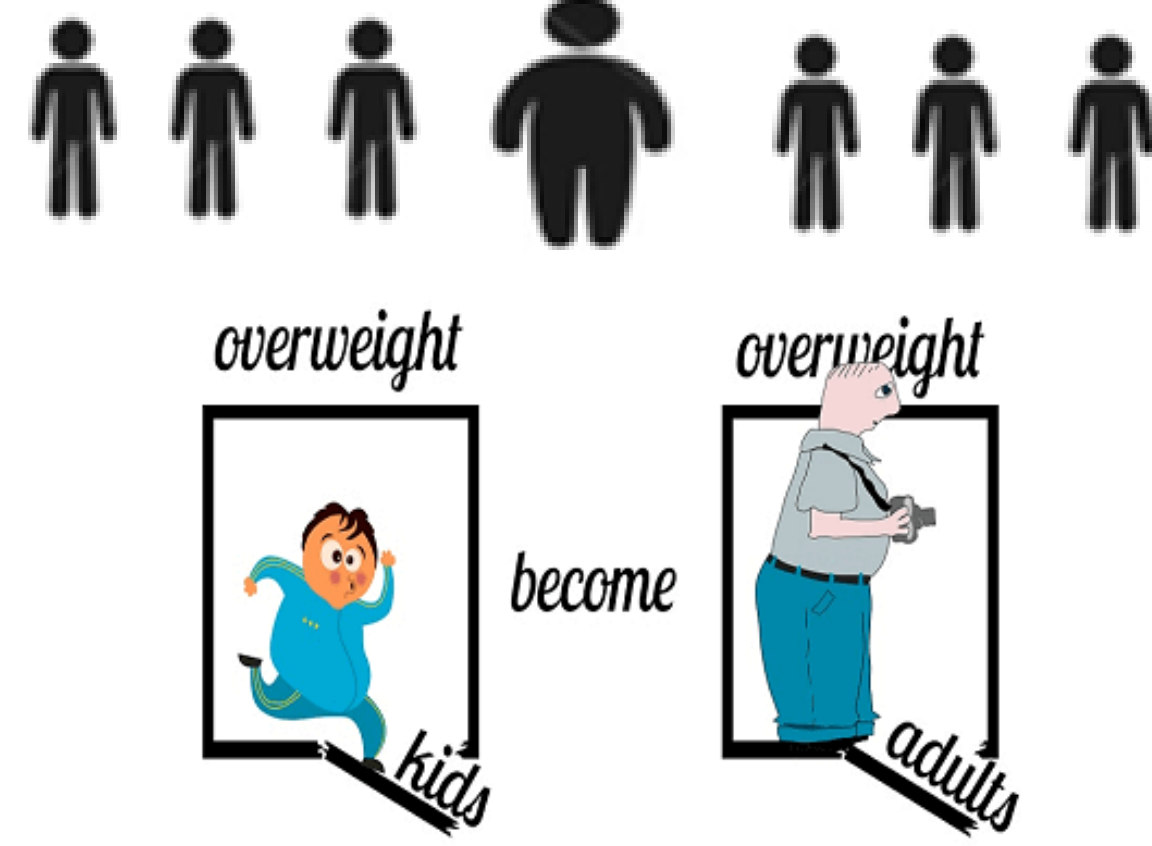


# EXECUTIVE FUNCTION TRAINING: THE LONGITUDINAL EFFECTS ON WEIGHT CONTROL AND PSYCHOLOGICAL WELLBEING OF CHILDREN WITH OBESITY

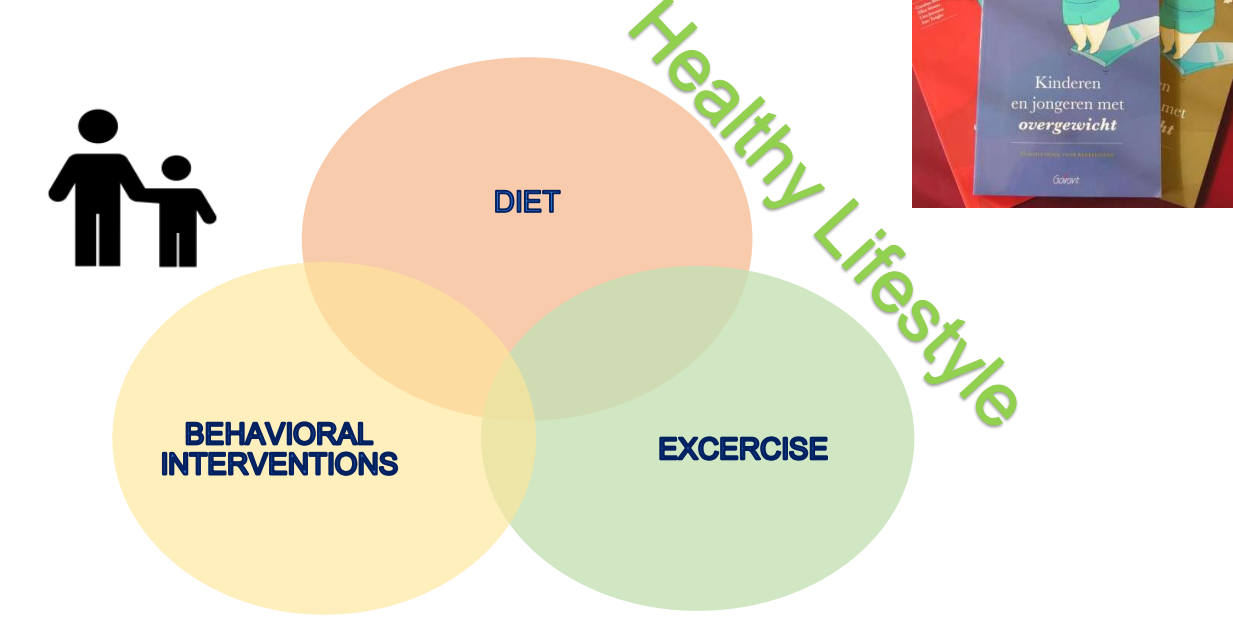
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Advisory Committee: dr. Leentje Vervoort, Prof. dr. Caroline Braet, dr. Sandra Verbeken, Prof. dr. Ernst Koster, Prof. dr. Saskia Van der Oord

## THE OBESITY EPIDEMIC & THE CHALLENGE OF WEIGHT CONTROL



### Multidisciplinary Obesity Treatment (MOT)



### Limited Long-term Success Relapse & Weight Regain



## THE ROLE OF EXECUTIVE FUNCTIONS (EF) IN OBESITY

EXECUTIVES

Neuropsychological processes to guide self-control in response to the environment



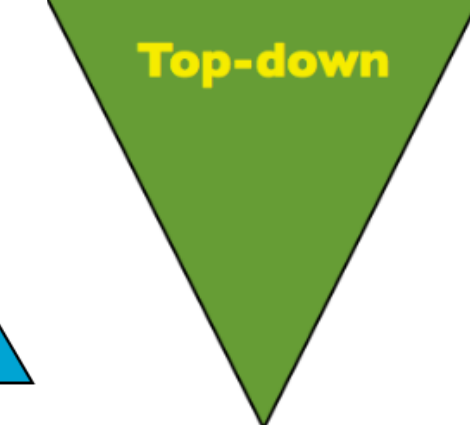
PATHWAY

Fast / Automatic Emotional



Attentional Bias  
Reactive Temperament

Inhibitory Control  
Regulative Temperament



Slow / Effortful Logical

EVIDENCE

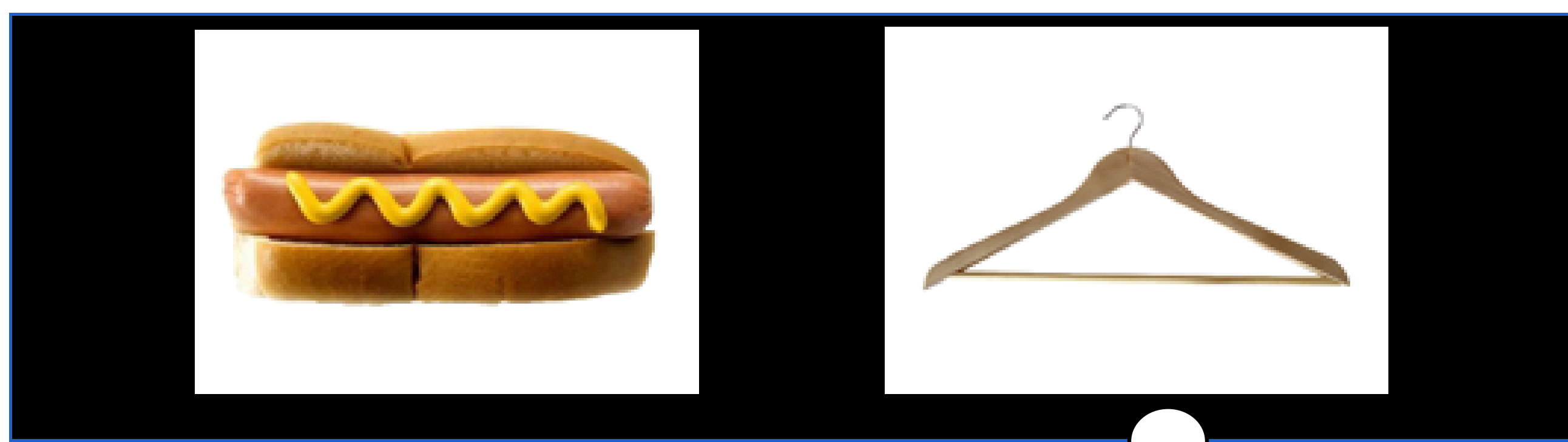
Deficits predict weight gain

Deficits hinder treatment

Improvable

## EF TRAINING ON TOP OF MOT

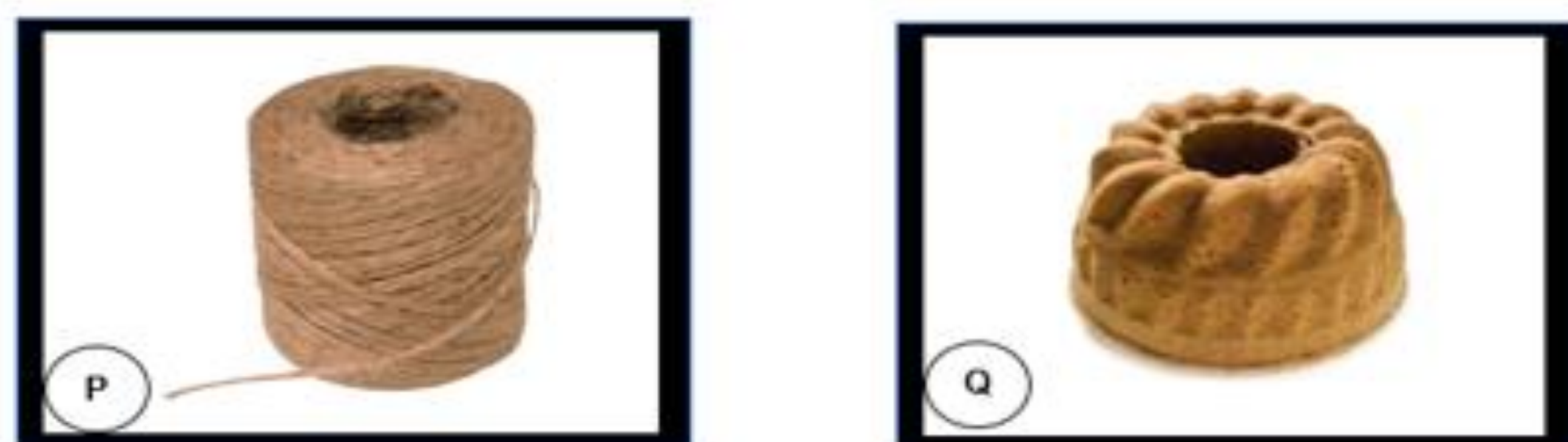
("Brain Fitness" BF)



### DOT PROBE

(Kemps, Tiggemann & Hollit, 2014)

Bottom-up



### GO/NO GO

(Houben & Janssen, 2011)

Top-down

## DESIGN: RCT

Inclusion: obesity, 8 – 18j, searching treatment  
Exclusion: other intervention research, underlying medical conditions  
Randomization: 1/1 for age, gender and BMI  
Inclusion: 2017-2018

Multicenter

2 conditions

Longitudinal

5 TIME POINTS

Participants

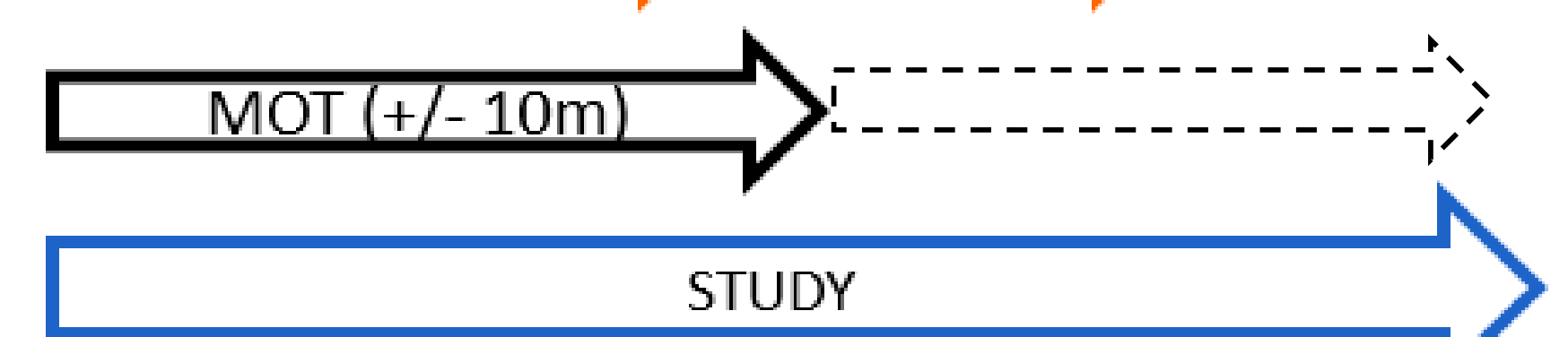
Obese youth in treatment (8-18y)

preventorium N = 100  
AZ JAN PALFJUN GENT N = 50  
UZA Kennis / Ervaring / Zorg N = 50

N = 200

N = 100 experimental training  
N = 100 active control shamtraining

INTENSIVE (6w) BOOSTER (8w)



Intake Start BF during MOT End MOT Start Booster BF End BF & 2M FU 6M FU

T0 T1 T2 T3 T4

## RESEARCH PREDICTIONS & INSTRUMENTS IN COMPARING THE GROUPS OVER TIME

IN THE EXPERIMENTAL GROUP:

Longitudinal Multilevel Analysis

### 1) MORE WEIGHT LOSS & MAINTENANCE

BMI SDS  
BMI IOTF

### 2) HEALTHIER EATING BEHAVIOR

External & Emotional Eating (DEBQ)  
Binge Eating (Ch-EDE-Q)

### 3) BETTER EXECUTIVE FUNCTIONING

Dot Probe & Go/No Go  
BRIEF & ECS

### 4) MORE PSYCHOLOGICAL WELLBEING

Self-Worth (CBSK/A)  
Internalizing symptoms (ASEBA, CDI)

CONTROLLING FOR  
IQ (SPM)

Age & Gender  
ADHD symptoms (ASEBA)