

How to make Mindful Eaking fun! Dr. Lorenza Bicchieri PsyD and
Dr. Cinzia Pezzolesi PhD

Mindful Eating pratice "Flavor Lab"
(Home version)


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"Flavor Lab"
(Home version)
MATVGRIATS NAD - 4 Shot glasses (or 4 for each participant)


## (Home version)

## MAIURIAESNPE

- 4 Shot glasses (or 4 for each participant)
- 4 cups (to cover the shots)
"Flavor Lab"
(Home version)
MATYRTAES NPADED
- 4 Shot glasses
- 4 cup (to cover the shots)



## MATYRIAES NPADPD



## (Home version)

## MATYRIAESNAMDEI



- 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


## (Home version)

- 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


## ERIAES NEDDAD



- soluble coffee
- table spoon and teaspoon
- 4 "placeholders"



## (Home version)

## MAYARTATSNE

- 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
"Flavor Lab"
(Hnme varsion)

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- 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


## "Flavor Lab" Pormal Practice

## 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)
$0,35 \mathrm{~g}$ of citric acid
0.4 g of anhydrous caffein
amount for 250 ml
5 g of sucrose (sugar)
0.5 g of sodium chloride (salt)
$0,2 \mathrm{~g}$ 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)
$0,2 \mathrm{~g}$ of citric acid
0.2 g of anhydrous caffein

## "Flavor Lab" Pormal Practice

## PREPARATITON FOR THE TASTING

## STEPS

1) To combine each flavor with a letter ( $\mathrm{A}, \mathrm{B}, \mathrm{C}$ 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 $(\mathbf{1 g} / \mathbf{m l})$ 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 $(\mathbf{0 , 1} \mathbf{~ g} / \mathbf{m l})$ 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 ( $0,1 \mathrm{~g} / \mathrm{ml}$ )
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 ( $0,1 \mathrm{~g} / \mathrm{ml}$ ) remove 2 ml of water from the big glass replace with 2 ml of bitter solution

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

## "Flavor Lab" Formal Practice

## PREPARATION FOR THE TASTING



## "Flavor Lab" Pormal Practice

## MATERTALS FOR EACH PARIICIPANI

- 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)

## "Flavor Lab" Pormal Practice

## EXAMPLE OF DETECTION CARD



## "Flavor Lab" Pormal Practice

## CONDUCT THE PRACIICE

## 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

## CONDUCT THE PRACIICE

## 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 OBJECDIVES

## IN BOTH SETTINGS

1) distinguish the four fundamental flavors
2) isolate the taste from other sensory aspects of food

## "Flavor Lab" Pormal Practice

## 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.

## Hear what a taste!

## 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

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## CROSS-MODAL PERCEPTION

Background music genre can modulate flavor pleasantness and overall impression of food stimuli

Article in Appetite $76 \cdot$ May 2014 with 1,405 Reads (i)
DOI: 10.1016/j.appet.2014.01.079
$\downarrow$ Cite this publication

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.

J Neurosci Res. 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.

