



The Center for MINDFUL EATING



How to make Mindful Eating fun!

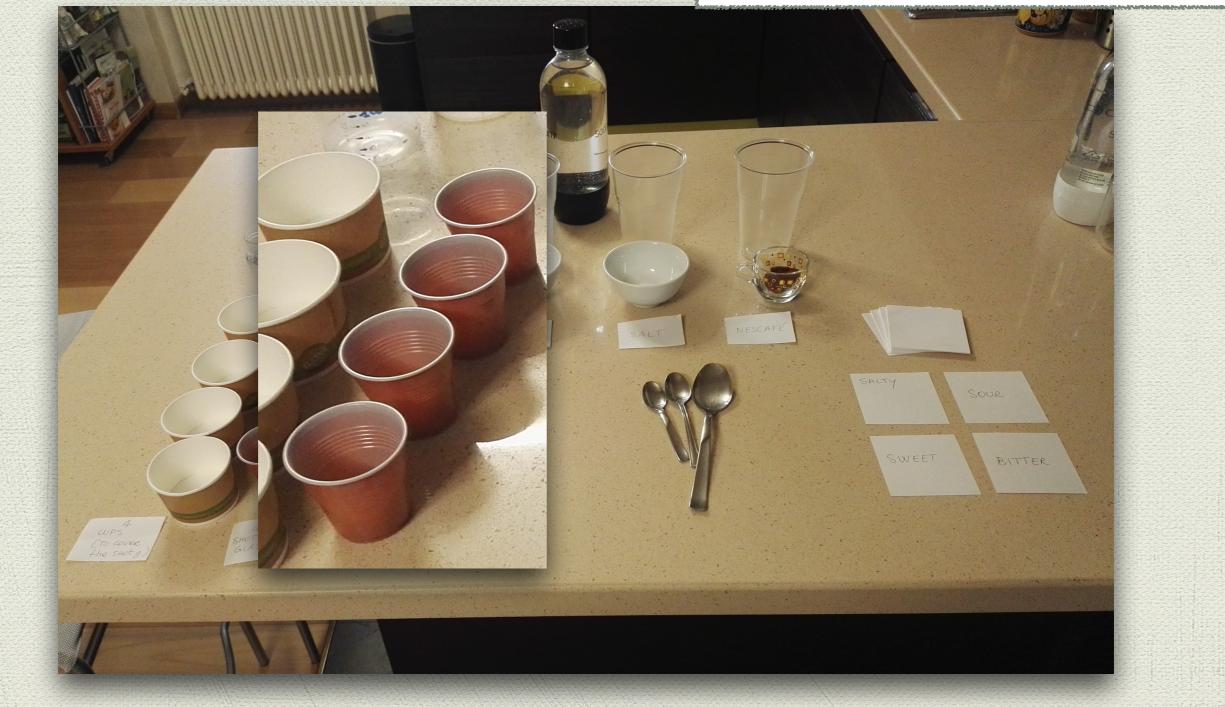
Dr. Lorenza Bicchieri PsyD and Dr. Cinzia Pezzolesi PhD

Mindful Eaking pratice "Flavor Lab" (Home version)



MATERIALS NEE

- 4 Shot glasses (or 4 for each participant)



MATERIALS NEE

- 4 Shot glasses (or 4 for each participant)

BITTER

- 4 cups (to cover the shots)

MATERIALS NEEDED

- 4 Shot glasses 4 cup (to cover the shots) Graduated cup (at least 250 ml) - 250 ml 1.50 ml 100 ml 50 BITTER

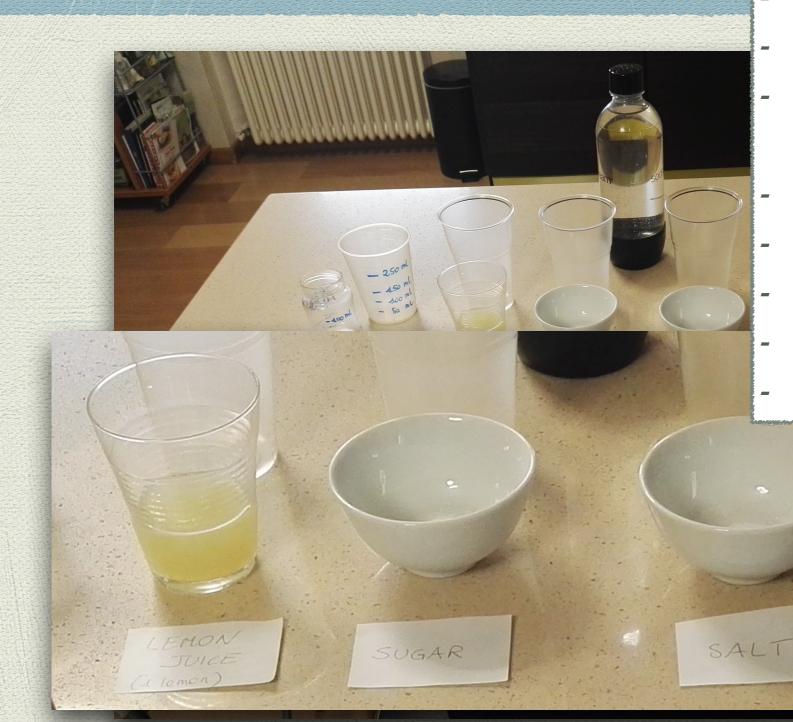
MATERIALS NEEDED



- 4 Shot glasses
- 4 cup (to cover the shots)
- Graduated cup (at least 250 ml)
- water 1 lt and 4 large glasses

BITTER

MATERIALS NEEDED

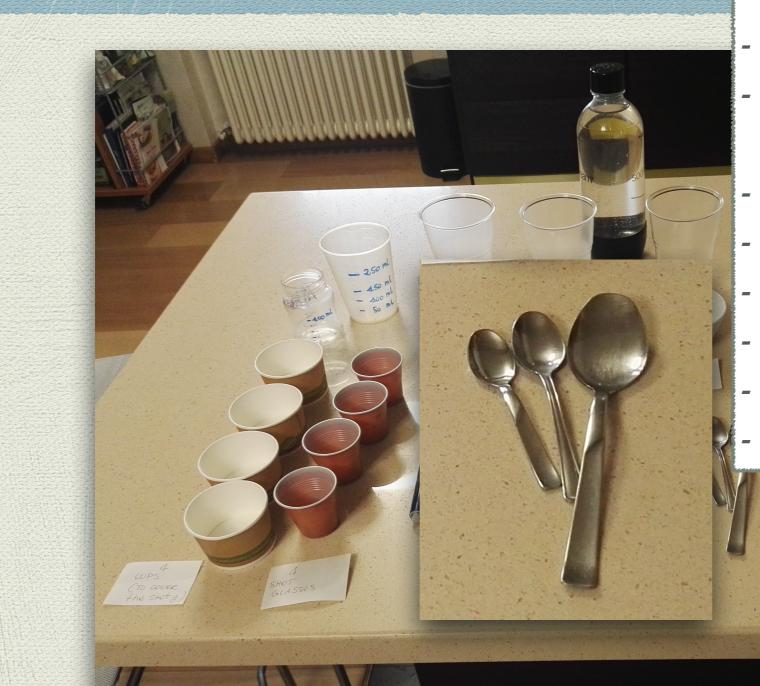


- 4 Shot glasses
- 4 cup (to cover the shots)
- Graduated cup (at least 250 ml)
- water 1 lt and 4 large glasses

NESCAFÉ

- lemon juice
- sugar
- salt
- instant coffee

MATERIALS NEEDED



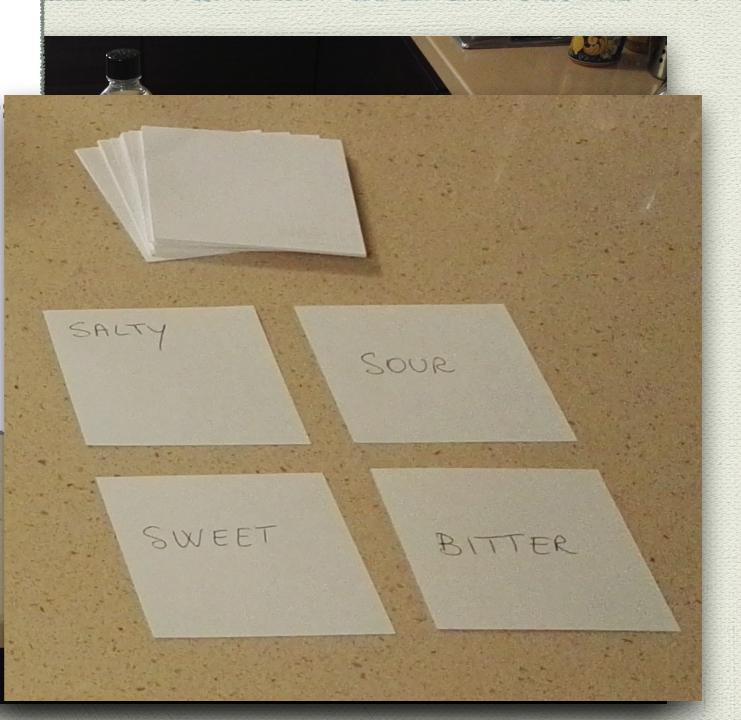
- 4 Shot glasses
- 4 cup (to cover the shots)
- Graduated cup (at least 250 ml)
- water 1 lt and 4 large glasses
- lemon juice
- sugar
- salt
- instant coffee
- table spoon and teaspoon

BITTER

- 4 Shot glasses
- 4 cup (to cover the shots)
- Graduated cup (at least 250 ml)
- water 1 lt and 4 large glasse
- lemon juice
- sugar
- salt
- soluble coffee
- table spoon and teaspoon
- 4 "placeholders"



ERIALS NEEDED



MATERIALS NEE



- 4 Shot glasses
- 4 cup (to cover the shots)
- Graduated cup (at least 250 ml)
- water 1 lt and 4 large glasses
- lemon juice
- sugar
- salt
- soluble coffee
- table spoon and teaspoon
- 4 "placeholders"
- a permanent marker

50

- 4 Shot glasses
 4 cup (to cover the shots)
 Graduated cup (at least 250 ml)
 - water 1 lt and 4 large glasses
 - lemon juice
 - sugar
 - salt
 - soluble coffee
 - table spoon and teaspoon
 - 4 "placeholders"
 - a permanent marker
 - fresh water, to drink
 between tests

"Flavor Lab" (Home version) TEST DEVELOPMENT



NEEDED MATERIALS TO PREPARE **ODORLESS** and **COLORLESS** SOLUTIONS TO TASTE THE **4 BASIC FLAVORS**:

- Graduated cup (at least 250 ml)
- water and large glasses (0.400 lt)
- Citric acid (sour)
- Sugar (sweet)
- Salt (salty)
- Caffeine (bitter)

if you don't have a precision scale:

- 4 glasses
- Syringes
- 4 bottles (if you prepare the "tasting" at home and have to carry them)

amount for 1 lt

20 g of sucrose (sugar) 2 g of sodium chloride (salt) 0.7 g of citric acid 0.8 g of anhydrous caffein

amount for 500 ml

10 g of sucrose (sugar)1 g of sodium chloride (salt)0,35 g of citric acid0.4 g of anhydrous caffein

amount for 250 ml

5 g of sucrose (sugar) 0.5 g of sodium chloride (salt) 0,2 g of citric acid 0.2 g of anhydrous caffein FOR 1/4 LITER 5 g of sucrose (sugar) 0.5 g of sodium chloride (salt) 0,2 g of citric acid 0.2 g of anhydrous caffein

"Flavor Lab" *Formal Practice*

PREPARATION FOR THE TASTING

STEPS

- 1) To combine each flavor with a letter (A, B, C or D) and write it on a sheet of paper
- 2) To label both big glasses and bottles (if you need them) with letters A, B, C, D.
- 3) To fill 3 glasses with 100 ml of water and 1 with 10 ml
- 4) To fill 4 big glasses with 250 ml of water

SWEET SOLUTION

- dilute 10 g of sugar in 10 ml of water (1g/ml)
- remove 5 ml of water from the big glass
- replace with 5 ml of sweet solution

SALTY SOLUTION

- dilute 10 g of salt in 100 ml of water (0,1 g/ml)
- remove 5 ml of water from the big glass
- replace with 5 ml of salty solution

SOUR SOLUTION

- dilute 10 g of Citric Acid in 100 ml of water **(0,1 g/ml)**
- remove 2 ml of water from the big glass replace with 2 ml of sour solution

BITTER SOLUTION

- dilute 10 g of Caffein in 100 ml of boiled
 water (0,1 g/ml)
- remove 2 ml of water from the big glass
- replace with 2 ml of bitter solution

FOR 1/4 LITER 5 g of sucrose (sugar) 0.5 g of sodium chloride (salt) 0.2 g of citric acid 0.2 g of anhydrous caffein

"Flavor Lab" Formal Practice

PREPARATION FOR THE TASTING



MATERIALS FOR EACH PARTICIPANT

- 4 shot glasses
- Individual detection card, to fill in after each taste test, and pens or pencil
- Water and 1 glass, to "reset" taste between tests
- Flip chart or billboard to record the results (optional)

Note: if you choose for compostable glasses, be sure that they haven't any smell. (because many compostable materials have a particular smell that interfere with taste)

EXAMPLE OF DETECTION CARD

SOLUTION	What flavor is it?	How intense is it? (-, +, ++, +++)	How much do you like it? (-, +, ++, +++)
Α			
В	F = 1		
C			
D			

CONDUCT THE PRACTICE

STEPS

- 1) Distribute to each participant 4 shot glasses, marked with the same letters of the solutions, and 1 glass to drink water between trials (reset tasting)
- 2) Distribute detection cards
- 3) Fill shot glasses with the 4 solutions that have the same letter and the water glass with mineral water (mineral water will be available to refill glass if needed)
- 4) Ask the participants to taste one at a time the solutions, and fill in the detection card after each trial.
- 5) At the end compare and discuss the results collectively by highlighting the individual differences

REMIND THE PARTICIPANTS TO DRINK PURE WATER BETWEEN TRIALS

CONDUCT THE PRACTICE

THE FIFTH SENSE: RECOGNIZE FLAVOR "UMAMI"

Umami is defined as "a **pleasant savory taste** that comes from glutamate and various ribonucleotides, including inosinate and guanilate, which are **naturally found** in meat, fish, vegetables and dairy products" (official definition of the **Umami Information Center**)

- often confused with salty
- generally appreciated by the majority of people
- little cubes of Parmigiano Reggiano cheese aged at 12, 24 and 30 months. The ripening allows the production of natural glutamate; Longer maturing cheese typically has a stronger flavour. Biological vs non-biological Soja sauce

"Flavor Lab"

LEARNING OBJECTIVES

IN BOTH SETTINGS

1) distinguish the four fundamental flavors

2) isolate the taste from other sensory aspects of food

TO DISCUSS AFTER PRACTICE

- If you propose the practice to children under 10-12 ("At home" version), it can be interesting to stimulate them to recognize the flavors they have tasted during the test, in the food they are used to eating.
- Emergent individual differences, offer food for thought about how those differences are fruit of both genetic patrimony and eating habits
- It may be useful to reflect about what is the aspect of food that makes it pleasant for us, in order to expand range of opportunity and promote flexibility in food choices.

Place 2 little piece of Dark Chocolate and a glass of water in front of you

when the music starts, eat one piece of chocolate slowly, and savoring it... notice and memorize what you can taste

When you have finished drink water to reset your mouth. When ready rise your hand, and we will repeat

Place 2 little piece of Dark Chocolate and a glass of water in front of you

when the music starts, eat one piece of chocolate slowly, and savoring it... notice and memorize what you can taste

When you have finished drink water to reset your mouth. When ready rise your hand, and we will repeat

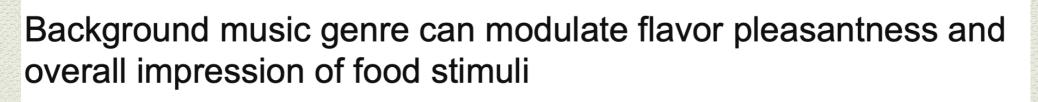
Place 2 little piece of Dark Chocolate and a glass of water in front of you

when the music starts, eat one piece of chocolate slowly, and savoring it... notice and memorize what you can taste

When you have finished drink water to reset your mouth. When ready rise your hand, and we will repeat

Place 2 little piece of Dark Chocolate and a glass of water in front of you JGSHAPT when the music starts notice and mouth. When ready I, and we will repeat

CROSS-MODAL PERCEPTION



Article in Appetite 76 · May 2014 with 1,405 Reads DOI: <u>10.1016/j.appet.2014.01.079</u> ↓ Cite this publication

Alexandra Fiegel



Jf C Meullenet II 37.81 · University of Arkansas

Appetite. 2017 Jan 1;108:383-390. doi: 10.1016/j.appet.2016.10.026. Epub 2016 Oct 23.

"Smooth operator": Music modulates the perceived creaminess, sweetness, and bitterness of chocolate. Reinoso Carvalho F, Wang QJ, van Ee R, Persoone D, Spence C.

<u>J Neurosci Res.</u> 2019 Mar;97(3):267-275. doi: 10.1002/jnr.24308. Epub 2018 Jul 19.

A bittersweet symphony: Evidence for taste-sound correspondences without effects on taste quality-specific perception. Höchenberger R, Ohla K.