THE CARE PATHWAY FOR WEIGHT MANAGEMENT OF CHILDREN ACROSS CORNWALL

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Being overweight or obese in childhood has become so common that it can be a surprise to parents and even to health professionals. Here, I aim to answers some basic questions about childhood obesity and then go on to describe the model that is used locally across Cornwall.

Q. HOW DO YOU DEFINE OVERWEIGHT AND OBESITY IN CHILDHOOD?

A. Body Mass Index (BMI) is a measure of weight for height. It is the gold standard for assessing weight in children and it should be plotted on gender specific UK charts and the centile should be used for diagnosis and monitoring (1).

Clinical cut-offs using these BMI charts:

BMI >91st centile = overweight
BMI >98th centile = obese

Over this level there is no consensus in terminology. In our specialist clinics we use the SIGN definitions (2) as follows:

BMI >99.6th centile = severe obesity
BMI >+3.5sd = very severe obesity
BMI >+4sd = extreme obesity

BMIs should not be used in isolation, but should be a key tool in your clinical assessment. Body shape is another consideration; however, waist circumference should not be used for diagnosis in children.

Q. IS OBESITY REALLY A PROBLEM IN CHILDHOOD?

A. Yes! Cardiovascular and diabetes risk factors are not uncommon in obese children and young people. These include increased blood pressure deranged lipid profiles (e.g. cholesterol and triglycerides), enlarged left ventricular mass, hyperglycaemia and hyperinsulinaemia. Sleep apnoea and abnormal liver function tests (signs of non-alcoholic fatty liver disease) are other co-morbidities seen. There can also be significant psychological and social consequences. For information about screening for comorbidities see the OSCA statement (3). It is recommended that all children with a BMI >98th centile should be screened. In practice our GPs undertake much of this screen.

Q. WHAT DOES THE EVIDENCE SAY ABOUT TREATING CHILDHOOD OBESITY?

A. NICE states that dietary guidance should not be given in isolation. Interventions should be lifestyle focused, including behaviour change, increased activity and decreased sedentary time (screen time), as well as reduced energy intake. At least one parent should be involved and whole family change should be promoted. Families should be encouraged to focus on SMART lifestyle goals (4).

The aim of intervention should be to reduce BMI centile. In most overweight children, this will be achieved through weight maintenance or even decreased trajectory of weight gain initially. In more extreme cases, e.g. when a child will never grow into their weight, gradual weight loss may be necessary. This should be at a maximum rate of 0.5 to 1.0kg per month and post-puberty.

Q. IS THERE ANYTHING ELSE THAT SHOULD BE CONSIDERED?

A. Referral to the paediatrician should be considered if there is a suspected underlying cause, including if a child is obese and short for their age, if they are severely obese before the age of two years, or those with serious medical comorbidities.

There are no medications licensed for use in children in the UK. However, Orlistat is sometimes used post puberty in extreme situations, although this is off licence and

As co-lead for children for DOM UK, Rachael campaigns for Junk Free Checkouts and sits on the APPG for a Fit and Healthy Childhood.

should only, therefore, be used under strict medical supervision. Surgery can be considered post puberty too in very severe obesity (BMI >3.5 SD) with severe comorbidities. It should only be carried out by very specialised multidisciplinary teams.

Safeguarding is another consideration. Although there is not much guidance on this at the moment, good practice says that it should be considered as neglect if there is a repeated failure to engage. Emotional abuse can sometimes be part of the cause of the child's obesity and so this should be considered. Viner (5) published a useful guidance paper and, more recently, a proposed framework has been set out by Garel (6).

OUR MODEL IN CORNWALL

Cornwall has a disparate and rural population which had to be a strong consideration when designing service delivery. Although it is a popular holiday and second home destination and a wonderful place to live, there is significant socio-economic deprivation in the local population. The NCMP figures, available from National Obesity Observatory (7), show us that obesity in children is linked to deprivation with levels being twice as high from the lowest to the highest decile and our levels of obesity reflect this.

We have two care pathways for overweight and obese children. The first is for babies and toddlers up to the age of two years and the second is for children and young people aged two to 16 years. The age split is based on the age for which BMI is more widely validated. The pathways aim to bring together the work of professionals in this area and are hosted on our website (8). This website aims to be the central point of information for both families and professionals. Although it is hosted by the Health Promotion Service, it aims to host information from all services working in weight management across the lifecycle and across Cornwall.

As children's dietitians, we work in a multidisciplinary (MDT), multi-agency team to provide weight management advice to families alongside training and clinical supervision to other professionals working in this area. We aim to provide care in a way that is most acceptable to families. When consulted, they said that they would prefer to gain the key messages through professionals whom they are already working with until there is a greater level of concern. When there is that greater level of concern, we provide a specialist programme called LEAF (Lifestyles, Eating and Activity for Families), which is a level 3 service for the early years (children of six years of age and younger). In the team, we have a paediatrician, dietitian and Activity Advisor. We also work in partnership with the local children's centres which provide the space for our group sessions as well as the crèche that is an important aspect of facilitating engagement.

The LEAF programme was locally developed over three years ago as we were unable to find a model of intervention that was appropriate for our target age group. We are HENRY (Health, Exercise & Nutrition in the Really Young) (9) trained and, although it is not designed for level 3, we base many of our principles of intervention on the HENRY model. The format of LEAF is a one-to-one initial session, usually at the family home, where the focus is on motivation to change and their understanding of the referral as well as preparing them for the clinic.

The next step is our MDT clinic at the hospital, where all three professionals see the family at the same time. This reduces the number of appointments and the time taken for families, which is an essential part of facilitating engagement in a county where they may be travelling for over an hour by car, or much longer if using public transport. Being together for the clinic is also beneficial for the professionals involved, as it allows us to ensure that we have all heard the same information and promotes consistent and manageable care plans. It is at this appointment that families are offered the GOOS (genetics of obesity study) (10).

The next stage in the programme is six weeks (spread over two to three months) of small group-based sessions run in local children's centres. Although it is our gold standard for intervention, it is not always possible for families to attend these sessions. If this is the case, we find other ways, such as working one-to-one, but also involving health visitors, school nurses or other professionals already working closely with the families, e.g. family support workers. Once this part of the programme is complete, we see them back in the MDT clinic before discharging to primary care for ongoing monitoring and support.

In some instances, we will continue to work with families for a longer period where they have struggled to engage, but are now more ready.

As you might expect in the group sessions, we cover a whole range of healthy lifestyle topics. As the groups are small, it allows us to really help families make the information relevant to them and each week we encourage SMART goals to be set. Although most of the sessions are parent focused delivery, one of the sessions is for the whole family in which we play fun games and do some 'taste testing' to see if we can eat a rainbow. If you would like to see other ideas to promote creative healthy snack times, you can follow my 'Fun with food' board on Pinterest (11).

Our outcomes are based on pre- and post-intervention measures, which include BMI z-score, energy from drinks, amount of sleep and level of sedentary behaviours. We use the NOO SEF (the standard evaluation framework from the National Obesity Observatory, now part of Public Health England (7)). However, we found that there is a lack of validated tools for measuring outcomes in this age group and so started using our own drinks diaries and lifestyle questions. The drinks diaries seem to suffer less from the reporting bias of food diaries, but the lifestyle questions, including hours of sleep and number of hours of screen time, do. The former is subjective and based on clinical experience, but the latter is based on the relatively recent introduction of accelerometers for the older children in the programme (four years upwards). Something that we are looking to explore further is bio-impedance measures to show changes in body composition. We would like to hear from others working in this area to share experiences and improve our outcome measures. You can get in touch with our team via LEAF.programme@cornwall.nhs.uk

Our other client group for one-to-one work is children with a genetic condition called Prader Willi Syndrome. The Prader Willi Syndrome Association has lots more information on this condition (12). We work with children and young people up to transition to adult services and deliver dietetic intervention alongside the paediatric endocrinologist.

WHAT CAN YOU DO?

Dietitians are very well placed to make a real difference in this relatively new and growing speciality. If you are in a specialist role, can I please encourage you to get involved with DOM UK (13) so that we can share our knowledge and experience to help progress this relatively new area of dietetics. Even if you are not in a specialist role, or even in a paediatric role, you can still make a difference by getting involved with promoting social change. For example, visit www.junkfreecheckouts.org to get involved with the joint DOM UK and Children's Food Campaign movement to see checkouts free from the temptation of junk foods (14). Whether you have children of your own or not, you can promote change and attitudes in your local schools and communities.

Examples of 'Fun with Food' at a group session

It is not just about treatment either. An excellent example of preventative work is the Food For Life Partnership (FFLP); you can find more details at www.foodforlife.org.uk (15). Many of our local schools are signed up (for free) to FFLP, which is a highly recommended platform to promote a whole food cycle approach to improving children's nutrition. It incorporates growing, cooking and good nutrition through resources, lesson plans and ideas for schools, and aims to transform food culture. It has been shown to have a positive impact on both health and education, as well as its effects spreading into the wider community.

Go on get involved - you CAN make a real difference!

For article references please email:
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