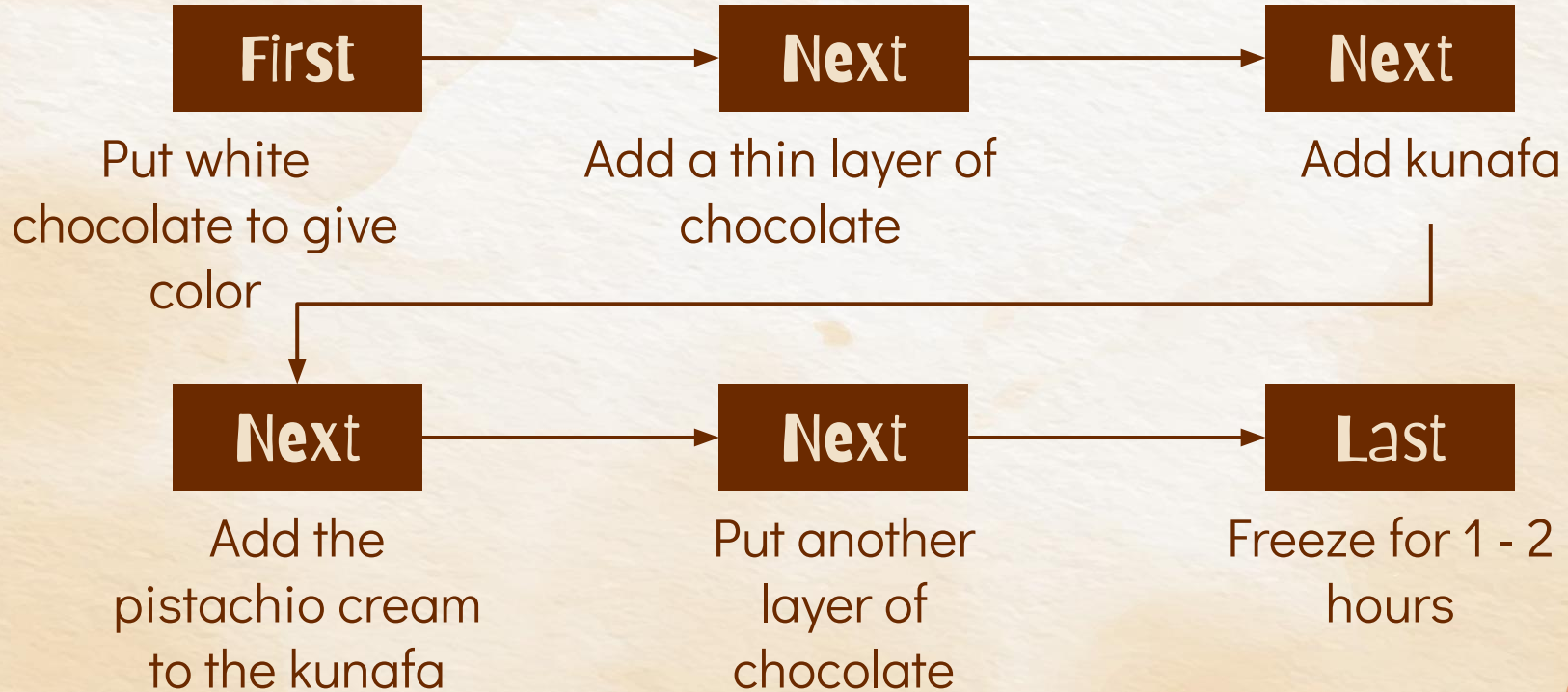


# Milk Chocolate recipe





# Dubai Chocolate recipe



# Fast Facts About chocolate

Did you know.....

- ★ White chocolate is not truly chocolate because it does not contain cocoa solids or chocolate liquor.
- ★ Cocoa was once used as currency in the olden times before money was invented.
- ★ Chocolate is technically/actually a fruit because it comes from cocoa beans which come from cocoa fruit trees.
- ★ The first chocolate bar was created by Europeans.
- ★ It takes 400 cocoa beans to produce one pound of chocolate.





# Observations

- ★ The Dubai chocolate pistachio cream worked better with less milk.
- ★ Thin chocolates were more secure and stable when using a smaller mold.
- ★ It was important not to add too much stevia sugar, as stevia is 400 times sweeter than regular sugar.
- ★ When re-making the recipe after researching another video, the result was much better.



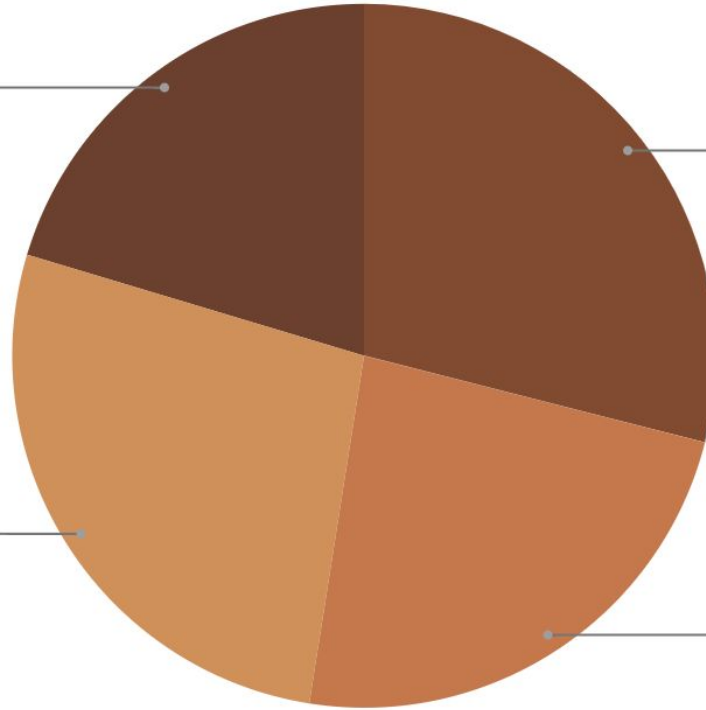
## Calories (Per Tbsp)

Coconut Sugar  
20.4%

Honey  
29.0%

Agave Syrup  
27.1%

Maple Syrup  
23.5%





# Analysis

- Used the data for the chart.
- Realized that all other healthy sugar substitutes have calories per teaspoon, but stevia has zero calories, which is why it was used and not included on the chart.
- Noticed that stevia is not widely used or well-known because it has a bitter aftertaste and can alter the texture and taste.



# Source Of Error

- We didn't calculate the sugar correctly, resulting in a lumpier texture instead of smooth.
- For the white chocolate, both the first and second attempts struggled to concentrate the ingredients and mix them well, despite blending efforts.
- These issues were resolved by following a more helpful video.
- Too much stevia was added, and since stevia is 400 times sweeter than regular sugar, we had to restart a few times to get the flavor right.



# Conclusion



- To conclude, this project demonstrates that chocolate can be both delicious and good for you.
- The goal was to create something people can enjoy without feeling guilty.
- This healthy chocolate focuses on balancing flavor with nutrition, showing you don't have to choose between treating yourself and taking care of yourself.
- The aim is for a better future and better life for generations to come.





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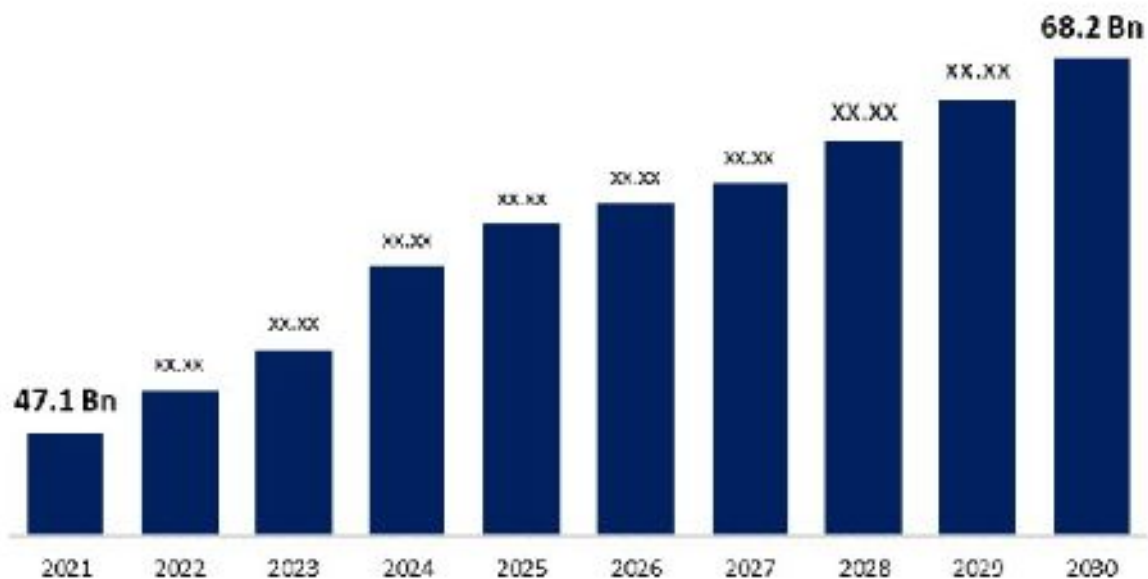
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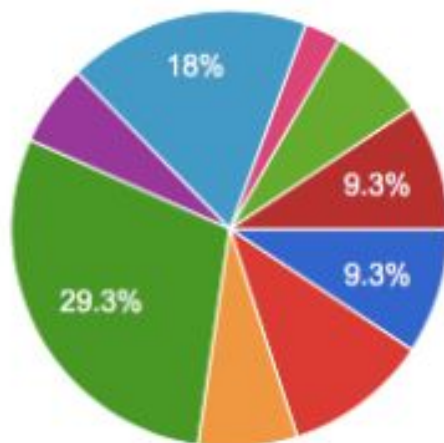
Marnie Ives is a passionate chocolate enthusiast who has been at the helm of Kron Chocolatier since 1998. With over two decades of experience. “50 Fun Facts about Chocolate You Never Knew.” *Kron Chocolatier* ,  
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## Global Cocoa and Chocolate Market







- Hershey's
- Cadbury
- Dove
- Ghirardelli
- Godiva
- Lindt
- Nestle
- Ferraro Rocher
- Other



It takes 400 cocoa beans to make 1 pound of chocolate.

The smell of chocolate, increases the brain waves, which triggers relaxation

Cocoa Beans were so valuable back then, they were used as a currency

People in London revealed their passwords for a chocolate bar a study found

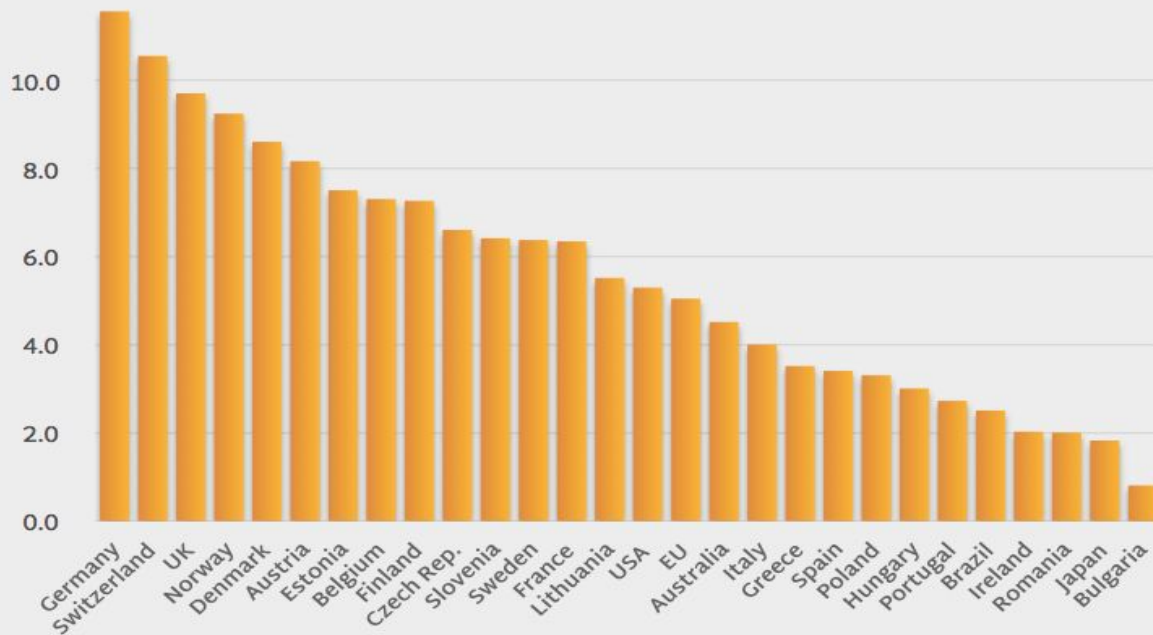




## Who's the Major Chocolate Eater?

Chocolate consumption per capita (kg)

 HelgiLibrary



Source: Caobisco, Helgi Analytics, Figures for 2012 or nearest

[www.helgilibrary.com](http://www.helgilibrary.com)





# Nutrition Facts

## Amount per

1 serving (1.3 oz) 38 g

**Calories** 227 **From Fat** 166

## % Daily Value\*

**Total Fat** 18.8g 29%

Saturated Fat 11.2g 56%

Trans Fat 0g

**Cholesterol** 0mg 0%

**Sodium** 13mg 1%

**Total Carbohydrates** 16g 5%

Dietary Fiber 1g 6%

Sugars 13g

**Protein** 2g 3%

**Vitamin A** 1% • **Vitamin C** 0%

**Calcium** 3% • **Iron** 4%

\* Percent Daily Values are based on 2000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

*HappyForks.com*