

## An Overview of Obesity

Lu DY<sup>1\*</sup>, Che JY<sup>1</sup>, Lu Y<sup>2</sup>, Wu HY<sup>1</sup>, Yarla NS<sup>3</sup>, Lu TR<sup>1</sup>, Xu B<sup>4</sup>, Huang YK<sup>5</sup> and Lu DF<sup>5</sup>

<sup>1</sup>Shanghai University, Shanghai, People's Republic of China

<sup>2</sup>Shanghai Ocean University, Shanghai, People's Republic of China

<sup>3</sup>Divisions of Biochemistry & Chemistry, City University of New York School of Medicine, 160 Convent Avenue, New York, NY10031, USA

<sup>4</sup>Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai, People's Republic of China

<sup>5</sup>The Second Hospital of Nejiang District, Sichuan Province, People's Republic of China

\*Corresponding author: Lu DY, Shanghai University, Shanghai 200444, People's Republic of China, Tel: +86 21 66163545; Fax: +821 66132177; E-mail: ludayong@shu.edu.cn

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### Abstract

Obesity is an undesired human physiological state caused by a lot of inherent risks and environmental influences. People with obesity commonly face a lot of negative personal image in the society and a number of medical and economic consequences. However weight loss after different types of interventions are often temporary and even bounce back than ever before. To face with this kind of therapeutic limitation, new ideas, perspectives and systematic action must be carried out.

**Keywords:** Obesity; Endocrinology; Human genome; Inflammatory factors; HAART; Antibiotics; Weight loss; Mathematics; Computational network; Obesity treatment; Life-style adjustment

### Introduction

#### Epidemic information

Obesity is an undesired phenotypic feature that troubles a lot of persons and a disease-like symptom to whom suffers from it [1,2]. People with obesity commonly face a lot of negative personal image in the society and a number of pathological symptoms with human health deteriorating outcomes. It seems like a chronic symptom that lasts long in common obesity people.

#### Difficult situations in obesity people

However, it is difficult to be remedied and fully managed by existing management measures and resources. Many types of therapeutic/management measures have been developed for this symptom of the most obesity people-some of these measures are even very expensive (like surgery) or harmful therapy for the sufferers (like cathartic agents or herbs) [2]. To face with this kind of therapeutic consequences, new ideas, perspectives and systematic study must be carried out [2-4].

#### Current Social and Political Impacts for Obese People

##### Negative social image

In addition, obesity youngsters often meet with some kinds of other environmental influence that make them negative social image. From these obese sufferers, losing weight is their first choice and addictive with, yet at this moment unsatisfactory (Table 1).

### Past experience

Disease managements of obesity encompass wide-spectra of

Categories	Details	References
Negative image	Romance difficult	2
	Job seeking	
	Position promotion	
	and so on	
Pathologic	Blood glucose level increases	9-12
	Blood lipid abnormality	
	Lipo-dystrophy	
	Metabolic syndrome	
	Liver functional impairments	
	Hormonal problem (leptin and others)	
	Inflammatory action	
and so on		
Complications	Cardiovascular risks	2, 5-12
	Type 2 diabetes	
	Human immune-system impairments	
	Mental disorders (suicide and intimidating)	
	and so on	

**Table 1:** The harmful impacts on human being with obesity.

medical/pharmacologic issues-including diet control, life-style adjustments, surgery, drug utility and novel clinical therapeutic managements [2-19].

**Problem Generation**

**Knowledge deficiency**

In most people’s minds, obesity equalizes to overfeed. As a result, current therapeutic ideas focus on accelerating nutrient excretion or food limitations. Yet, certain amounts of obesity people are not induced from overfeed. Liver functional damage may also be the causes (side effects of other drugs, such as hormonal therapy, HAART therapy for HIV/AIDS and others) [20]. To these obesity people, food limitations or regular exercises do not work well.

**Genetic predisposition**

Similarly, genetic predispositions also play key roles for human obesity [21-25]. These ranges of obesity people are also less sensible for food limitations and cathartic therapeutics.

In the early study of these obesity people, human genomic exploration is the only way for finding final solution and curable therapeutics. In accompany with past therapeutic option, obesity people are more suitable for combination of life-style adjustments with other medication due to the multiple causality of human obesity.

**Obesity Etiology, Patho-Physiologic Relation and Analysis**

Human obesity is caused by a lot of different factors – including;

Causality	Life-style changes	References
Overfeed	Increase fruit consumptions	1-8
	Eat more vegetables	
	Reduce fried food/meats, especially fast food	
	Eat more sea-food (fish and marine life)	
	More milk consumption	
	and so on	
Exercise	Swimming	2
	Ball-game	
	Yoga	
	Martial arts	
	Athletics	
	and so on	
Bad habits	Reduce cigarette	2-8
	Reduce alcohols, especially beer	
	Sleep adjustments	
	Reduce sedentary work every days	
	and so on	
Spirit regulatory	Tea drink	10-11
	Coffee drink	
	Conversations	
	Reading	
	Listen to the music	
	Meditation	

**Table 2:** Different patterns of life-style adjustment for human obesity.

## Life-Style Adjustments

### General information

Besides food restraint, many other types of life-style adjustments are usually as effective as drug therapy. They are multiple selections, such as food control, regular exercises, bad habit avoidance and spiritual focusing. Despite equal effective as drug intervention, many details need to be optimizing (Table 2).

### Human body exercises

The most famous one are different types of body exercises. They vary in intensity, duration and regularity [3,4]. These characters also play key roles for obesity managements and need to study systematically.

### Beverage consumption

In the past discovery, many traditional beverages, such as tea, coffee [13,14] and so on are effective to reduce body-mass of obesity people. This type of effective ways should be introduced to more people along with balanced exercises.

### Major Categories of Counteractive Measures

The counteractive measures for obesity people can be variable [13-20]. These kinds of obesity managements include surgery, drugs and other therapeutic options. However, most of these management options are not perfect. Mechanisms and genetic study are indispensable (Table 3).

Therapeutic categories	Specific options
Surgery	Gastric bariatric surgery and so on
Drug therapies	Chemical drugs
	Bio-agents
	Herbal therapy
	Gene therapy
	Dietary issues
	Drug combination
	Individualized therapy and so on
Others	Life-style adjustment
	Community supports
	Psychiatric interventions
	and so on

**Table 3:** Major patterns of clinical therapeutics.

### Mathematical or Computational Network

Mathematical modelling is an important step to find new relations. Equation 1 represents our vision towards this topic [26,27].

Pathogenesis simulation and analysis of human obesity:

$$B=f(x)+f(y;\beta)+f(z;)+E \quad (1)$$

B=Body mass index

x=Food related variables

y=Drug related variables

z=Genetic related variables

E=A common constant

These mathematical equations are proposed by us and might be applicable for further specification, enumerated and statistically analysed. Possible joint-actions might accelerate it [28-30].

### New Insights

New and update obesity therapeutics should be targeted to disease originality and causality. Without these targeted therapeutics, clinical obesity therapy will be unchanged and less responsive.

Genomic study of obesity might bring us many new insights into this chronic phenotype/symptom [22-25]. Along with the advance of other diseases, the patho-therapeutic knowledge of obesity might be improved by this genomic approach in the future.

Therapeutic combinations are also very useful for obesity patients. These kinds of therapeutic paradigms are very useful for many other diseases [30-38]. Further work in this regard is inevitable. Maybe any other therapeutic breakthroughs create from drug combinations, like HIV and cancer treatments.

### Conclusion

Obesity control is very difficult from easily bouncing back. A lot of life-style and therapeutic interventions have been designed and applied in the clinic and general people. Look forward to new generation of medical cares for obesity.

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