

**ToyBox Programme:** A kindergarten based, family involved intervention aiming to prevent obesity among preschool children and their families

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# ToyBox-Programme Partners



## Academic Research Institutes

- Harokopio University, HUA (GR)
- Ludwig-Maximilians University of Munich, LMU (DE)
- State Institute of Early Childhood Research, IFP (DE)
- Ghent University, Ugent (BE)
- VU University Medical Centre, Vumc (NL)
- University of Zaragoza, UniZar (ES)
- Akershus University College, HIAK (NO)
- Durham University, UDUR (UK)
- Roehampton University, RoU (UK)
- Children's Memorial Health Institute, CMHI (PL)
- Medical University of Varna, MUV (BG)

## International / Health Promotion Organisations

- International Association for the Study of Obesity, IASO (UK)
- Netherlands Institute for Health Promotion and Disease Prevention, NIGZ (NL)

## SME

- AOK- Verlag GmbH (DE)

# What is ToyBox Programme?

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- ▶ Is kindergarten based, family involved intervention aiming to prevent obesity among preschool children and their families.
- ▶ The intervention programme is evidence-based, developed by a multidisciplinary team of experts from 14 Entities throughout Europe working in close collaboration with teachers and parents from 6 member states.
- ▶ The programme was tested by more than 700 kindergarten teachers in 309 kindergartens reaching more than 17,000 children and their families in 6 countries.
- ▶ The results obtained over one year of intervention showed significant improvements in the targeted obesogenic behaviors among children and parents, as well as relevant parental practices.
- ▶ The vast majority of teachers found it very useful and easy to implement.
- ▶ The implementation of the ToyBox Programme is currently expanded in more than 18 countries globally.



# Why kindergartens?

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- ▶ The risk of obesity is starting from very early childhood. Obese preschoolers will more likely become obese adults if no early action is not taken.
- ▶ Kindergarten is an ideally setting since:
  - ▶ It reaches all children/ families
  - ▶ Parents need to take their children to the kindergarten and have regular contact with teachers
  - ▶ Parents are seeking for trustful source of information regarding their children's growth, nourishment, physical activity and social interactions.
  - ▶ Parents are more willing to become good role models and also adopt healthy behaviours for their own benefit too.
  - ▶ Kindergarten curriculum is quite flexible, allowing the easy integration of the ToyBox-programme in kindergartens' weekly time table.



# How is ToyBox Programme implemented?

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- ▶ Four specific behaviours are targeted:
  - ▶ drinking water
  - ▶ healthy snacking
  - ▶ physical activity
  - ▶ decreasing sedentary time
- ▶ It is implemented by the kindergarten teachers by:
  - ▶ Creating a supportive environment in the kindergarten
  - ▶ Reminding and encouraging children to implement the targeted behaviors
  - ▶ Acting also themselves as a role model wherever feasible
  - ▶ Promoting the behavior by doing some of the very simple activities they are provided with (like reading a fairytale, using a hand puppet to encourage children to actively participate and implement the behaviour, allowing children to interact with each others)
  - ▶ Disseminating printed newsletters to the parents so as to actively engage the families too



# What about Physical activity sessions?

## Is there a need of a trained instructor?

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- ▶ The physical activity sessions provided are build on the natural desire for children to be active since via physical activity they are socializing with their peers.
- ▶ Simple, non competitive, non sport related activities with cheap material (like balloons and newspapers) are proposed. In these sessions:
  - ▶ There are no winners and losers
  - ▶ There is no competition and there is no risk for the children to be injured by falling one on another.
  - ▶ No Physical Education Instructor is needed
  - ▶ No facilities are required; it could be also delivered in the classroom.
  - ▶ Teachers if they wish they could combine the fairytales or other classroom activities with physical activity sessions (e.g. animals walking in the forest)



# How could ToyBox Programme be implemented nationally? How could the teachers be trained?

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- ▶ There is a power point training presentation available in 7 European languages.
- ▶ A 30 minutes video could also be developed which could be sent via e-mail to all kindergartens nationally to be used for familiarizing the teachers with the programme and give them simple instructions and examples of how the programme could be implemented.
- ▶ The material (intervention class material, parental newsletters and tip cards) could be also sent electronically via e-mail at no cost to all kindergartens at a national level.
- ▶ ToyBox material is already available in 7 European languages
- ▶ ToyBox material could be further adapted to country/local conditions if requested by a member state and the ToyBox research team could help with relevant adjustments.



# ToyBox material was developed by a multidisciplinary team working with teachers and parents from 6 member states



2010

2011

2012-2013

2014

- Systematic reviews
- Secondary analysis
- Focus groups



Key-behaviours  
& their  
determinants

## Targeted behaviours

- Water consumption
  - Snacking
- Physical activity
- Sedentary behaviour

## Aiming to:

- Change kindergarten environment
- Implement the behaviours
- Conduct interactive activities
- Target/Involve parents via newsletters/tip-cards/posters



# ToyBox Programme was tested in 6 countries during school year 2012-2013

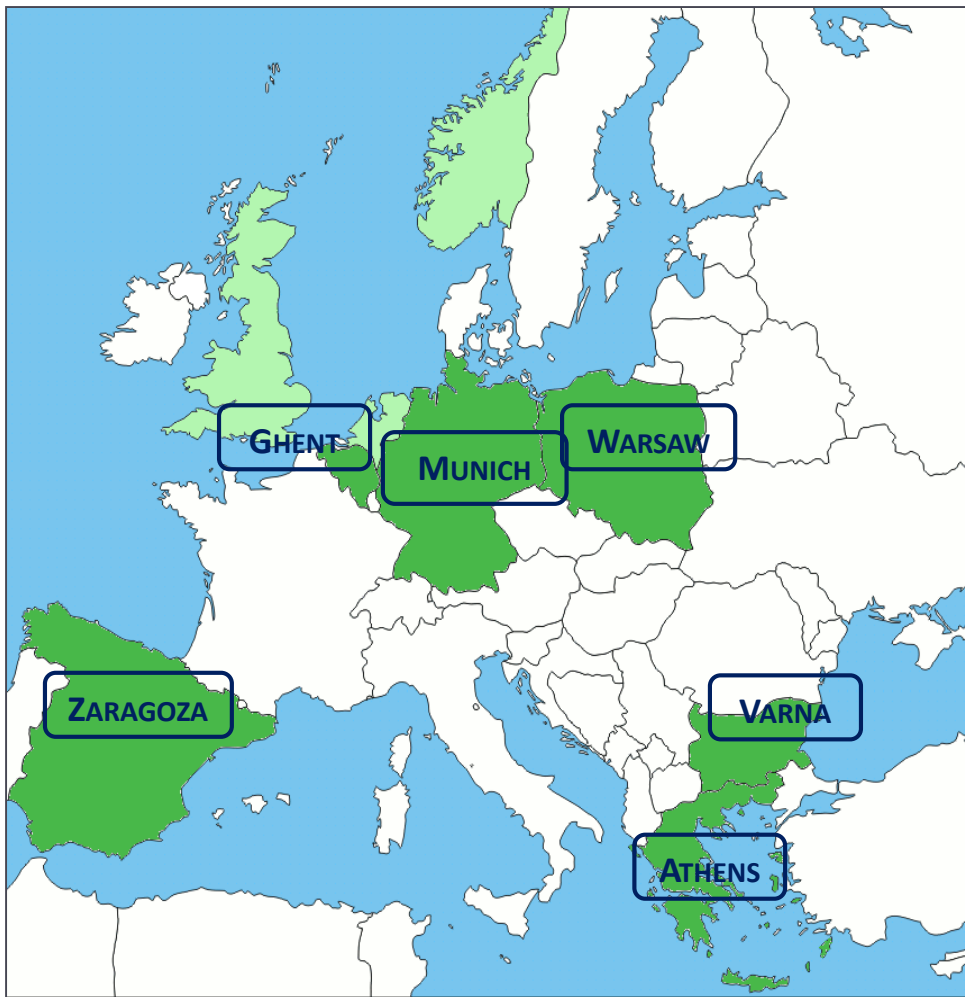
April 2010

2011

2012

2013

2014



ToyBox Programme was implemented:

- by more than 700 kindergarten teachers
- in 309 kindergartens
- reaching more than 17,000 children and their families

# ToyBox material is available in 7 European languages and in electronic format



The ToyBox material contains:

- A Training presentation for teachers
- Teachers' guides for implementing each one of the targeted behaviors
- News letters, tip cards and posters for the parents

# 1<sup>st</sup> Behaviour: Water consumption

## Change of kindergarten environment



## Implementation of behaviour





# 1<sup>st</sup> Behaviour: Water consumption

Every 30-40  
minutes

## Implementation of behaviour



# 2<sup>nd</sup> Behaviour: Snacking

## Change of kindergarten environment



## Implementation of behaviour





# 2<sup>nd</sup> Behaviour: Snacking

Morning snack



## Implementation of behaviour



# 3<sup>rd</sup> Behaviour: Physical activity

## Change of kindergarten environment



## Implementation of behaviour



# 3<sup>rd</sup> Behaviour: Physical activity

At least 2  
times/week



## Implementation of behaviour





# 4<sup>th</sup> Behaviour: Sedentary behaviour

## Change of kindergarten environment

## Implementation of behaviour



# 4<sup>th</sup> Behaviour: Sedentary behaviour

Every 30-40  
minutes



## Implementation of behaviour

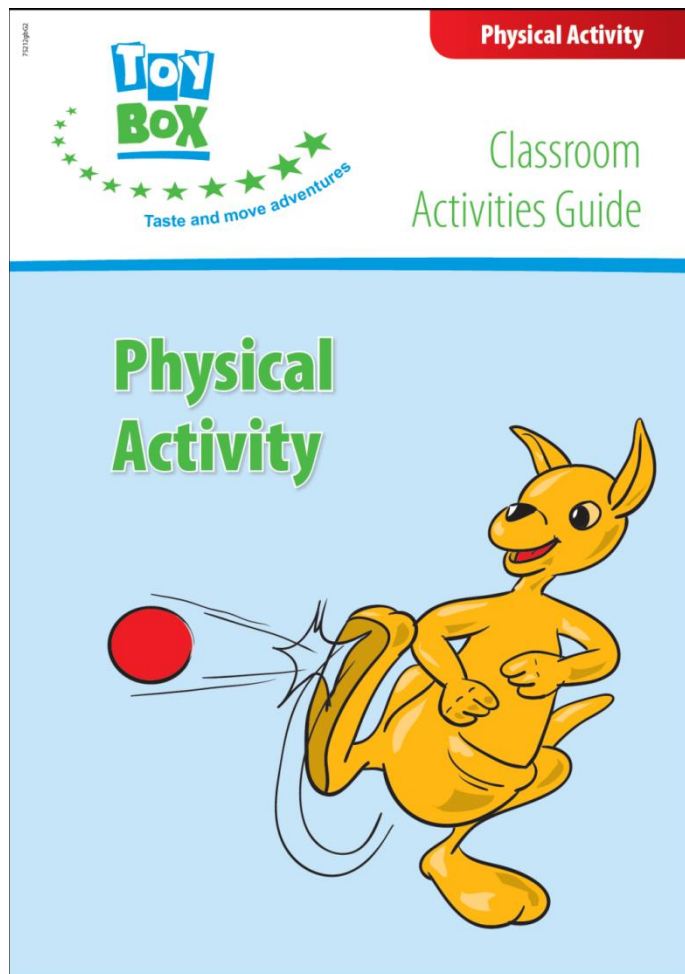




# For all behaviours: classroom activities



# Examples of physical activity sessions



# Chiffon cloths and parachute



# A day at the construction site





# Material journey



# Newspaper session



# Cardboard roles



# Newspapers and clothes pegs



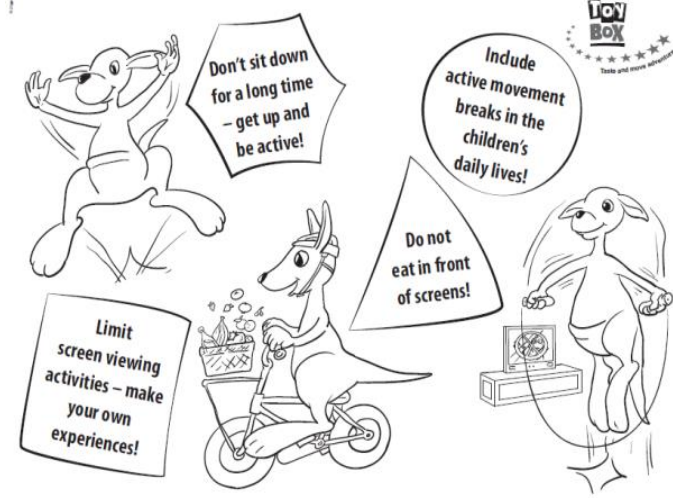
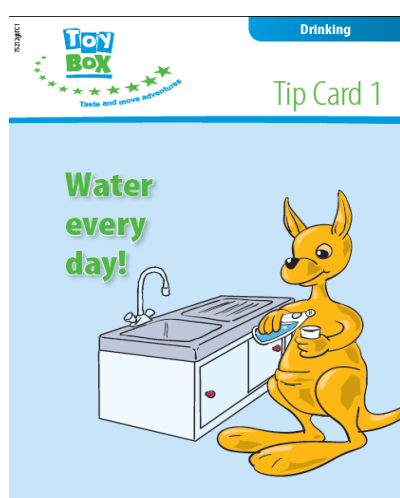
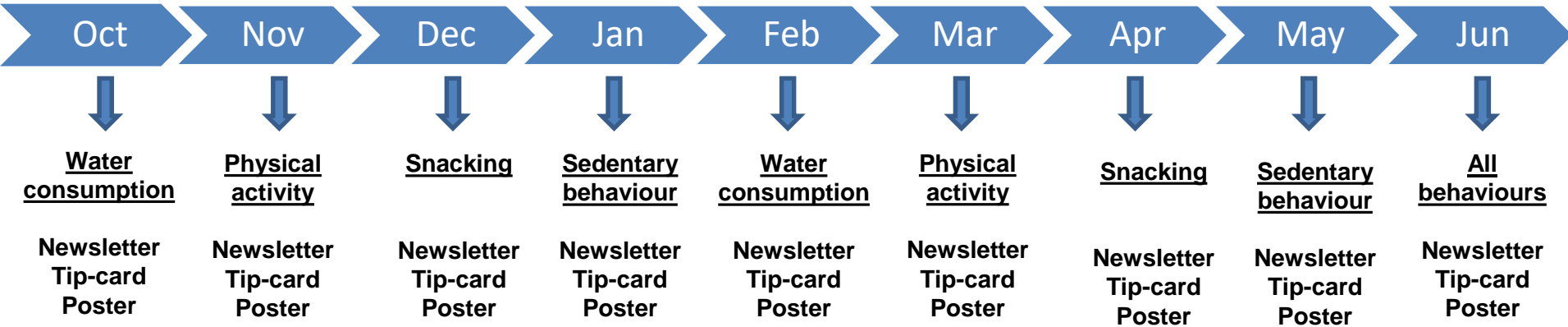
# Small pirates

## Games with a balloon





# Material for parents



- 9 Newsletters
- 8 Tip-cards
- 4 Posters

# ToyBox-Programme was tested in 6 countries (2012-2013). For evaluation purposes baseline and follow-up data was obtained from 5550 families

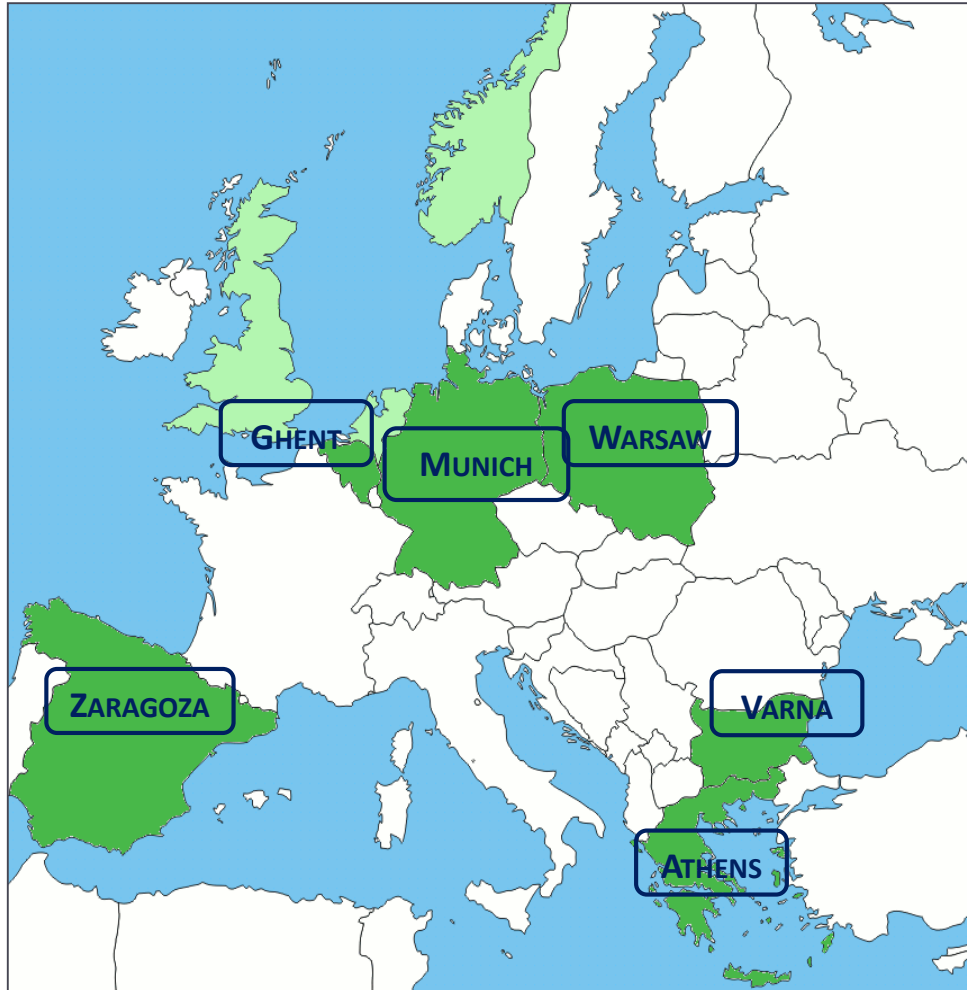
April 2010

2011

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2014



Country	Kindergartens	Children/ Parents
Belgium	26	1032
Bulgaria	19	792
Germany	55	954
Greece	92	854
Poland	49	1065
Spain	30	853
<b>Total</b>	<b>271</b>	<b>5550</b>

# RESULTS OF TOYBOX-INTERVENTION



# Is ToyBox-Programme effective?

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- ▶ After obtaining data from more than 5,500 families it was found:
- ▶ Many significant favorable changes in children's and parents' obesogenic behaviors as well as improvement in many parental practices.
- ▶ Indicatively significant favorable changes were observed for:
  - ▶ water consumption
  - ▶ prepacked fruit juice consumption
  - ▶ sweet snacks consumption
  - ▶ meat products (e.g. salami, hum etc.) consumption
  - ▶ screen time



# Is ToyBox-Programme easy to implement?

## Is it low cost?

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- ▶ Yes it is, since it uses available infrastructure and personnel.
  - ▶ Teachers can be trained via a 30 minutes self-explanatory video which could be circulated via e-mail at no cost.
  - ▶ The material for the classroom activities (fairytales and other interactive activities) could be also sent electronically.
  - ▶ The newsletters for the parents could be sent electronically. If some kindergartens wish to print any of the newsletters they could print any one they wish.
  - ▶ Kindergartens could choose to implement all or any of the four behaviors.



# Why choosing to implement ToyBox-programme?

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- ▶ Obesity prevalence is growing throughout Europe and it is even more pronounced in certain regions/ countries as well as among low SES groups.
- ▶ Obesity has its roots in very early childhood. Obese preschoolers will more likely become obese adults if no early action is taken.
- ▶ Toybox-programme can effectively tackle obesogenic behaviors among both parents and children.
- ▶ It is easy to implement, using existing facilities and personnel.
- ▶ It has no cost (or low cost if some material decided to be printed).
- ▶ The vast majority of teachers implemented the programme found it useful and easy to implement.
- ▶ It could be combined with other ongoing initiatives in each country.
- ▶ If needed, specific regions at higher risk within each country, could be prioritized.



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More information regarding the ToyBox-study: [www.toybox-study.eu](http://www.toybox-study.eu)

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