



# **Quality criteria for programmes to prevent and treat overweight and obesity in children and adolescents**



**Quality grid for prevention  
measures**

**Consensus paper on patient  
training programmes**

The Federal Centre for Health Education (BZgA) is an authority under the aegis of the Federal Ministry of Health and Social Security (BMGS) and has its registered offices in Cologne. It carries out information and communication tasks (educational role) as well as quality assurance tasks (clearing and coordination role) in the area of health promotion.

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**Quality grid for preventative measures  
for overweight and obese children and  
adolescents**

Cornelia Goldapp, Reinhard Mann, Rose Shaw

**Consensus paper  
Patient training programmes for obese  
children and adolescents**

Thomas Böhler, Martin Wabitsch, Ute Winkler

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Gesundheitsförderung konkret, Band 4  
Bundeszentrale für gesundheitliche Aufklärung (BZgA)  
Ostmerheimer Str. 220, 51109, Köln  
Tel.: +49 02 21/89 92-0  
Fax: +49 02 21/89 92-300

Project manager: Cornelia Goldapp  
E-mail: [cornelia.goldapp@bzga.de](mailto:cornelia.goldapp@bzga.de)

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## Foreword

There is a number of outpatient and inpatient measures available for children and adolescents in Germany who are overweight or obese. These range from internet services to programmes at paediatric clinics, nutritional advice centres and sports clubs, to specialised group services. However, as information relating to the criteria for defining a patient's need for treatment, the structure of such treatment and the content of the services on offer is patchy, it is almost impossible to recommend or assess these services comprehensively. In order to remedy this situation, a process was begun involving the main persons responsible for such measures, the aim of which was to make qualitative improvements to the care of overweight and obese children and adolescents. During the first stage of this work, quality criteria were compiled by two working groups that have been looking at the prevention and treatment of overweight in children. These are based on currently available expert knowledge regarding the structural and procedural quality of measures to combat overweight in young people.

*The Quality grid for preventative measures for overweight children and adolescents* were developed in a working group. The quality grid is aimed at services for overweight children who have not yet developed any secondary diseases. Representatives of various institutions such as the specialist association known as the Working Group for Obesity During Childhood and Adolescence [*Arbeitsgemeinschaft Adipositas im Kindes- und Jugendalter*] at the Robert Koch Institute and representatives of the Medical Service of the Central Associations of the German Statutory Health Insurance Funds and the Federal Ministry of Health and Social Security (BMGS) [*Medizinischer Dienst der Spitzenverbände der Krankenkassen und des Bundesministeriums für Gesundheit und Soziale Sicherung*] were involved in its development. This working group was led by the Federal Centre for Health Education (BZgA).

A second working group developed the *Consensus paper – Patient training programmes for obese children and adolescents*. This contains criteria for training programmes aimed at severely overweight, i.e. obese children and adolescents. Members of this working group were representatives of the Federal Ministry of Consumer Protection, Food and Agriculture, the Federal Centre for Health Education (BZgA), the statutory health insurance funds, the Medical Service of the Central Associations of the German Statutory Health

Insurance Funds and specialist societies. This working group was led by the Federal Ministry of Health and Social Security (BMGS).

The aim of the quality grid and the consensus paper is to help and encourage everyone involved in the care of overweight and obese children when planning, implementing and assessing measures in accordance with the current standard of scientific knowledge. The publication is therefore aimed at the parties responsible for funding children's participation in such measures, those providing the programmes, and other multipliers of information such as paediatricians and teachers.

I am pleased that it has been possible to jointly compile a set of recommendations with representatives of the specialist associations, as well as to identify existing deficits. Since there are no data or studies on the long-term effects of the services, a specialist consensus of this kind is an important first step for increasing the quality of the measures to prevent and treat overweight in children.

Further steps will be taken by the BZgA in collaboration with the specialist associations as part of the quality assurance process. On the one hand, this will involve compiling a national, quality-oriented inventory of services to prevent obesity, based on the above quality-related criteria and consensus paper. On the other hand, a multicentre observation study on the effects of the various outpatient and inpatient measures currently on offer for overweight and obese children, was commenced in 2005. The results of these activities will be published at a later date in other booklets.

I would like to express my thanks to all who contributed to the publication of this booklet, in particular the members of the participating working groups, as well as the institutions that tested the content and practicability of the quality criteria in their everyday work.

I hope that the quality grid and the consensus paper contribute to ensuring the availability of more high quality programmes in the future.

Cologne, September 2005

Dr. Elisabeth Pott  
Head of the Federal Centre  
for Health Education

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Where health insurance funds are mentioned in these two documents, this refers to the statutory health insurance funds.



# 1 Quality grid for preventative measures for overweight and obese children

Presented by the working group 'Evaluation of measures to help overweight children and adolescents' under the chairmanship of the Federal Centre for Health Education (BZgA)

Written by Cornelia Goldapp, Reinhard Mann, Dr Rose Shaw

Federal Centre for Health Education (BZgA)  
Cologne, July 2005

# 1.1 Introduction: Information regarding the aims of this booklet and its use

Overweight and obese children and adolescents are one of the biggest challenges facing the modern health system. The development and implementation of high quality measures to prevent the health consequences of overweight have priority with regard to the prevalence of the problem. The quality grid should, on the one hand, provide a basis for assessing existing preventative measures for overweight children and adolescents, whilst on the other, it should provide information on how to develop high quality preventative measures. In creating this booklet, an attempt was made to develop a tool that is valid for the broad range of preventative measures that are on offer for this target group in Germany. The measures range from media-assisted services to loose networks of paediatricians and paediatric clinics, sports clubs and nutritional advice centres to specialised multimodal group services.

The primary target group of the measures to be assessed or to be developed should be children and adolescents with a BMI between the 90<sup>th</sup> and 97<sup>th</sup> percentiles (for explanations see section 1.2.1 Definition, prevalence and health risk, page 10) with no evidence of secondary diseases<sup>1</sup> (overweight children). The grid may also be used if the child/adolescent's BMI is between the 97<sup>th</sup> and 99.5<sup>th</sup> percentiles (obese children) and if he or she has neither secondary illnesses nor risk factors (such as obesity running in the family, insulin resistance, dyslipidaemia [lipometabolic disorders], motivation problems [e.g. an unwillingness to change his or her behaviour]). The area of application for the quality grid is therefore in the field of health prevention (see Table 1). With regard to therapeutic services for obese children and adolescents or overweight children/adolescents who have secondary illnesses, the Federal Ministry of Health and Social Security has developed a set of consensus criteria, according to which a recommendation is made as to whether the full cost or partial cost of any such treatment will be borne by the statutory health insurance funds in accordance with Section 43 Paragraph 1 No. 2 of the Fifth German Social Security Code [SGB V] (see bibliography).

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<sup>1</sup> NASH (non-alcoholic steatohepatitis (fatty liver disease)), dyslipidaemia, arterial hypertension, diabetes mellitus type 2, disturbed glucose intolerance, precocious puberty, polycystic ovary syndrome and orthopaedic illnesses in association with increased body weight.

Associated with increased body weight ...	No risk factors	Risk factor *	Illness**
<i>Extreme obesity</i> (BMI > 99.5 <sup>th</sup> percentile)			
<i>Obesity</i> (BMI > 97 <sup>th</sup> to < 99.5 <sup>th</sup> percentile)			
<i>Overweight</i> (BMI > 90 <sup>th</sup> to < 97. percentile)			

\*The following are classed as *risk factors*: insulin resistance or dyslipidaemia and family predisposition (diabetes mellitus type 2 in the child's parents, myocardial infarction or stroke before the end of the 55<sup>th</sup> year of life in 1<sup>st</sup> and 2<sup>nd</sup> degree relatives ).

\*\* The following are considered to be illnesses that require body weight to be reduced in order to treat them, *where the link with increased body weight appears to be plausible*: arterial hypertension, diabetes mellitus type 2, disturbed glucose tolerance, precocious puberty (premature onset of puberty), polycystic ovary syndrome, orthopaedic illnesses.

Table 1: Use of the quality grid (grey area) dependent upon the extent of the child's overweight and the risk factors or illnesses associated with the increased body weight

The quality grid is aimed primarily at two target groups. On the one hand, the grid should provide a sound basis for the parties responsible for funding a child's participation in a preventative programme to assess a given service and in so doing provide a basis on which to decide whether or not to finance or recommend the chosen measure. On the other hand, the grid should provide a basis for service providers working in the areas of ecotrophology, psychology, sport therapy and doctors for developing, implementing and improving preventative services conceptually and thereby contribute to optimising the care situation by creating high quality measures.

The quality grid was developed by the working group 'Evaluation of measures to treat overweight in children and adolescents' initiated by the BZgA. Members of the working group are:

*Prof. Dr. Jürgen Bengel* (Dipl.-Psych.), University of Freiburg

*Dr. Thomas Böhrer* (Dr. med.), Medical Service of the Baden-Württemberg Health Insurance Fund

*Prof. Monika Bullinger* (Dipl.-Psych.), University of Freiburg  
*Dr. Andreas van Egmond-Fröhlich* (Dr. med.), Child Rehabilitation Clinic [Kinder-Reha-Klinik], Bad Kösen  
*Cornelia Goldapp* (Dipl.-Oecotroph.), Federal Centre for Health Education (BZgA), Cologne  
*Dr. Ulrike Ravens-Sieberer* (Dipl.-Psych.), Robert Koch Institute (RKI), Berlin  
*Prof. Dr. Reinhard Holl* (Dr. med), University of Ulm  
*Thomas Kliche* (Dipl.-Psych., Dipl.-Pol.), Hamburg-Eppendorf University Hospital (UKE)  
*Christina Krüger* (Dipl.-Psych.), Hamburg-Eppendorf University Hospital (UKE)  
*Reinhard Mann* (Dipl.-Psych.), Federal Centre for Health Education (BZgA), Cologne  
*Dr. Thomas Reinehr* (Dr. med.), Vestische Kinderklinik, Datteln  
*Dr. Rose Shaw* (Dipl.-Psych.), Institute for Therapy Research [Institut für Therapieforschung] (IFT), Munich  
*Jürgen Töppich* (Dipl.-Soz.), Federal Centre for Health Education, Cologne  
*Prof. Martin Wabitsch* (Dr. med.), University of Ulm  
*Prof. Dr. Joachim Westenhöfer* (Dipl.-Psych.), Hamburg University of Applied Sciences  
*Dr. Ute Winkler* (Dipl.-Soz.), Federal Ministry of Health and Social Security, Berlin

In addition to topical academic literature, the following formed the basis of the grid: the guidelines of the Working Group for Obesity During Childhood and Adolescence (2003), the assessment criteria for outpatient programmes in accordance with Section 43 Paragraph 2 of the Fifth Social Security Code for obese children and adolescents of the Medical Service of the Central Associations of the Statutory Health Insurance Funds, the consensus paper ‘Patient training programmes for obese children and adolescents’ (Böhler, Wabitsch and Winkler 2004), the quality grid for measures for overweight adults produced by the BZGA (1994) and the BZGA’s quality assurance concept, (Quality management in health promotion and prevention, Cologne 2001).

### **Application**

The grid should be valid for a broad range of services. However, as a consequence of the grid having such a broad focus, it was not possible to provide full details of some areas of its use. Those, for example, who wish to use the grid for media-assisted services (for example, internet programmes) should

therefore not hang on its every word, but should try to assess whether the basic idea behind it has been realised. ‘Personnel’ in this case would mean for example the developers and/or managers of the programme. The documentation and evaluation will not of course be carried out for each and every participant, but should show whether an evaluation of the service has been or is to be carried out.

The grid should only be understood as a basic framework the content of which should be ex-panded as further specialist knowledge is acquired. This applies in particular also to the documentation and evaluation of the measure. Various specialist associations offer training on this, and cooperation with a research institute can also be helpful in this regard.

## 1.2 Basic information on overweight and obesity in children and adolescents

### 1.2.1 Definition, prevalence and health risk

#### How is overweight in children defined?

The Body Mass Index (BMI) is now an internationally recognised method for measuring overweight in adults, and shows the relationship between a person’s body weight and height. The BMI is defined as a person’s body weight in kilograms, divided by the square of that person’s height in metres:

$$\text{BMI} = \frac{\text{Weight in kilograms}}{(\text{height in meters})^2}$$

As the BMI in children and adolescents is strongly influenced by age and gender-dependent physiological changes in body mass, the extent of their overweight cannot be defined using fixed threshold values as it can in adults. As a result, a set of reference values were developed on the basis of tests carried out on the population, which allow a person’s individual value to be classified using age and gender-specific percentiles. Percentiles mean that a child’s BMI can be given in relation to that of other children of the same age and gender. Although this procedure is not without its challengers, the specialist

association, the Working Group for Obesity During Childhood and Adolescence (AGA) has proposed the following definition in support of the international specialist associations: Children who exceed the 90<sup>th</sup> age and gender-specific percentiles (those whose BMI is higher than that in 90% of all children of their age and gender), are classed as overweight. If their BMI is above the 97<sup>th</sup> percentile, they are obese, and if they exceed the 99.5<sup>th</sup> percentile they are classed as extremely obese. Percentile values for girls and boys are given in the Annex.

### **How widespread are overweight and obesity in children?**

Overweight and obesity are considered to be a serious health problem of the 21<sup>st</sup> century (WHO 2000 and 2003). In Germany, depending on the definition, 10–20% of all school children are overweight or obese (Benecke and Vogel 2003); among 5 to 6-year old children between 8% and 13% are already overweight and 4% to 7% are obese (Wabitsch et al. 2002). Longitudinal section studies in various countries show a dramatic increase in the prevalence rates in children in the last few decades (see overview in Ebbeling et al. 2002). According to the results of regional school investigations the rates also appear to be rising in Germany (Böhm et al. 2002; Kromeyer-Hauschild and Jaeger 1998). The distribution of the BMI has moved into the upper region in particular, meaning that the severely obese children have become even heavier (Barth et al. 1997; Flegal and Troiano 2000).

Representative data on the prevalence of overweight and obesity in Germany are to be supplied by the ‘Children and adolescents’ health survey’ being conducted by the Robert Koch Institute, which involves collecting data on physical, psychological and social health, healthcare and behaviour until 2006. According to the information currently available from the survey, although this is not yet representative, it is assumed that there is a maximum 15% of children aged between 5 and 7 who are overweight. Among 10 to 11-year-olds it is estimated that there is a maximum of 20% (German Bundestag 2005).

### **What are the consequences of overweight during childhood and adolescence?**

The main direct medical consequences are increased cardiovascular risk factors and orthopaedic problems. Psychosocial problems manifest themselves in the form of low self-esteem or depression. Low levels of physical fitness and other forms of eating disorders are also common consequences of overweight (Ebbeling et al. 2002; French et al. 1995). If a person becomes obese as a child, obesity during adulthood is significantly more marked and is

linked to higher levels of morbidity and mortality than if the person does not become obese until they are an adult (Seidell et al. 1996).

## 1.2.2 Clarification models

On the simplest level, overweight results from a chronic imbalance of energy intake and energy consumption, i.e. a positive energy balance sheet. The factors that influence this imbalance, however, are extremely complex. Overweight and obesity must be regarded as multifactorial illnesses, the development of which depends on complex interactions between genetic influences and environmental factors. Genetic factors alone cannot explain the rapid increase in prevalence rates over the last few decades; relevant environmental factors are discussed on an individual basis, in particular nutrition and physical activity.

Metabolic factors during pregnancy and early infancy (e.g. nutritional condition of the mother or if she is diabetic, breastfeeding as a protective factor) also seem to have an effect (Koletzko and von Kries 2001). Overall, the amount of data relating to protection and risk factors for overweight and obesity is very minimal.

### Genetic factors

Studies of twins and adopted children show that a high proportion of variance (up to 70%) is caused by genetic influences (see overview in Price 2002). Some genetic defects were identified in animal studies, which were confirmed, in individual cases, in humans. For example, mutations in the melanocortin-4-receptor, which occur in approximately 2–4% of all extremely obese people were identified (Hebebrand et al. 2003). Such genetic defects, however, do not appear to lead directly to obesity, but to an increased predisposition, which when combined with an unhealthy lifestyle, then manifests itself as overweight (Allison and Comuzzie 1998; Damcott et al. 2003).

### Nutrition and parental behaviour

Although it would seem reasonable to assume that overweight children consume more calories and/or fat than children who do not suffer from weight problems, scientific findings in relation to this are not clear cut. This is possibly also due to the fact that it is difficult to obtain reliable information about the eating habits of children. Overweight children with problematic nutritional behaviour (too much food, food which is too greasy and too rich in calo-

ries, irregular meal times and frequent snacking in between) are particularly at risk of developing weight problems due to their genetic disposition compared with normal-weight children.

Families have a strong influence on nutritional behaviour. By learning what their role models do, children adopt their parents' unhealthy nutritional behaviour. If food is used as a reward by a child's parents or if a child is forced to eat everything on its plate, this may lead to a disturbed hunger-satiation pattern (Laessle et al. 2001). Parents asking their children to eat and praising them for finishing their meal, led to increased food intake and eating for longer in some studies and was associated with high body weight (Johnson and Birch 1994).

### **Physical activity and television**

Physical inactivity is one of the few risk factors that is deemed to be relatively certain (WHO 2003). Among 5 to 6-year-old children in Germany, over half of them spend up to two hours per day watching television and playing electronic games, with almost 20% spending more than two hours engaged in such activities. These children have a significantly increased risk of overweight (Kalies et al. 2001; Maffeis et al. 1997). Television not only contributes to inactivity, but also significantly lowers a person's basal metabolic rate and thereby contributes to reducing energy consumption (Klesges et al. 1993). In addition to this, watching television is often associated with eating, above all fatty and calorie-rich foods.

By contrast, physical activity during childhood appears to be a protective factor; longitudinal section studies have shown that people who were active as a child, played more sport as adults (Kuh et al. 1992; Telama et al. 1997). There seems to be a negative correlation between physical activity and overweight (Sunnegardh et al. 1986; Kikuchi et al. 1995). It is unclear, however, what type and how much physical activity has a preventative effect (Molnár and Livingstone 2000). When it comes to physical activity, the significance of parental behaviour also plays a role and studies have shown that parents of normal weight children encourage physical activity more than the parents of obese children (Epstein 1996).

### **Gender**

Whilst considerably more adult men are overweight than adult women (by contrast, obesity is distributed almost equally), in children there are no significant differences between the sexes. In some studies, more girls tend to be



overweight (approx. 12%) or obese (between 5% and 9%) at the time they start school than boys (approx. 11% are overweight, and between 4% and 8% are obese; see overview in Kolip 2004).

### **Social status**

The prevalence of overweight and obesity differs in the various social strata. Overweight and obesity are significantly more common among socially weaker classes (Benecke and Vogel 2003). There is a greater percentage of both men and women who are overweight among the working classes (Robert Koch Institute 1999). Among women, 31% of those who are obese are from lower class backgrounds, 20% are from middle class backgrounds and 10% are from upper class backgrounds. Among men the figures are 22%, 18% and 16% respectively. Among pre-school children from lower class backgrounds the risk of being overweight is increased two to threefold (Koletzko and Kries 2001; Ellsäßer et al. 2002; Langnäse et al. 2002).

Data from Brandenburg show that 16% of girls from a low social background were obese, whereas the figure was 10.4% among those with a high social status. By contrast, among boys the largest proportion of obese children was to be found among those from middle class backgrounds (Ministry for Labour, Social Affairs, Health and Women of the Region of Brandenburg 2000). Here, low levels of education and varying degrees of awareness about health and lifestyle play a primary role (Langnäse et al. 2002, Gerhards and Rössel 2003).

### **Environment**

Social risk factors affect an individual's behaviour where nutrition and physical activity are concerned, which are difficult to influence with measures aimed at the individual, for example, the constant availability of nutrient-rich food and the increasing mechanisation of everyday life and the working environment, all of which are reducing the necessity of physical activity in everyday tasks in modern western cultures. In order to change these risk factors structural, general prevention methods are required ('situation based prevention') that do not form part of the content of this quality grid.

## **1.2.3 Caring for overweight children and adolescents in Germany: prevention and treatment measures**

Preventative approaches can generally be divided into general, selective and targeted services. *General approaches* are designed for all children, regard-

less of their weight. Examples of such services are school-based services, whereby whole classes of school children take part in a prevention programme, information campaigns aimed at the entire population or also structural measures such as the introduction of healthy food at nursery schools (projects that follow the setting approach). *Selective services* are designed for children who have an increased risk of becoming overweight, but do not yet have a weight problem themselves, such as the children of overweight parents. Finally, *targeted services* are aimed at children who are already overweight. Here, prevention means stopping the occurrence of secondary damage caused by overweight (development of obesity, medical or psychological problems). The following text, as in the quality grid overall, will concentrate solely on the last in this list, the targeted services for overweight children, the aim of which is to change behaviour in relation to nutrition and physical activity.

Measures to prevent and treat overweight and obesity in children/adolescents are offered by a large number of individuals and institutions. In addition to internet services and various guidebooks (books, brochures, etc.) there is a large number of nutritionists, sport therapists, doctors and psychotherapists, who offer specific services for overweight children. These measures take the form of individual advisory sessions or therapy or as group programmes. Out-patient group programmes are also offered by night schools, university hospitals, public health departments, paediatric clinics, counselling services and other institutions or by health insurance funds. A number of inpatient institutions have developed specific training programmes and treatments for overweight and obese children.

### 1.2.4 Quality assurance

In the Working Group for Obesity During Childhood and Adolescence AGA which is part of the German Obesity Society [*Deutsche Adipositas-Gesellschaft*], guidelines are being developed on the diagnosis, prevention and treatment of overweight or obese children and adolescents (Wabitsch and Kunze 2003). A set of assessment criteria for outpatient treatment programmes for obese children and adolescents has also been drawn up by the MDS (Medical Service of the Central Associations of the Health Insurance Funds). There is currently very little knowledge about staging successful interventions on children and adolescents and the situation with regard to care of this nature in Germany. The BZGA has therefore initiated a study to map the situation with

regard to the care of obese children and adolescents in Germany and record treatment results of currently existing care services for obese children and adolescents. First results are expected to be available in 2008.

# 1.3 Quality criteria for preventative measures

## 1.3.1 Checklist (A)

QUALITY OF THE CONCEPT	Criterion fulfilled?		
	Yes	No	
Attention is paid to the central conceptual elements.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 18
Medication, formula diets, nutritional supplements, extreme calorie-reduced food or surgery are not part of the concept.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 19
The programme is designed for a specific target group.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 20

QUALITY OF THE PROCESS	Criterion fulfilled?		
	Yes	No	
The parents are involved in the programme.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 21
The programme has specific target criteria.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 22
The course of the programme is quality assured.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 23

QUALITY OF THE STRUCTURE	Criterion fulfilled?		
	Yes	No	
The provider is qualified.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 24
The programme has an interdisciplinary conception.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 25
Rooms and equipment are appropriate to the measure.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 25
Manuals/materials are available.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 25

QUALITY OF THE RESULTS	Criterion fulfilled?		
	Yes	No	
Relevant data are documented by the service provider.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 26
An evaluation will be carried out.	<input type="checkbox"/>	<input type="checkbox"/>	➔ P. 28

## 1.3.2 Formulation of criteria (B)

### Quality of the concept

#### **Attention is paid to the central conceptual elements.**

- Nutritional recommendation: According to the recommendations of the FKE and the DGE no extreme calorie-reduced diet; scientific as well as practical criteria are taken into consideration
- Physical activity: Attention is paid to structured units as well as physical activity in everyday life; the reduction of inactivity (e.g. watching television) is taken as one of the focuses of the programme
- Behavioural therapy elements: The programme influences nutritional behaviour and levels of physical activity and corresponding life habits during everyday life. Taking the initiative and taking responsibility for oneself are actively encouraged.
- Measures to support the permanent application are offered.

#### **INFO**

Unhealthy nutritional behaviour and a lack of physical activity are regarded as the main risk factors for becoming overweight or obese. Both of these aspects should be included in the content of all prevention programmes.

The basis of the *nutritional recommendations* should be an ‘optimised variety of foods’ as recommended by the Research Institute for Child Nutrition [*Forschungsinstitut für Kinderernährung*] (FKE) and the DACH reference values of the German Society for Nutrition [*Deutsche Gesellschaft für Ernährung*] (DGE). The recommendations should, on the one hand, correspond to the current level of scientific knowledge, and on the other, be easy to implement. Diets that involve severely reducing calorie intake should not be recommended due to the risk of growth retardation.

The emphasis with regard to recommendations relating to sport and *exercise* should be on integrating physical activity into everyday life and reducing inactive behaviour such as watching television. Everyday physical activity seems to be of greater significance than organised sport components.

Recommendations and exercises to change nutritional habits and levels of physical activity should be based on behavioural therapy principles and take

account of individuals' learning speeds, with learning in small stages that build upon one another, self control techniques such as keeping a diary on nutrition and exercise. Methodology appropriate to children should also be ensured.

With regard to the difficulties of maintaining behavioural changes, *Measures to support the permanent implementation* of the measures that have been learned are of particular importance. Sustained behavioural changes are facilitated by adopting a behavioural therapy approach that enables individuals to gradually adopt new behaviour and practice this. On the other hand, additional measures should be adopted such as the provision of written tips on how to continue the successes, refresher meetings a few months after the final meeting (for group programmes) or encouragement for group participants to meet up after the end of the programme.

**Medication, formula diets, nutritional supplements, severely calorie-reduced food or surgical intervention do not form part of the concept.**

## INFO

*Formula diets* and *extreme calorie-reduced diets* are very common, particularly among adults. Due to the risk of children not getting sufficient nutrients and the associated risk of growth retardation, they are not indicated for children. To date, the safety and efficacy of formula diets in children have not been sufficiently studied. Currently, very few insights into the treatment of obese children with *medication* have been gained from clinical trials, also due to the general problems of drug research on children. In drug trials on the efficacy of the preparations “Orlistat” and “Sibutramin”<sup>2</sup> in adults, in some cases very high side effect rates were found. At best, use is therefore only currently tolerated in extremely obese children as part of controlled clinical trials. *Surgical measures* such as gastric band operations must be regarded as a measure only to be used in isolated cases. As a general rule, programmes that involve formula diets, extreme calorie-reduced diets, medication or sur-

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2 Orlistat affects the fat metabolism and reduces the absorption and digestion of fat from food. Non-digested fat is passed out of the body again. Sibutramin reduces a person's appetite and increases the body's consumption of energy by increasing body heat.

gical measures should therefore be rejected for obese children and adolescents. These are measures to be used in isolated cases and come under the remit of the therapeutic area.

**The programme is designed for a specific target group.**

- Inclusion and exclusion criteria as well as criteria for discontinuing the programme must be identified.
- Inclusion criteria are given: e.g. BMI 90<sup>th</sup> to 97<sup>th</sup> percentile; up to the 99.5<sup>th</sup> percentile, if the child has no risk factors or obesity-related illnesses.
- Exclusion criteria are given: e.g. lack of motivation, secondary and syndromal forms of obesity or existence of psychological disorders.
- Criteria for discontinuing the programme are given: e.g. irregular participation, occurrence of psychiatric illnesses.
- The programme focuses on the problem areas relevant to the individual.
- Attention is paid to age homogeneity, (similar stage of development of the children/adolescents). Depending on the age of the adolescents, gender-specific services can be designed.

**INFO**

What is important first of all, is that it is clear from the programme description for which target group the programme is intended. In order to do this, firstly it is necessary to identify *inclusion criteria* that have to be met to ensure that the programme is suitable for the relevant child/adolescents. Prevention programmes for overweight children and adolescents should, for example, specify the BMI percentile range or give a description of the extent of overweight for which the programme is conceived (overweight or 90<sup>th</sup> to 97<sup>th</sup> BMI percentile). In principal, a prevention programme can also include obese children and adolescents with a BMI above the 97<sup>th</sup> percentile, if the child/adolescent does not have risk factors or secondary illnesses. For children who are extremely obese (BMI over the 99.5<sup>th</sup> percentile), obese with risk factors/secondary illnesses or overweight with a secondary illness, reference should be made to the BMGS consensus criteria for therapeutic measures, according to which acceptance of full or partial costs by the statutory health insurance fund in accordance with Section 43 Paragraph 1 No. 2 of the Fifth Social Security Code is recommended.

Secondly, certain *exclusion criteria* have to be given, which identify the circumstances in which participation in the programme would be inadvisable.

This could be for example if the child/adolescent has psychological disorders (eating disorders such as bulimia nervosa, but also other illnesses such as depression) or serious behavioural or developmental disorders. In this case, there is a risk that their participation in the programme would be unsuccessful, meaning that other treatment would be required. Another possible reason for exclusion is if the child and/or its parents lack motivation. Also, in rare cases in which overweight is the result of another underlying disease or part of another illness, an investigation should be carried out in individual cases to ascertain whether or not the service is suitable for the patient. Communicating *Criteria for discontinuing the programme*, which would lead to the service provider discontinuing the measure is essential, as this ensures that attention has been paid to factors that may prevent the course being completed successfully during its implementation. Examples of this may again be psychological disorders that occur for the first time during the course of the measure, or even the occurrence of severe health problems that make it impossible for the child/adolescent to continue their participation. Irregular participation or failure to attend sessions should be a reason for discontinuing a measure.

The more specifically a measure has been tailored to the *problem areas relevant to the individual* the better. Whilst in one child the focus should be on changing what he or she eats, another child may require a lot of support in building up an exercise programme. *Age homogeneity* is also part of any approach that is tailored to the target group. When putting group programmes together, it should be ensured that the children or adolescents are at similar physical and psychological stages of development. With older groups of adolescents, gender-specific measures may be useful.

### Quality of the process

#### **The parents are involved in the programme.**

- The involvement of parents and other family members should differ according to the age group:
- For children, parents are involved in all aspects: the parents are trained in the skills that are necessary in order to establish and maintain new behaviour in the children.
- For adolescents, the parents are informed about the aims and possibilities for support (minimum: participation in the entrance and exit interview and handing out of information to the parents).

## INFO

Including the parents in the programme should ensure that the parents are instructed in the application of the content and behavioural therapy methods their children have been taught. Various studies have reached the conclusion that such programmes are more successful than programmes for children alone. Ultimately, nutrition and exercise are topics that affect the whole family. Parents of small children in particular play a key role in establishing and maintaining new behaviour. The extent to which parents are included can range from oral or written information to joint nutritional changes and joint implementation of all elements of the programme. This is particularly useful when the parents are overweight themselves. For younger *children* it is necessary to involve the parents more comprehensively in order to ensure that the measures are implemented in the child's everyday life. With *adolescents*, parents should at the very least be given written information in the form of a clearly laid out brochure and a detailed entrance and exit interview be conducted.

### **The programme has specific target criteria.**

- The target criteria should be set according to the age, extent of the child/adolescent's overweight and individual problem behaviour.
- The weight-related goal should be a relative reduction in weight (constant weight whilst the child grows in height or reduction of the BMI-SDS.)
- The behaviour-related goals pursued are the long-term improvement of nutritional behaviour and levels of physical activity as well as the reduction of inactivity.
- Other goals are the improvement of the risk factors associated with increased body weight, improvement of quality of life and the avoidance of side effects.

## INFO

It is important that the programme specifies concrete aims because only then is it possible to decide whether the programme is suitable for a specific child or specific adolescent and only then is it possible to ascertain whether these goals have been achieved at the end of the measure. What aims are suitable for which child or which adolescent depends on various factors such as the child/adolescent's age, extent of their overweight and their individual problem behaviour. With regard to the child/adolescent's *weight*, unrealistic promises



should generally be avoided “3 kg less in one week” or similar, and whether and how much weight should be lost should depend on the age of the child and on the extent of their overweight. For children/adolescents with mild or medium overweight it may already be sufficient according to the recommendations of the AGA (Working Group for Obesity During Childhood and Adolescence) for the child to maintain their current weight, i.e. as they grow taller, their BMI will reduce. On the other hand, if the child is severely overweight and/or has secondary illnesses, weight reduction is necessary.

In addition to the child’s weight, depending on the individual’s problem behaviour, other goals should be set for factors that contribute indirectly to further weight gain. These *behaviour-related goals* include achieving and maintaining beneficial nutritional behaviour, based upon their current nutritional behaviour and the amount of food they eat (reference: DACH reference values and Optimix), build-up of exercise and reduction of inactive behaviour such as watching television, playing video games, etc. *Other goals* may be the improvement of a child’s quality of life overall or the improvement of any existing risk factors associated with overweight (e.g. increased blood pressure). In addition to this, it should always be ensured that *adverse side effects are avoided* such as the development of eating disorders, the development or increase in orthopaedic complications as a result of inadequate physical activity or even excessively rapid weight reduction with a possible resultant yo-yo effect.

**The course of the programme is quality assured.**

- The programme follows a *curriculum* available in written form.
- *The individual learning progression* of the individual participants is taken into account.
- *The success of the child’s/adolescent’s learning is ensured with a sufficient number of training units spread out over a period of time.*

**INFO**

The programme should have a *curriculum*, which sets out the content, methods and structure of the programme for achieving the intended goals. The curriculum should be regarded as an intervention plan in which intervention steps that build upon one another are shown on a timescale. This makes it clear what effects (interim goals) are to have occurred by what time, so that the intervention will be successful by the specified end date for the measure.

It should be obvious that the programme will not be standardized and identical for all participants, but that the content is to be adapted for each participant and that *individual learning progression* will be taken into account. In order to achieve learning success that is also reflected in a permanent implementation of the new behaviour that has been learned, there must be a sufficient number of training units with sufficient time to practice what has been learned between the units. The exact number will differ according to focus of the content. It should, however, be assumed that if there are fewer than six training units divided over several weeks, there will not be sufficient time to supply the information and allow the participants to practice the new behaviour.

### Quality of the structure

#### **The provider is qualified.**

- There are sufficient personnel.
  - The personnel are sufficiently well qualified in the areas of nutrition, physical activity and behavioural therapy;
  - They are trained to provide group therapy.
- The personnel attend regular training courses to further their skills and knowledge.

### INFO

Specialist preparatory training is a prerequisite such as that completed by psychologists, teachers, sociologists etc. (in stress reduction, relaxation and behavioural therapy), ecotrophologists, diet assistants etc. for the area of nutrition, and sport therapists, gymnastics teachers etc. for the area of physical activity – based on the stipulations of the Working Group for the Central Associations of the Health Insurance Funds (2003) regarding the implementation of Section 20 paragraphs 1 and 2 of the Fifth Social Security Code. It is considered important to have a basic qualification in group counselling and proof of practical experience of working with groups should therefore be provided. Specialist knowledge should be updated through further training courses. According to the contents of the programme, the service provider (if necessary, in cooperation with other service providers) must be able to provide information about nutrition, carry out an exercise programme and motivate participants to change their behaviour and implement what they have learned with the help of elements of behavioural therapy.

**The programme has an interdisciplinary conception.**

- The measure is carried out by an interdisciplinary team  
*or*
- There is proof of cooperation with other participants in the health sector (linking of the services in terms of content and on a financial level).

**INFO**

Multimodal programmes in which the components of physical activity, nutrition and elements of behaviour therapy are offered under one roof by an *interdisciplinary team* are very high quality, but also require a large amount of effort on the part of the participants. It is also possible for various service providers to *work closely with one another*. For example, a nutritionist who largely works with the area of nutrition in her prevention programme, should draw participants' attention to the importance of sport and physical activity as part of the service she provides and motivate them to take part in exercise programmes and should also cooperate with a provider of an exercise programme herself. With an interdisciplinary team, as is also the case when various service providers are cooperating with one another, the staff must possess the relevant specialist qualifications (see service provider qualifications).

**Rooms and equipment are appropriate to the measure.**

- The rooms and equipment required for the measure are available.

**INFO**

In this case it should be ensured that the service provider has the relevant equipment and premises for the service it is offering. For example, for group exercise classes there should be rooms large enough to hold a group and where applicable, these should be equipped with training equipment.

**Manuals/materials are available.**

- A concept exists that contains well thought out, educational content for implementing the measure.
- Materials appropriate to the needs of the participants have been set aside.
- The service includes information for the children/adolescents' parents.

## INFO

The programme should be implemented in accordance with a *concept* that is available in the form of a handbook for the course managers. At the very least, this should be a brief guide setting out the most important processes and content. High quality programmes are characterised by detailed handbooks on how they should be implemented. They give a detailed account of the content of the individual meetings thus ensuring that the quality of implementation remains the same. Materials should be prepared for the participants and their parents that help them to implement what they have learned in their daily lives on a permanent basis.

## Quality of the results

### **Relevant data are documented by the service provider.**

#### MINIMUM REQUIREMENTS

*Survey at the beginning, end and at least 1 year after completion of the programme.*

- Age of the child
- Sex of the child
- Height and weight as well as BMI-SDS<sup>3</sup> of the child
- Type of school, class attended by the participant
- Obesity-related illnesses or risk factors, if applicable with laboratory findings and other test results (carried out by GP or paediatrician) of the child
- Attitude, knowledge and behaviour in relation to nutrition and physical activity/inactivity

*Survey at the end of the measure:*

- Number and quota of programme non-completers
- Reasons for their dropping out of the programme
- Participation in the individual organised sessions

*Ongoing documentation:*

- The occurrence of factors that can lead to a participant withdrawing from the programme (e.g. sporting injuries, psychological disorders including eating disorders, motivation problems)

#### DESIRABLE ADDITIONAL DATA COLLECTION

- Survey of age, height, weight and any obesity-related illnesses that the child's parents have
- Information relating to lifestyle (e.g. membership of a sports club)
- Long-term survey after over a year (three and five years after the programme has ended)

## INFO

It is necessary to document certain data at different times, in order to get a clear picture of how the measure is progressing. Participants' BMI and any obesity-related illnesses as well as risk factors should be documented in addition to their age and gender at the very least, namely before and after the measure, as well as one year after the end of the measure. This requires the cooperation with the participants' GP's or paediatricians. Collection of information about the type of school each child attends gives a more accurate picture of which target groups can be reached with the service, and who benefits in particular from a service, etc.

In addition to weight development there are a series of other aspects that should change for the better as a result of the prevention measure (see "target criteria"). Behaviour and attitudes in relation to nutrition and physical activity should be described in particular. In order to make any statements about the quality of the way in which the measure was implemented, the number of non-completers as well as the reason why they decided to discontinue the programme and their participation in the individual sessions should be recorded. Statements about adverse effects and psychological disorders, i.e. eating disorders, in particular are also important. Ideally, this information should be collected using tried and tested methods (for example, a standardised questionnaire).

In addition to these minimum requirements, which even those service providers with few resources should also be able to meet, there is a range of data which if collected is useful, but may not be feasible, however, for some service providers to collect. This data is described as *desirable additional data collection* for the above reason. Additional information about a child's weight, its parents' illnesses and lifestyle (e.g. regular participation in activities offered by a sports club) can provide more accurate information about the factors influencing the child's overweight. Although a lot of measures are successful in the short term, several years after the end of the programme, the successes are either no longer to be seen or are only partially evident. In order to make statements about the long-term effects of the measure, it is therefore useful to carry out follow-up surveys even several years after the conclusion of the measure.

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3 BMI-SDS: Standard deviation score of the BMI; takes into account the age dependency of the BMI. For information on how to calculate this see [www.mybmi.de](http://www.mybmi.de).

### **An evaluation will be carried out.**

- An evaluation of the process will be carried out.
- An evaluation of the results will be carried out.
- An intention-to-treat analysis will be carried out.

### **INFO**

It is necessary to carry out an evaluation as a means of distinguishing effective, useful measures from ineffective measures. A *process evaluation* usually includes questions about the quality of the structure and the implementation of the measure: was the measure implemented as planned (e.g. implementation of the manual, type of measure; duration, number of sessions)? How well did the target group accept the measure and how did they rate it? An *evaluation of the results* includes questions about the effectiveness of the measure. What changes have there been since the end of measure compared with the start in the relevant target areas?

A problem with evaluating preventative and therapeutic measures is the number of non-completers, i.e. the people who did not participate in the measure until the end. If you only question those who saw the measure through to the end, this gives a positive but biased picture of the effectiveness of the measure. In order to make useful statements about the effectiveness of a measure, the results should be assessed in relation to all participants who began the measure (*intention-to-treat analysis*). For example, if ten participants began a measure, and six of them achieved their target weight – two did not reach their goal and two dropped out of the measure part way through, – then the non-completers have to be included too. Accordingly, it was not six of the eight people who completed the measure who were successful (75%), but six out of the ten people (60%) who began it.

These days, a qualified evaluation of a preventative measure is generally a requirement of health insurance funds if they are to provide funding. It may therefore be useful to cooperate with an academic institution (university or other research facility).

# 1.4 Annex

## 1.4.1 Bibliography

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## B. Further reading

The following information is not exhaustive.

### Nutrition recommendations:

- German Society for Nutrition [Deutsche Gesellschaft für Ernährung]: Vollwertig essen und trinken nach den 10 Regeln der DGE. DGE, Bonn.
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### Guidelines:

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## 1.4.2 Adresses

Relevant professional associations and other information sources:

AGA – Arbeitsgemeinschaft  
Adipositas im Kindes- und  
Jugendalter  
Sprecher: Dr. Thomas Reinehr  
Vestische Kinder- und Jugend-  
klinik, Universität Witten-  
Herdecke  
Dr.-F.-Steiner-Str. 5  
45711 Datteln  
Telefon: 02363-975-229  
Fax: 02363-975-225  
www.a-g-a.de

aid infodienst  
Verbraucherschutz/Ernährung/  
Landwirtschaft e. V.  
Friedrich-Ebert-Straße 3  
53177 Bonn  
Telefon: 0228-8499-0  
Fax: 0228-8499-177  
www.aid.de

BDEM  
Berufsverband Deutscher  
Ernährungsmediziner  
(DAEM/DGEM)  
Reichsgrafenstraße 11  
79102 Freiburg  
Telefon: 0761-78980  
Fax: 0761-72024  
www.bdem.de

bdp  
Bundesverband Deutscher  
Psychologinnen und  
Psychologen

Bundesgeschäftsstelle Berlin  
Glinkastraße 5–7  
10117 Berlin  
Telefon: 030-2091490  
Fax: 030-20914966  
www.bdp-verband.org

bvkj  
Berufsverband der Kinder-  
und Jugendärzte e.V.  
Mielenforster Str. 2  
51069 Köln  
Telefon: 0221-689090  
www.kinderaerzteimnetz.de

BZgA  
Bundeszentrale für  
gesundheitliche Aufklärung  
Ostmerheimer Str. 220  
51109 Köln  
Telefon: 0221-8992-0  
Fax: 0221-8992-300  
www.bzga.de

DGE  
Deutsche Gesellschaft  
für Ernährung e.V.  
Godesberger Allee 18  
53175 Bonn  
Telefon: 0228-3776600  
Fax: 0228-3776-800  
www.dge.de

DGSP  
Deutsche Gesellschaft für  
Sportmedizin und Prävention

(DGSP) (Deutscher Sportärzte-  
bund) e.V.  
Hugstetter Straße 55  
79106 Freiburg  
Telefon: 0761-270-7456  
Fax: 0761-202-4881  
www.dgsp.de

FKE  
Forschungsinstitut für Kinder-  
ernährung  
Heinstück 11  
44255 Dortmund  
Telefon: 0231-792210-0  
www.fke-do.de

VDD  
Verband der Diätassistenten  
Bismarckstr. 96  
40210 Düsseldorf  
Telefon: 0221-162175  
www.vdd.de

VDO<sub>E</sub>  
Verband der Diplom-Oecotro-  
phologen e.V.  
Reuterstr. 161  
53113 Bonn  
Telefon: 0228-28922-0  
Fax 0228-28922-77  
www.vdoe.de

### 1.4.3 Percentiles for the Body Mass Index (in kg/m<sup>2</sup>) in girls aged between 0 and 18 years

From: Kromeyer-Hauschild, K. et al. (2001): Percentiles for the Body Mass Index during childhood and adolescence based on various German random samples. Monthly magazine Kinderheilkunde, 149, p. 807–818

Age (years)	P 3	P 10	P 25	P 50 (M)	P 75	P 90	P 97	P 99.5
0	10.21	10.99	11.75	12.58	13.40	14.12	14.81	15.61
0.5	13.86	14.55	15.29	16.16	17.08	17.95	18.85	19.98
1	14.14	14.81	15.53	16.40	17.34	18.25	19.22	20.41
1.5	13.94	14.59	15.32	16.19	17.16	18.11	19.15	20.48
2	13.68	14.33	15.05	15.93	16.93	17.92	19.03	20.48
2.5	13.46	14.10	14.82	15.71	16.73	17.76	18.92	20.51
3	13.29	13.93	14.64	15.54	16.57	17.64	18.84	20.46
3.5	13.16	13.79	14.51	15.42	16.46	17.56	18.81	20.54
4	13.06	13.69	14.42	15.33	16.40	17.54	18.85	20.75
4.5	13.00	13.64	14.37	15.31	16.41	17.58	18.97	20.97
5	12.97	13.61	14.36	15.32	16.46	17.69	19.16	21.34
5.5	12.94	13.60	14.36	15.35	16.53	17.83	19.40	21.74
6	12.92	13.59	14.37	15.39	16.63	17.99	19.67	22.28
6.5	12.93	13.62	14.42	15.48	16.77	18.21	20.01	22.78
7	12.98	13.69	14.52	15.62	16.98	18.51	20.44	23.48
7.5	13.06	13.80	14.66	15.81	17.24	18.86	20.93	24.25
8	13.16	13.92	14.82	16.03	17.53	19.25	21.47	25.19
8.5	13.27	14.06	15.00	16.25	17.83	19.65	22.01	26.02
9	13.38	14.19	15.17	16.48	18.13	20.04	22.54	26.69
9.5	13.48	14.33	15.34	16.70	18.42	20.42	23.04	27.50
10	13.61	14.48	15.53	16.94	18.72	20.80	23.54	28.17
10.5	13.76	14.66	15.74	17.20	19.05	21.20	24.03	28.73
11	13.95	14.88	15.99	17.50	19.40	21.61	24.51	29.36
11.5	14.18	15.14	16.28	17.83	19.78	22.04	25.00	29.88
12	14.45	15.43	16.60	18.19	20.18	22.48	25.47	30.47
12.5	14.74	15.75	16.95	18.56	20.58	22.91	25.92	30.77
13	15.04	16.07	17.30	18.94	20.98	23.33	26.33	31.26
13.5	15.35	16.40	17.64	19.30	21.36	23.71	26.70	31.43
14	15.65	16.71	17.97	19.64	21.71	24.05	27.01	31.72
14.5	15.92	17.00	18.27	19.95	22.02	24.35	27.26	31.81
15	16.18	17.26	18.53	20.22	22.28	24.59	27.45	31.86
15.5	16.40	17.49	18.76	20.45	22.50	24.77	27.57	31.85
16	16.60	17.69	18.96	20.64	22.67	24.91	27.65	31.79
16.5	16.78	17.87	19.14	20.81	22.82	25.02	27.69	31.71
17	16.95	18.04	19.31	20.96	22.95	25.11	27.72	31.61
17.5	17.11	18.20	19.47	21.11	23.07	25.20	27.74	31.51
18	17.27	18.36	19.62	21.25	23.19	25.28	27.76	31.42

### 1.4.4 Percentiles for the Body Mass Index (in kg/m<sup>2</sup>) in boys aged between 0 and 18 years

Age (years)	P 3	P 10	P 25	P 50 (M)	P 75	P 90	P 97	P 99.5
0	10.20	11.01	11.81	12.68	13.53	14.28	15.01	15.86
0.5	14.38	15.06	15.80	16.70	17.69	18.66	19.72	21.09
1	14.58	15.22	15.93	16.79	17.76	18.73	19.81	21.25
1.5	14.31	14.92	15.60	16.44	17.40	18.37	19.47	20.95
2	14.00	14.58	15.25	16.08	17.03	18.01	19.14	20.69
2.5	13.73	14.31	14.97	15.80	16.76	17.76	18.92	20.51
3	13.55	14.13	14.79	15.62	16.59	17.62	18.82	20.51
3.5	13.44	14.01	14.67	15.51	16.50	17.56	18.80	20.61
4	13.36	13.94	14.60	15.45	16.46	17.54	18.83	20.68
4.5	13.30	13.88	14.55	15.42	16.45	17.56	18.90	20.87
5	13.24	13.83	14.51	15.40	16.46	17.61	19.02	21.17
5.5	13.20	13.80	14.50	15.40	16.50	17.71	19.19	21.52
6	13.18	13.79	14.51	15.45	16.59	17.86	19.44	21.92
6.5	13.19	13.82	14.56	15.53	16.73	18.07	19.76	22.40
7	13.23	13.88	14.64	15.66	16.92	18.34	20.15	23.07
7.5	13.29	13.96	14.76	15.82	17.14	18.65	20.60	23.81
8	13.37	14.07	14.90	16.01	17.40	19.01	21.11	24.62
8.5	13.46	14.18	15.05	16.21	17.68	19.38	21.64	25.48
9	13.56	14.31	15.21	16.42	17.97	19.78	22.21	26.55
9.5	13.67	14.45	15.38	16.65	18.27	20.19	22.78	27.34
10	13.80	14.60	15.57	16.89	18.58	20.60	23.35	28.35
10.5	13.94	14.78	15.78	17.14	18.91	21.02	23.91	29.21
11	14.11	14.97	16.00	17.41	19.24	21.43	24.45	30.11
11.5	14.30	15.18	16.24	17.70	19.58	21.84	24.96	30.63
12	14.50	15.41	16.50	17.99	19.93	22.25	25.44	31.38
12.5	14.73	15.66	16.77	18.30	20.27	22.64	25.88	31.72
13	14.97	15.92	17.06	18.62	20.62	23.01	26.28	32.08
13.5	15.23	16.19	17.35	18.94	20.97	23.38	26.64	32.45
14	15.50	16.48	17.65	19.26	21.30	23.72	26.97	32.61
14.5	15.77	16.76	17.96	19.58	21.63	24.05	27.26	32.79
15	16.04	17.05	18.25	19.89	21.95	24.36	27.53	32.96
15.5	16.31	17.33	18.55	20.19	22.26	24.65	27.77	32.94
16	16.57	17.60	18.83	20.48	22.55	24.92	27.99	33.11
16.5	16.83	17.87	19.11	20.77	22.83	25.18	28.20	33.09
17	17.08	18.13	19.38	21.04	23.10	25.44	28.40	33.24
17.5	17.32	18.39	19.64	21.31	23.36	25.68	28.60	33.21
18	17.56	18.63	19.89	21.57	23.61	25.91	28.78	33.19

From: Kromeyer-Hauschild, K. et al. (2001): Percentiles for the Body Mass Index during childhood and adolescence based on various German random samples. Monthly magazine Kinderheilkunde, 149, p. 807–818



# 2. Consensus paper – patient training programmes for obese children and adolescents

Presented by the Working Group for ‘Preventative and therapeutic measures for overweight children and adolescents – establishing a consensus’ led by the Federal Ministry of Health and Social Security

Written by: Dr Thomas Böhler, Prof. Martin Wabitsch,  
Dr Ute Winkler

Berlin, September 2004

Members of the working group:

*Rosmarie Apitz*, Office of the German Forum for Prevention and Health Promotion at the BMGS [*Geschäftsstelle Deutsches Forum Prävention und Gesundheitsförderung im BMGS*]

*Sibylle Becker*, AOK-Bundesverband

*Andrea Benecke*, German Society for Behavioural Therapy [*Deutsche Gesellschaft für Verhaltenstherapie*]

*Dr. Thomas Böhler*, Medical Service of the Health Insurance Funds [*Medizinischer Dienst der Krankenkassen*]

Baden-Württemberg/Medical Service of the Central Associations [*Medizinischer Dienst der Spitzenverbände*]

*Dr. Andreas van Egmond-Fröhlich*, Working Group for Obesity During Childhood and Adolescence [*Arbeitsgemeinschaft Adipositas im Kindes- und Jugendalter*]

*Dr. Helge Hebestreit*, Society for Paediatric Sports Medicine [*Gesellschaft für Pädiatrische Sportmedizin*]

*Reinhard Mann*, Federal Centre for Health Education

*Dr. Dorothee Meyer-Mansour*, Ministry for Rural Areas, Food, Agriculture and Consumer Protection for Lower Saxony [*Niedersächsisches Ministerium für ländlichen Raum, Ernährung, Landwirtschaft und Verbraucherschutz*]

*Karin Niederbühl*, Association of Employee Health Insurance Funds and Worker Compensation Funds Association [*Verband der Angestellten-Krankenkassen und Arbeiter-Ersatzkassen-Verband*]

*Dr. Astrid Potz*, Federal Ministry of Consumer Protection, Food and Agriculture [*Bundesministerium für Verbraucherschutz, Ernährung und Landwirtschaft*]

*Dr. Christel Rademacher*, German Society for Nutrition [*Deutsche Gesellschaft für Ernährung*]

*Iris Renner-Mörsberger*, IKK-Bundesverband

*Prof. Martin Wabitsch*, Working Group for Obesity During Childhood and Adolescence

*Prof. Joachim Westenhöfer*, Working Group for Obesity During Childhood and Adolescence

*Dr. Ute Winkler*, Federal Ministry for Health and Social Security



# 2.1 Preamble

At the invitation of Federal Health Minister Ulla Schmidt, a meeting of experts was held in June 2003 to discuss ‘Preventative and therapeutic measures for overweight children and adolescents – establishing a consensus’. One outcome of this was that a working group was commissioned to establish a consensus on preventative and therapeutic measures for overweight children and adolescents. The mandate, which was formed in general way, was then further defined by members of the working group to say that there is an urgent need to act with regard to quality assurance of outpatient training programmes.

Patient training programmes for children and adolescents can be used as additional rehabilitation measures in accordance with Section 43 Paragraphs 1 No. 2 of the Fifth Social Security Code if outpatient services provided by general practitioners and specialist doctors prove insufficient. The number of patient training programmes on offer is constantly rising. Based on the criteria of evidence-based medicine, however, there is currently no proof of the long-term, sustainable effectiveness of the services. This creates particular difficulties for cost bearers of such measures in terms of regulating which services to fund. Before valid evaluation results can be made available, binding standards for patient training programmes first have to be developed. Naturally, these can only apply for as long as scientifically sound information on the long-term effectiveness and successes of the measures is available, which makes it necessary to carry out an evaluation in the form of a scientific study.

Against this background, the following statements are of a provisional nature. They have, however, been conceived as an initial aid to cost bearers for assessing patient training programmes and as a guide for the service providers themselves to allow them to compare their services against those of other providers, the result of which being that this information will contribute to the development and improvement of the quality of these care services for children and adolescents and benefit those affected by overweight and obesity.

Unfortunately, the hope that it would be possible to organise a scientific study on the effectiveness of outpatient training programmes for obesity, which formed the basis of the consensus paper in September 2004, has not been fulfilled.

## 2.2 Definition of overweight and obesity

Overweight and obesity (adiposity) are defined as having an overproportionate quantity of fatty tissue in the human body. The Body Mass Index [BMI = Weight (kg) / Height<sup>2</sup> (m<sup>2</sup>)] is used to measure this. Due to age-related and gender-specific changes in body mass during the development of children and adolescents, the tables or percentile curves developed by the Working Group for Obesity During Childhood and Adolescence (AGA) are used as reference values.

If a child or adolescent has a BMI over the 90<sup>th</sup> age and gender-specific percentile, he or she is considered to be overweight, whereas if he or she has a BMI over the 97<sup>th</sup> percentile he or she is regarded as obese. A child is said to be extremely obese if he or she has a BMI that exceeds the 99.5<sup>th</sup> percentile. Deviations of the BMI measured in individual cases from the age and gender-specific average value are expressed in the form of standard deviation scores or SDS. This value is calculated as  $BMI_{AGA} - SDS_{LMS}$  (Kromeyer-Hauschild et al. 2001).

## 2.3 Prevalence

The prevalence figures for Germany, i.e. the figures relating to the current frequency of an illness, are inconsistent for children and adolescents. The available studies use different measuring techniques and definitions of overweight and obesity. Even the size of the random samples and the selection criteria for the participants are inconsistent. This means that the data can only be compared to a limited extent and that there is a diverse range of values.

According to the available national data from the various regions of Germany, the values from 1985 to 1999 fluctuate for five to ten-year-old children for overweight between approx. 8.1% and 17.6% and for obesity between 0.7% and 6.7 %, for 13 to 15-year-old children between 13.8% and 16.8% for overweight and 5.1% and 7.9% for obesity (Wabitsch et al. 2002). By contrast, however, the figures from the youth health survey conducted by the Univer-

sity of Bielefeld are considerably lower. According to these, approximately 4,6% of 12 to 16-year-olds were overweight in 2002 and 2.1% were obese (Zubrängel and Settertobulte 2003). As a reference, the 90<sup>th</sup> to 97<sup>th</sup> percentiles for children (AGA) were used in these studies.

Based on current estimates, it is assumed that half of the obese children and adolescents will have at least one secondary illness or have other risk factors (Ravens-Sieberer et al. 2001; Reinehr, Bryak et al. 2003).

Topical German studies report different trends in relation to prevalence. For example in a study in Jena, the percentage of overweight and obesity in children rose from 9.7% among boys and 11.8% among girls in 1975 to 16% among boys and 21% among girls in 1995 (Kromeyer-Hauschild and Jaeger 1998). A similar development is evident among children from Hamburg: Data from examinations carried out by school doctors confirm an increase in the proportion of obese children from 4% in 1975 to just under 11% in 1999 (Authority for Labour, Health and Social Affairs Hamburg 1999). By contrast, both the German Society for Nutrition and the Research Institute for Child Nutrition in Dortmund come to the conclusion that there has been no increase in the prevalence of overweight and obesity in German children and adolescents in the past 15 years (Benecke and Vogel 2003).

The less than satisfactory data situation will be considerably improved by the results of the National Health Survey on Children and Adolescents currently being carried out by the Robert Koch Institute (RKI). From 2006, the first representative information will be available for the whole of Germany. The information from the survey currently available, although this is not yet representative suggests that there is a maximum of 20% overweight children among the 10–11-year-old age group, and a maximum of 15% among the 5–7-year-olds.

According to experts, significant factors influencing the trend of obesity during childhood and adolescence and factors that mean that children are at risk of developing obesity are family predisposition (obese and overweight parents), ethnic background (country or origin other than Germany), sociocultural factors and a low social status (based on income and the parents' academic education) (Wabitsch 2004). Having a body weight that is too high is also caused by a lack of physical activity during the day (lack of exercise), a persistently positive energy balance and an inability to deal with stress. Changed living circumstances in the family unit and in the surrounding living

environment of the child or adolescent also play a role, the significance of which should not be underestimated. Obesity is therefore a problem with many facets, caused also by cultural and behavioural factors.

Since nutritional behaviour and lifestyle are defined during a person's early years, early intervention that involves a child's parents is indicated for children and adolescents.

## 2.4 Indication – who should take part in patient training programmes?

Preventative or medical interventions, including rehabilitative interventions should definitely be considered for children or adolescents who are malnourished or do not eat a balanced diet or who are overweight or obese. The decision as to which measure is indicated in each individual case will be made by the relevant child or adolescent's paediatrician or family doctor. These play a key role in the long-term treatment of the affected child and his or her family. If the doctor treating the child or adolescent considers participation in a patient training programme would be of benefit, the following should be borne in mind:

Structured patient training programmes may be indicated in the following circumstances:

- for extremely obese children (BMI above the 99.5<sup>th</sup> percentile),
- for obese children with a BMI between the 97<sup>th</sup> and 99.5<sup>th</sup> percentiles, if additional risk factors and illnesses are involved  
and
- for overweight children with a BMI between the 90<sup>th</sup> and 97<sup>th</sup> percentiles with an illness or illnesses requiring treatment.

If the child or adolescent has another severe illness (e.g. as a result of a hereditary disease), another form of therapy is generally required (AGA 2003). The target groups among overweight and obese children and adolescents for whom the patient training programmes are relevant in accordance with Section 43 Paragraph 1 No. 2 of the Fifth Social Security Code are defined in detail in the fields marked in grey in table 2.

Associated with increased body weight ...	No risk factors	Risk factor *	Illness**
<i>Extreme obesity</i> (BMI > 99.5 <sup>th</sup> percentile)			
<i>Obesity</i> (BMI < 99.5 <sup>th</sup> to > 97 <sup>th</sup> percentile)			
<i>Overweight</i> (BMI < 97 <sup>th</sup> to > 90 <sup>th</sup> percentile)			
<i>Normal weight</i> (BMI < 90 <sup>th</sup> percentile)			

\* The following are classed as *risk factors*: insulin resistance or hypercholesterolaemia as well as family predisposition (diabetes mellitus type 2 in the child's parents, myocardial infarction or stroke before the end of the 55<sup>th</sup> year of life in 1<sup>st</sup> and 2<sup>nd</sup> degree relatives).

\*\* The following are considered to be illnesses that require body weight to be reduced in order to treat them, *where the link with increased body weight appears to be plausible*: arterial hypertension, diabetes mellitus type 2, disturbed glucose tolerance, precocious puberty (premature onset of puberty), polycystic ovary syndrome, orthopaedic illnesses.

Table 2: indications for participation in a patient training programme for children and adolescents (field marked in grey)

*Explanatory example*: For an overweight child (BMI = 95<sup>th</sup> percentile) with a secondary illness requiring treatment, participation in a patient training programme in accordance with Section 43 Paragraph 1 No. 2 of the Fifth Social Security Code would be appropriate, *without* secondary illnesses it would not.

Participation in a patient training programme is contraindicated in the following cases:

- Children/adolescents and their families or relatives who are not sufficiently motivated to change their behaviour,
- Children/adolescents who are unable to work in a group or who have intellectual handicaps,
- Forms of obesity that are attributable to an illness (e.g. Prader-Willi Syndrome).

If the child/adolescent in question has another illness that requires treatment (e.g. eating disorder, depression), a decision must be taken as to which illness

should have priority, to ensure that the child is not overtaxed. For target groups where there is not indication for them to take part in a patient training programme (which fields in table 2), the doctor treating them has the option of making use of the various preventative services offered by the health insurance funds (cf. joint and standard areas of activity of the central associations of the health insurance funds for implementation of Section 20 paragraphs 1 and 2 of the Fifth Social Security Code).

## 2.5 Goals – what do the measures aim to achieve?

In general terms, the aim of patient training programmes is to reduce the weight of a child/adolescent in the long-term (reduction of fat mass) and stabilise their weight as well as improve the risk factors associated with obesity and illnesses in the affected child/adolescent by changing their nutritional behaviour and levels of physical activity as well as to promote normal development and performance.

Individual targets should therefore be agreed with the participants of patient training programmes and subgoals recorded. It must be possible in each case to examine the extent to which the individual has achieved his or her goal. To do this, changes in height, body weight and the BMI, which can all be measured using simple means, must be measured and recorded before, during and after participation in the patient training programme.

Since a person's body fat mass and the BMI undergo a significant physiological increase from the age of six, the *success of their participation in the programme* can only be assessed on the basis of the change in the  $BMI_{AGA}-SDS_{LMS}$  achieved. In simple terms this means:

- Short-term weight reduction (reduction of fat mass) is deemed to have occurred if a person's body weight has reduced by at least 5% (reduction of BMI-SDS of  $> 0.2$ ) one year after the start of treatment.
- Success is deemed to very good if a person's body weight has reduced by approximately 10% (reduction of BMI-SDS by  $> 0.5$ ).
- An additional criterion for success is the improvement of the risk factors associated with increased bodyweight and the alleviation of illnesses associated with obesity.

Criteria for long-term success – both in relation to the individual participants in a patient training programme as well as in relation to the programme as a whole – have not yet been agreed.

## 2.6 Quality requirements – which conditions need to be fulfilled?

### Quality of the concept

The patient training programme must clearly detail the involvement of contractual doctors who treat the patients prior to, during and subsequent to the programme in particular. Regardless of the duration of a patient training programme, by including the patients in a treatment chain that involves post-monitoring by contractual doctors over a period of at least three years, it is possible to assess an individual's success and compare the success of different programmes. Persons insured by the statutory health insurance are obligated in accordance with Section 1 of the Fifth Social Security Code to cooperate with precautionary health measures, have their illnesses treated or be rehabilitated and pay part of the costs towards such measures. The aims of the programme must be compatible with the above statements. Patient training programmes that are likely to be successful include a combination of the following five modules:

1. *Nutrition* (communication of knowledge, advice and practical exercises for parents and children on changing the food they eat, taking the DGE recommendations into account).
2. *Physical activity* (changing children's behaviour and habits with increased physical activity in their everyday lives; structured training and sport units alone led by personnel *are insufficient*),
3. *Behavioural therapy elements* to guard against participants falling back into old habits (influencing nutritional behaviour and levels of physical activity in combination with nutritional changes and an increase in physical activity),
4. *Medicine* (definition and consequences of obesity, causes and intervention options),
5. *Involvement of a child's parents* or guardians, taking the age of the child/adolescent into account (programmes aimed solely at children which do not involve their parents in any way, are not assessed as target-oriented).

The testing of diagnostically relevant laboratory values and other tests are already part of the care provided by contractual doctors. Accordingly, it is not necessary to integrate these into a patient training programme. Similarly, extreme calorie-reduced diets, formula foods, food supplements, non-approved medication or surgical procedures must not be part of the patient training programme.

## Quality of the process

The decision as to whether or not there is an *indication* for a patient to participate in a patient training programme must be made by the contractual doctor. The parties providing the programmes must, however, stipulate binding inclusion, exclusion and discontinuation criteria for the participants that are compatible with agreed and evidence-based guidelines. At the same time, the participants of such a programme and their families must be motivated, i.e. ready and willing, to implement the necessary changes to their daily lives on a permanent basis.

The *training groups* should be age-homogeneous, i.e. comprise children or adolescents of similar ages, and the individual progress of the participants in relation to the desired change in behaviour must be taken into account. In order to do this, an individual intervention plan must be compiled for each participant showing what effects the training ought to have had by what times, if the training is to be completed with success (agreement of target, setting of subgoals).

The consensus group considers the following steps to be relevant for *including the doctor treating* a patient when carrying out a patient training programme:

- Assessment of the indication by the contractual doctor treating a patient (before the start of the training),
- Interim report to be sent to the contractual doctor treating a patient (once a quarter),
- Final report to be sent to the contractual doctor treating a patient (at the latest two weeks after the end of the training).
- The contractual doctor treating a patient should be contacted in the event of problems (fulfilment of criteria for discontinuing a programme, irregular participation).



*Diet:* An easily comprehensible, easy to implement general dietary recommendation appropriate for the various target groups is sufficient. It is not generally necessary to compile individual dietary plans. If patients keep a record of the food they eat and the actual nutritional behaviour is documented, this can help to stabilise the implementation of the dietary recommendation. This has the advantage of allowing unwanted developments – such as an unbalanced diet and nutritional deficits – to be recognised. The food eaten should correspond to the relevant chapter in the guidelines of the Working Group for Obesity During Childhood and Adolescence (AGA 2003) or the recommendations of the German Society for Nutrition.

*Physical activity:* There is no doubt that sufficient physical activity is the key to success. Work carried out to influence levels of physical activity should not only be in structured, taught training or sport sessions. The aim must be to change habits and levels of physical activity during everyday life.

*Changing behaviour:* Implementing new behaviour in everyday life mainly requires the application of methods used in behavioural therapy in all programme modules in addition to theoretical and practical teaching of knowledge and encouragement to change the food the participants eat and increase the exercise they do.

*Parental involvement:* It has been scientifically proven that a person's family shapes and sustainably influences their levels of physical activity and eating habits, particularly at a young age. The younger a child is, the more dependent it is on the decisions its parents make. This means parents are important role models at this stage. As a child grows older, other influences such as friends and the media start to play an increasing role. The involvement of parents and other family members should differ according to the age group:

- With children, full involvement of their parents and the people looking after the children should be encouraged. Parents of younger children should understand that they play a key role in establishing and maintaining new behaviour in the children. They should be trained in how to create the conditions for the children to learn and motivate them in the long term.
- With adolescents, their parents should be informed about the aim and content of the programme and be instructed in how to help their children achieve the goals set for them at the training sessions. They should not, however, always be present at the training sessions with the adolescents.

## Quality of the structure

*Training team:* Depending on the modules and the content of a patient training programme, an interdisciplinary team is indicated with the guidance of a doctor (cf. Joint Recommendations of the Central Associations of the Health Insurance Funds for Promoting and Carrying Out Patient Training based on Section 43 Paragraph 1 No. 2 of the Fifth Social Security Code). The required programme content must be taught by an interdisciplinary training team with the guidance of a doctor. All team members must be able to provide evidence of their expertise in dealing with obese children and adolescents, and have the relevant teaching skills, methods and experience. The training team must be able to prove that they have expertise in the areas of nutrition, physical activity and behavioural therapy by presenting the relevant certificates. The training should follow a predefined methodical concept, which is described in a *Handbook for Therapists*. The patient training programme should be laid down in writing and include written and target group-specific material for the participants.

## 2.7 Required documentation

The documentation plays an important role in patient training programmes because this allows a target to be set, provides a place to record the subgoals that have been achieved and enables the progress of the measure to be traced. The following table gives a systematic overview of the requirements of the documentation.

## 2.8 Future developments and outlook

This consensus paper created an important basis for reducing uncertainty amongst service providers and health insurance funds with regard to patient training programmes for children and adolescents with obesity and for implementing the first steps towards a standardised system with regard to the

Service provider	Before the start of the programme	During	After the end of the programme
<p><i>Contractual doctor who referred the patient to the programme and continues to treat them</i></p>	<p><u>Medical certificate, this should:</u></p> <ol style="list-style-type: none"> <li>1. Rule out secondary or syndromal forms of obesity as well as the presence of any psychological disorders</li> <li>2. state whether or not the patient is suitable to take part in a training programme</li> <li>3. include the body weight, height and BMI of the child/adolescent and of its parents</li> <li>4. document obesity-associated illnesses and risk factors with the diagnostically relevant laboratory findings and other test results</li> </ol>	<p><u>Letter to programme provider and sponsor:</u> if illnesses and symptoms occur that correspond to the aforementioned criteria for being excluded from taking part</p>	<p><u>Letter to programme provider and sponsor:</u> (once a year for three years after the end of the programme):</p> <ol style="list-style-type: none"> <li>1. Body weight and height, BMI of the child/adolescent, as far as data protection regulations do not oppose this</li> <li>2. Progress and (new) occurrence of obesity-associated illnesses and risk factors, if applicable with diagnostically relevant laboratory findings and other test results</li> <li>3. (new) occurrence of psychological disorders including eating disorders</li> </ol>
<p><i>Programme provider</i></p>	<p><u>Confirmation of inclusion in the programme to be sent to the contractual doctor who referred the patient:</u></p> <ol style="list-style-type: none"> <li>1. Confirmation that the patient fulfils the inclusion criteria and does not have any exclusion criteria</li> <li>2. Examination of the patient to ascertain whether or not they are sufficiently motivated and that the child/adolescent, parents have sufficient resources</li> <li>3. Agreement of goals with the patient/s</li> </ol>	<p><u>Interim report to the contractual doctor who referred the patient:</u></p> <ol style="list-style-type: none"> <li>1. Body weight, height and BMI of the child/adolescent</li> <li>2. If applicable, reasons for dropping out of the programme prematurely (e.g. occurrence of psychological disorders requiring treatment and other severe health problems, the patient did not take part regularly)</li> </ol>	<p><u>Final report to the contractual doctor who referred the patient:</u></p> <ol style="list-style-type: none"> <li>1. Achievement of agreed target (body weight, height and BMI of the child/adolescent)</li> <li>2. Information on networking with regional providers of services for primary prevention of obesity as part of continued treatment</li> </ol>

Service provider	Before the start of the programme	During	After the end of the programme
	<p><u>Documentation for bodies funding treatment:</u></p> <p>1. Willingness to participate in a scientific evaluation and integration of the medical history of the insured persons into this study (with declaration of consent from those participating)</p>	<p><u>Documentation for bodies funding treatment:</u></p> <p>1. Participation in each individual training session (with signature of the participant/his/her parents and information on the relevant training content)</p>	<p>3. Any grounds for stopping participation prematurely (e.g. appearance of mental disorders requiring treatment or of other serious health problems, no regular participation)</p> <p><u>Documentation for bodies funding treatment:</u></p> <p>1. Participation in each individual training session (with signature of the participant, his/her parents and information on the relevant training content)</p>

Table 3: Requirements of service providers' documentation.

acceptance of costs. This means greater transparency for those affected and also that it will be easier for them to find a suitable patient training programme more easily and achieve success with it. Nevertheless, the work of all concerned is far from done. In the future, even greater attention must be paid to the prevention of overweight, since by heightening the awareness of those affected by it to the risks associated with overweight and obesity at an early stage and the promoting healthy lifestyles, illnesses can be avoided and the costs of treatment avoided or reduced.

In addition to this, further efforts need to be made to provide quality services both in the field of prevention as well as in the area of treatment of overweight and obesity in children. The first inroads into this have already been made. The National Health Survey for Children and Adolescents conducted by the RKI will also supply the requisite prevalence figures relating to the

weight of children and adolescents. It should be possible to combine this data with sociodemographic data and update it at regular intervals.

In future, more attention must be paid to the prevention of overweight. This is why the Federal Centre for Health Education (BZgA) is developing quality criteria for prevention programmes as part of its project ‘Quality Grid for Prevention Measures for Overweight and Obese Children and Adolescents’, the aim of which is to provide a basis for assessing existing services to prevent and treat of overweight together with experts. At the same time, a study is being carried out to record the care services for overweight children on a national scale. Furthermore, there are plans for a multiprofessional obesity evaluation group to examine the various care services with regard to their effects. In addition to this, an interdisciplinary working group has applied to the German Research Association [*Deutsche Forschungsgemeinschaft*] to carry out a prospective, multicentre, controlled and randomised study to treat obesity in children.<sup>4</sup> The results of this scientific study would be incorporated into future recommendations for creating suitable services to prevent and treat overweight and obesity in children and adolescents. The consensus group strongly welcomes this research application. We consider it necessary to take further steps to compile evidence-based guidelines.

These various activities have been important measures toward ensuring the availability of high quality, quality-assured and effective services for prevention and rehabilitation in the next few years. In order to achieve this goal, all participants must continue to make concerted efforts in the interests of the children and adolescents affected to create viable services.

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<sup>4</sup> This application was refused by the DFG. At this current stage, funding for a multicentre, randomised and controlled study on the efficacy of the treatment of obese children and adolescents in Germany has not been secured.

# 2.9 Annex

## 2.9.1 Quality criteria for patient training programmes for obese children and adolescents

A patient training programme for obese children and adolescents can only be recommended if the programme fulfils all of the criteria listed below:

The *programme providers* must submit the following documents to the cost bearers:

1. A description of the content and didactic concept complete with bibliography,
2. Diagram of the key processes involved in carrying out the training programme,
3. Description of the training team and evidence of their existing qualifications,
4. Description of the premises available for the training,
5. Target group-specific teaching material including handbook/manual,
6. Illustration of the schedule documentation and documentation for recording the results as well as correspondence with the contractual doctor treating the participants,
7. Proof of the quality of the results, if appropriate with bibliography or certificate of participation in a national evaluation study.

1. QUALITY OF THE CONCEPT		Yes	No
1.1	The programme concept includes a combination of methods.	<input type="checkbox"/>	<input type="checkbox"/>
1.2	The programme is designed for a specific target group.	<input type="checkbox"/>	<input type="checkbox"/>
1.3	Use of medication, formula diets or nutritional supplements are not a fixed element of the treatment concept communicated in the training programme.	<input type="checkbox"/>	<input type="checkbox"/>
1.4	A surgical procedure is not a fixed element of the treatment concept communicated in the training programme.	<input type="checkbox"/>	<input type="checkbox"/>
1.5	The programme strives to achieve the approved targets or programme targets are described, the achievement of which is measurable both with regard to the programme as well as in individual cases.	<input type="checkbox"/>	<input type="checkbox"/>

<b>2. QUALITY OF THE PROCESS</b>		Yes	No
2.1	Binding inclusion criteria are given.	<input type="checkbox"/>	<input type="checkbox"/>
2.2	Binding exclusion criteria are given.	<input type="checkbox"/>	<input type="checkbox"/>
2.3	Binding criteria for discontinuing the programme are given.	<input type="checkbox"/>	<input type="checkbox"/>
2.4	The motivation of the children/adolescents is checked before the start of the programme.	<input type="checkbox"/>	<input type="checkbox"/>
2.5	The age-homogeneity of the training groups is ensured.	<input type="checkbox"/>	<input type="checkbox"/>
2.6	The individual learning speed of the participants is taken into account.	<input type="checkbox"/>	<input type="checkbox"/>
2.7	The contractual doctor treating the participants is involved in the training of his or her patients.	<input type="checkbox"/>	<input type="checkbox"/>
2.8	Interdisciplinary team meetings are held at which the progress of the individual participants is discussed between the staff.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Diet</b>			
2.9	The dietary recommendations correspond to the stipulations of the specialist associations (AGA, DGE, FKE).	<input type="checkbox"/>	<input type="checkbox"/>
2.10	An extreme calorie-reduced diet is not recommended.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Physical activity</b>			
2.11	Exercise programme: Emphasis is on actively promoting patient's own initiative and encouraging them to take responsibility for increasing their level of physical activity.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Behaviour</b>			
2.12	Application of behavioural therapy methods during the majority of time the team spend in the programme hours for children/adolescents.	<input type="checkbox"/>	<input type="checkbox"/>
<b>Parental involvement</b>			
2.13	Parents are actively involved in the programme for children (services aimed at parents in the form of parents evenings, training events, manuals and joint campaigns).	<input type="checkbox"/>	<input type="checkbox"/>
2.14	Parents are informed about the programme for adolescents (minimum: parent manual).	<input type="checkbox"/>	<input type="checkbox"/>
2.15	The parents are trained in the skills that are necessary in order to establish and maintain the new behaviour in the children.	<input type="checkbox"/>	<input type="checkbox"/>
2.16	Parents should not always be present at the adolescents' training sessions, but should help them to maintain their new behaviour.	<input type="checkbox"/>	<input type="checkbox"/>

Table 4: Quality criteria for patient training programmes for obese children and adolescents

<b>3. QUALITY OF THE STRUCTURE</b>		Yes	No
3.1	The programme is taught by an interdisciplinary training team in the sense of the 'Joint recommendations of the central associations of the statutory health insurance funds'. The team members have specific experience in the care of children and adolescents.	<input type="checkbox"/>	<input type="checkbox"/>
3.2	The staff are trained in the use of behavioural therapy techniques.	<input type="checkbox"/>	<input type="checkbox"/>
3.3	A target group-specific handbook for children/adolescents/therapists/parents is available.	<input type="checkbox"/>	<input type="checkbox"/>
3.4	The length of the programme is less than 2 years.	<input type="checkbox"/>	<input type="checkbox"/>
3.5	The intended group size is up to 12 participants.	<input type="checkbox"/>	<input type="checkbox"/>
3.6	Instruction on dealing with foodstuffs and shopping exercises take up less than 30% of the time set aside for the nutrition module.	<input type="checkbox"/>	<input type="checkbox"/>
3.7	The available premises satisfy the requirements of the 'Joint recommendations of the central associations of the statutory health insurance funds'.	<input type="checkbox"/>	<input type="checkbox"/>
3.8	The intended documentation of the schedule and results satisfies the approved requirements.	<input type="checkbox"/>	<input type="checkbox"/>

<b>4. QUALITY OF THE RESULTS</b>		Yes	No
4.1	The organisers are able to show confirmation that the programme is participating in a national evaluation study by the BZgA or the AGA.	<input type="checkbox"/>	<input type="checkbox"/>
	<b>or</b>		
4.2	Reliable information about the numbers of drop-outs are available.	<input type="checkbox"/>	<input type="checkbox"/>
4.3	Results as to how many and to what extent the participants achieved their goals (intention-to-treat analysis) are available.	<input type="checkbox"/>	<input type="checkbox"/>
4.4	Systematic evaluations of the participant questionnaires have been carried out and are available.	<input type="checkbox"/>	<input type="checkbox"/>

Table 5: Quality criteria for patient training programmes for obese children and adolescents



## 2.9.2 Bibliography

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In Germany, numerous inpatient and outpatient measures are on offer for children and adolescents who are overweight or obese. Until now, however, knowledge of the need for action and of the structure and contents of the measures on offer has remained fragmentary. For the first time, volume 4 of the series 'Gesundheitsförderung konkret' ['Concrete methods of health promotion'] sets up sound criteria that mean the quality of measures for overweight and obese children can be guaranteed. The first part of this volume contains a quality grid, whilst the second is comprised of a consensus paper.

The quality grid – submitted by the 'Evaluation of measures to combat obesity in children and adolescents' working group– is a catalogue of criteria focusing on preventative measures implemented in the case of children who are overweight and have not developed any secondary diseases. The criteria set out in the consensus paper - submitted by the working group 'Preventative and therapeutic measures for overweight children and adolescents' - are relevant to training programmes on offer for seriously overweight (obese) children and young people.

The quality grid and the consensus paper are intended to aid and encourage all those actively involved in provision for overweight and obese children in the planning, implementation and evaluation of measures.



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