Sultan Qaboos University Med J, August 2013, Vol. 13, Iss. 3, pp. 336-340, Epub. 25th Jun 13
Submitted 27th May 13
Peer Reviewed
Accepted 4th Jun 13

EDITORIAL

Conspicuous Consumption and Sedentary Living

Is this our legacy to our children?

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ظاهرة الاستهلاك وحياة الخمول

هل هذه وصيتنا لأطفالنا؟

ريتو لاكتكيا

The Earth is not a gift from our parents, it is a loan from our children - Kenyan Proverb

This issue of the journal highlights issues which significantly impact the physical, mental and environmental health of a generation of children and adolescents. Whether it is mute exposure to passive smoking,[1] the mental stress faced by professional scholars[2] or the frightening emergence of a new generation of young 'maturity' onset diabetics,[3] it is a clarion call for parents, society and the medical fraternity to stand up and take responsibility.

Childhood obesity: The silent epidemic

The alarming emergence of the silent epidemic of childhood obesity as a prelude to lifelong morbidity (with diabetes, hypertension, dyslipidaemia, insulin resistance, obstructive sleep apnoea being possible consequences)[4,5] deserves to be tackled on a war footing. Sleep apnoea as a manifestation of corpulence earned literary reknown through the popularity of early Dickensian writings, long before authoritative scientific publications linked the two physical phenomena[6,7] [Figure 1]. Charles Dickens' classic description of the frequent somnolence of 'Joe, the fat boy' is an acknowledged example of the power of observation of a clinical phenomenon by a non-physician.[6]

The interplay of genetic, physiological and familial factors, physical activity, sedentary behaviour, dietary intake and social cognitive, family and peer, school and community factors are at the heart of this malady.[8] The complex problem of an 'obesogenic' childhood and adolescence is well summarised in an excellent treatise on the subject.[9] The authors provide a comprehensive overview of obesity statistics, the complexity of contributing factors and policies, both existing and required, to address this socio-cultural-environmental health hazard. While a debate still rages as to whether obesity should be considered a disease at all, therapeutic professionals have opened their doors to

Figure 1: "...and on the box sat a fat and red-faced boy, in a state of somnolency".
The Posthumous Papers of the Pickwick Club, Charles Dickens, 1837.[6]

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a bewildering array of medical and surgical options that have serious implications when advocated for children.[10]

Do we need to be concerned in Oman?

Rapid social and economic transition in the span of just four decades has catapulted the Omani population into an affluent lifestyle with its attendant burden of lifestyle diseases. The World Health Organization (WHO) predicted an increase of 190% in the number of subjects living with diabetes in Oman over the next 20 years, rising from 75,000 in 2000 to 217,000 in 2025.[11] The scenario is even more horrifying when you consider that 12% of the population already has diabetes, 30% is overweight, 20% is obese, 41% has high cholesterol, and 21% has the metabolic syndrome.[12] If even a small proportion of this astronomical figure are obesity-driven youth diabetics, in a nation where 53% of the population is below 20 years,[12] the enormity of the situation cannot be overemphasised. Ali *et al.*'s figures on childhood diabetes in Egypt, bring home the stark reality that the disease of 'maturity' has changed gears to a much younger and 'immature' age group.[3] In a study of university students in Oman, Al-Kilani *et al*. found that almost 28% of students were overweight or obese and, more pertinently, that almost 50% had a high or very high body fat score.[13] In studies across the region in Oman, Lebanon and Kuwait, obesity is significantly higher in males compared to females.[13–15] Obesity, particularly in females, is related to high leptin levels.

Impact on health

Type 2 diabetes mellitus (T2DM), coronary heart disease, stroke, osteoporosis, some forms of cancer, and gall bladder disease are the long term outcomes of obesity.[4,5] If obesity begins in childhood, the lifetime probability of early onset of one or more of these diseases and the consequent morbidity will obviously increase. Early onset cardiovascular disease in Arab countries has its origins in improper diet and physical inactivity.[16] The hormonal and metabolic consequences of obesity in young people parallel those in obese adults.[17] Psychological effects such as victimisation, poor self-esteem, negative stereotypes and stigmatisation are just some of the outcomes of obesity. *Anorexia nervosa* is an extreme of this example that may have its origins in childhood obesity.[4,5] Prejudice and discrimination against the obese often go unnoticed and unreported with significant effects on personality development.

Who is responsible?

The aetiology of obesity encompasses a complex and multifactorial interplay of parents, caregivers, medical practitioners, society, food manufacturers and their advertisers and policy makers; the continuum begins with deranged food habits at home and extends to societal influences and peer pressure. Of these, the burden of responsibility lies heavily on parents who are often in denial until adolescence forces the underlying issues to the surface.[18] A lack of quality parenting is increasingly being spotlighted as an overwhelming contributor to a range of biological and psychosocial outcomes in later life.[19] Several genetic and subcellular evolutionary changes serve as theories for abnormal fat accumulation.[20] Unusual causes include childhood obesity in communities exposed to violence for a sustained period as a manifestation of post-traumatic stress.[21]

Conspicuous consumption

There appears to be enough scientific support for traditional breast feeding practices. Obesity is one of several unwelcome proven outcomes of the early replacement of breast milk by formula milk and other supplements.[22] A high proportion of carbohydrate-rich refined foods in the lists of imports to Oman, with minor increases in fruits, is evidence of availability and hence consumption.[23] A comparison of food habits in Muscat and the southern region of Oman showed changed dietary patterns compared to the previous two decades. A decline in breast feeding and the early institution of infant formula and weaning foods, and food composition weighing heavily in favour of fat, cholesterol, refined sugar and salt, is the cost of urbanisation and globalisation and produces heavier and unhealthier children.[24] Improper diet and physical inactivity in Arab countries are leading contributors to obesity and consequently to early onset cardiovascular disease.[16] Nutritional knowledge has been found to be low in students irrespective of low or high body fat scores in Oman.[13] The effects of environmental, social and nutritional factors are evidenced by the fact that diabetes affects 17.7% of urban adults versus 10.5% of rural adults (2006 data).[25]

Sedentary lifestyles

An interesting study done on Omani schoolboys of grades 3 and 4 (average age 9 years) and their parents displayed the possible effects of adult behaviour on childhood obesity, revealing that only 32.5% of fathers and 8% of mothers exercised twice weekly. The perception of obesity in the family was 21% in mothers, 11% in fathers and 8% in siblings.[26] Active lifestyles are most effective when initiated from childhood. There are certainly those who begin later in life but this initiative demands a high sense of self-discipline and motivation to sustain exercise as a part of ones lifestyle. Ironically, it appears, the very miracles of scientific gadgetry that fascinate growing children (e.g., mobiles, remote controls, PlayStations) and supposedly stimulate mental activity in fact restrict bodily activity to rapid finger movements. A rate of car ownership of 69% in Oman may be a hallmark of affluence but it also unfortunately means the exertion of minimal physical exertion to get from place to place.[27]

Demographics, family environment and cultural influences

Urbanisation in Oman, rising from 11 to 79% between 1970 and 2005, and expected to reach a mindboggling level of 86% by 2030, has already brought with it a tide of changed dietary and behavioural patterns that directly impact obesity, among other concerns.[27] Communities, schools and urban planners are considered at the heart and not on the sidelines of addressing the problem of T2DM. Addressing obesity, as it is a prelude to T2DM, similarly needs to be family-centric in its approach because long before a child leaves the home, their food habits, tastes and olfactory senses have developed deep-rooted connections in the brain. Aggressive food marketing and advertising tactics assault the last efforts at resistance; the golden arches framing 'M' against the skyline beckon and stimulate gastric juices from miles away. Freebies of cuddly toys or miniatures of the latest cartoon characters blatantly packaged with 'combo' meals capture even a toddler's imagination. There is little counterbalance in attractive, eye-catching and inspiring suggestions for equally tasty, satisfying, balanced foods. A particularly insightful analysis of the influence of cultural practices, beliefs and a distancing of communication between globally-educated Omani health providers and locally-rooted family members, illustrates the yawning gap between health education delivery and receptivity.[28] These extend to culturally-acceptable nuances of 'health' or even 'beauty' when appraising a cherubic child or a well-endowed female form, respectively. Notably, a study reports the lack of fat-phobia in Omani adolescents in direct contrast to their peers in other countries.[29]

Awareness

The bright light at the end of the tunnel is another article in this very issue that illustrates the ongoing efforts for studying and stimulating population awareness.[30] It details some of the measures already in place through governmental five-year plans to inculcate healthy lifestyles in children—with obvious lifelong benefits. Al-Shafaee *et al.* found 29.5% and 20.8% of adults in a semi-urban population knowledgeable about the contribution to diabetes of obesity and physical inactivity, respectively.[31]

Prevention: Family, state and society

Charity, they say, begins at home. This is certainly true of childhood obesity. Parents' knowledge of balanced nutrition, the establishment of ground rules of food procurement for the family, good old joint family eating practices setting an example through minimising TV snacking by adults, the provision of home-made school snacks and even family cooking sessions—the list is endless, restricted only by the imagination.

It is pertinent to note that the traditional Omani diet that is regulated in its frequency and content provides a simple 'back to basics' formula for stemming the tide of imbalanced dietary practices. Fish as a choice of high-protein low-fat food is one such vital ingredient that families relish. Salad (*khudra)* as a regular accompaniment provides vitamins, roughage and, in adequate quantities, satiety. A greater emphasis on home-made versus ready-made will provide the subtle shift from a higher to lower carbohydrate, refined sugar and salt content. Regulating quantity of portions is easy when families 'share' organised meals but difficult in fridge-to-couch snacks. It takes a persistent but rewarding lifestyle effort by modern and working mothers to slip fruits and cereals into the routine of planned meals.

Adopting 'the family that plays together…' adage is really the initiation of a child in preparation for his/her own forays into the world of sports later in life. That this has additional benefits in family bonding and mental health is another achievement. These practices yield the greatest benefit when an early start is made. Sending conflicting signals by trying to impose these practices later on tweens and older adolescents is guaranteed to invite rebellious reactions and be entirely counterproductive.

Within the Ministry of Health, a separate directorate for Non-communicable Diseases Surveillance and Control addresses community-based initiatives, especially preventive measures like health education.[12] Deep penetration of awareness measures into secondary and primary health care, however, needs simultaneous educational measures. School health and awareness of the killer diseases related to childhood obesity deserve a media blitz through communication channels patronised by the ever younger tech-savvy youth (Twitter, Facebook, etc.). A unique attempt to analyse objectively the impact of this epidemic is the Arab Teens Lifestyle Study (ATLS). This is a multicenter collaborative project for assessing the lifestyle habits of adolescents from 11 Arab cities across the region, including Muscat, and is ultimately aimed at guiding public health policy.[32]

In 2005, gadget manufacturers tried to extend corporate social responsibility to preventive health by creating Aibo, the robotic dog, a pet that reflects the owner's anti-obesity struggles.[33]

Therapy

Pharmacotherapy and/or bariatric surgery for childhood/adolescent obesity brings with it moral debates on ethics and child rights.[9,34–36] For extreme situations, anti-obesity medication may be an obligatory inclusion in the pharmacopoeia.[12]

Advances in hygiene, science, automation and the consequent longevity will all come to naught if the weighty shall inherit the earth. Through the simple remedial interventions of good parenting, legislation of food products and appropriate advertising, the snowballing epidemic of obesity can not only be halted but reversed. It would be a pity if human evolution leads to a shorter life expectancy punctuated by obesity-associated illnesses—for lack of the simple wisdom of balanced eating and exercise.

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