

# PREVENTION OF OBESITY IN CHILDREN AT KINDERGARTEN – RESULTS FROM THE PROJECT „ CHILDREN’S HEALTH“

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**Purpose:** The idea for the project originated from activities of the City of Karlsruhe related to the “Local Agenda 21”. Information on the obligatory examinations for school beginners indicated an increased prevalence of children with overweight (Fig 1)  
The intention of the project is to positively influence the lifestyle (esp. nutrition, activity and mobility) of children at the setting kindergarten sustainably by an efficient co-operation of city officials and health and scientific institutions.

**Methods:** An intervention program was developed which is characterised by the intersectorial approach (nutrition, physical activity, mobility) and by a realistic input, not as often short-term and high input, but long-range (3 years) and moderate intensity of intervention programs, in order to fit into time and economical frame of kindergartens and to ensure that input given achieves a lasting positive effect.

Before the program started the following baseline surveys were conducted:

- Anthropometric Measurements of all Karlsruhe Kindergarten children (142 kindergartens with 7181 children – Results Fig. 2)
- Motor and fitness tests in the 26 selected kindergartens (13 intervention and 13 control kindergartens ; N= 1660 - Fig. 3)
- Study on the mobility of children (diary on the ways between home and kindergarten – 800 children in 13 kindergartens)

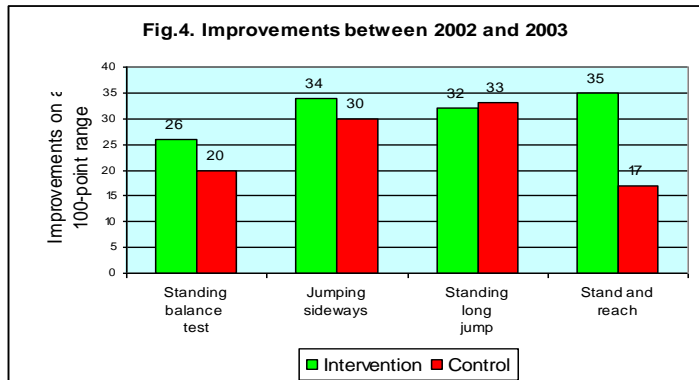
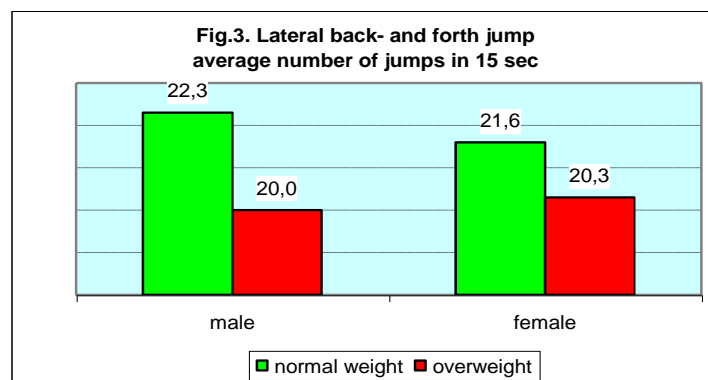
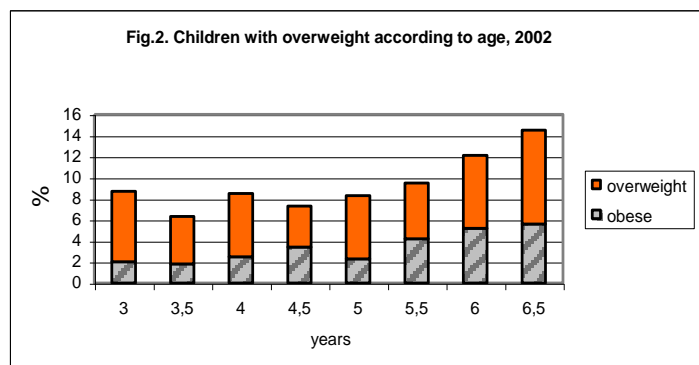
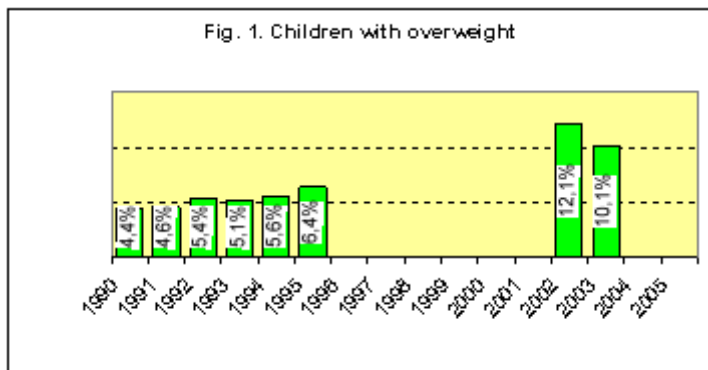
The program was implemented in 13 kindergartens (starting in September 2002; with about 900 children) and their are 13 control groups, distributed even within Karlsruhe area.

The interventions were manifold, like further education of kindergarten teachers related to nutrition, physical activities, mobility – traffic education; within the kindergarten these topics were integrated into the daily routines; but also projects and “actions” were organised. The parents of the children were also involved in the interventions.

The program was evaluated in several surveys annually, mainly by anthropometric measurements and measurements of motor ability. The last examination was in June 2005.

**Results:** It can be seen that obesity starts already at the kindergarten; 6% of the 3-year-old and 12% of the 6-year-old are obese. The general fitness and physical motor ability of the small kids is insufficient, and this is related to overweight.

The positive effects of the prevention programs could be seen already in the second year examination (Fig.1). Children of intervention kindergartens have improved stronger than the children of control kindergartens (Fig. 4).



## Conclusions:

The measures conducted within the project have been successful. The program is feasible for extension to other communities.