

“Universal Diet and Beverage Code”: ‘The Rules of Halves in Human Nutrition’

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Introduction / Background

The supremacy of human race is attributed to its highest form of adoptability exhibited under diverging conditions. Be it the freezing tundra or non-pardoning tropics this race has established its indomitable authority.

The prime cause of this marvellous success lies in its dietary behaviour. Humans are known omnivores; consuming whatever the nature offered them [1-4]. When this diverse dietary habit is their main secret to success it also creates a barrier in establishing a uniform civil dietary code. This is evident by the differing guidelines by multiple agencies at different level. Be it the ever revising and differing RDAs for different countries focusing on the minimum nutritional limits or equally vocal orthomolecular exponents stressing on the maximum tolerable end or the moderators like DRI (dietary reference intake); or even some controversial ones like the latest ‘paleo diet’; all have played their role in creating this dietary ambush [5-8]. Though these international, national, ethnic and specific guidelines for differing situations are right at their respective places they have done little in clearing the cloud.

In recent years with rapidly changing world trend the geopolitical, socio-cultural and ethnic divides are getting bridged. The un-taming human palate is on a mission to explore all frontiers to satisfy its curiosity [9,10]. This coupled with ever differing and everyday emerging guidelines have created the ‘myth of Sisyphus’. Where ‘Sisyphus’ had no choice but we do have. In this pressing hour we must get our basics right. It is just not enough to provide safe and adequate food to our populace but to guide them to healthy and proportionate eating for productive longevity.

Introducing the ‘uniform diet and beverage code’

There are handful of attempts made and guidelines published but one in the line of ‘uniform diet code’ is yet to be established. With the support of our ever expanding and enduring research evidences and valued lessons learnt from history painstakingly propagated by world scholars; today we are in a position to direct those resources towards that which will serve us all and serve us well [1-21]. We in all wholeness can advocate a ‘uniform diet and beverage code’ for universal use which shall be practical, easy to comprehend and implement across the globe.

This “universal diet and beverage code” can also be referred to as the ‘rules of halved in human dietetics’ as the sections and subsections are divided by halving them. It has two components the ‘diet code’ and ‘the beverage code’.

‘The diet code’

Assuming a day’s diet as a plate this rule suggests that half of its supply should come from ‘proximate articles’ and the other half from ‘non proximate’ one.

The proximate half of the plate can be further divided to cereal and non-cereal based articles at 1:1 ratio. The cereal portion should have equal representation from whole grains and flour cereals. The non-cereal portion is proposed to have half protein source and the other half as fat source. The protein half should be equally represented by plant and animal products. Furthermore the animal section should further be divided equally to dairy and flesh products- which include fish and eggs in addition to the regular meat items. For vegetarians the animal source should be replaced by dairy items. The plant sources should contain protein rich items like soya beans, pulses and legumes to name some (Figure 1).

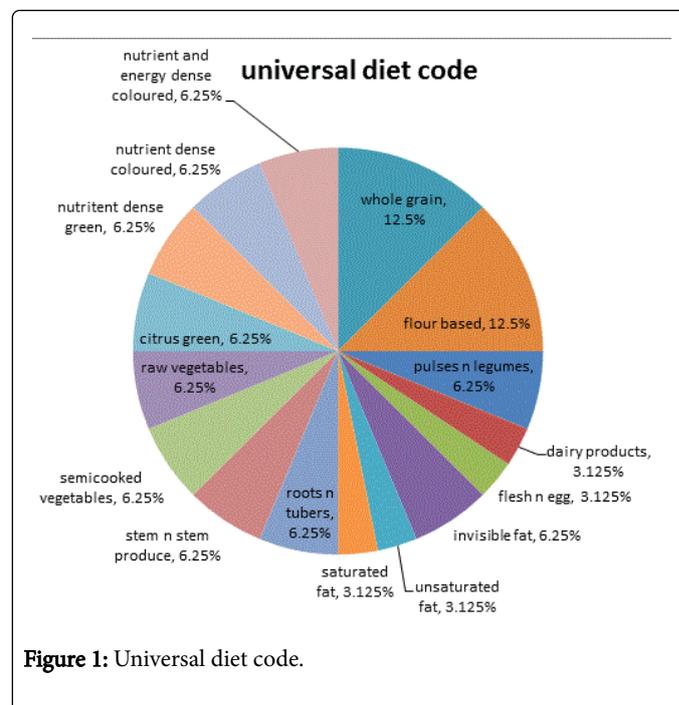


Figure 1: Universal diet code.

The fat counter should have equal presentations from visible and non-visible sources. The visible portion again can be equally presented by saturated to unsaturated fats. The saturated source should ideally be rich in omega 3 like ghee, butter, coconut oil but not hydrogenated oil

and, the unsaturated ones of the kind sunflower and groundnut. This is proposed to tilt the omega 6:3 closer to the idealistic 1:1 ratio [11,12].

Now let us discuss the other halve of the plate. This is intended to include vegetables and fruits in equal proportion. Halve of the vegetables should be cooked and the other halve consumed semi cooked and raw again at a proportion of 1:1. In the cooked variety there has to be a balance of 1:1 among energy and nutrient dense roots and tubers like sweet potato, potato, cassava, cocoyam, to nutrient rich green leafy and stem and stem bearing products like their flowers, fruits and seeds, i.e., spinach, cauliflower, aubergine / brinjal, ladyfingers, different types of gourds to name a few. The semi-cooked and raw stuffs are the different types of salads prepared with great hygienic care and health concern. The vegetable portion is proposed to provide complex carbohydrates, at least halve of dietary fibres and halve of vitamins and minerals.

The fruit sector should constitute of local and seasonal produce. This should have equal presentation from coloured and non-coloured / green products. Half of the coloured fruits should come from energy and nutrient rich items like banana, mango and coconut and the other half from nutrient rich ones like apple, pine apple, melons and berries. The non-coloured ones should further have equal presentations from citrus and fibrous / dried fruits. The fruit portion should be mainly aimed at closing the gap on the other halves of fibres, vitamins and minerals.

All the produce for the 'universal diet code' should be preferred organic agricultural and pasture grown.

'The beverage code'

The beverage world in human nutrition is no less complex. Long gone are those days when the all-important beverage in human nutrition 'water' was the solo authority. Addition of new products at increasingly regular frequencies are adding to its owe. It would appear impractical to recommend water as the only beverage for the present populace. Efforts are being made to strike some balance in this regards but a universally acceptable one is still elusive [13-16] (Figure 2).

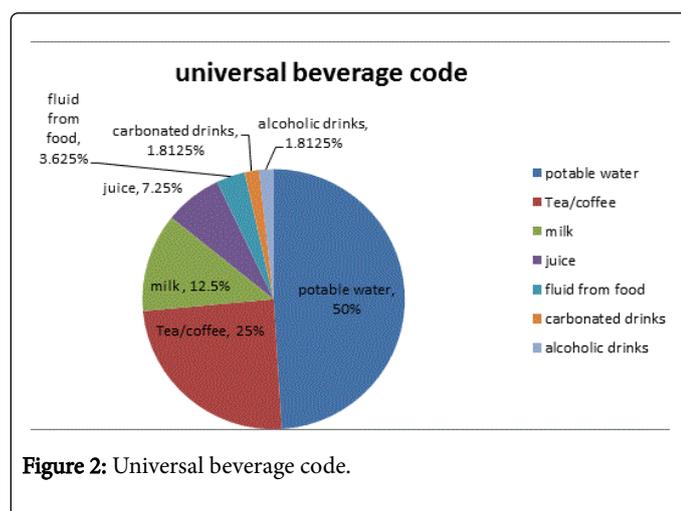


Figure 2: Universal beverage code.

The proposed 'universal beverage code' also adopt a 'rule of halve' principle for consumption of different beverages that are consumed on daily basis. The average beverage requirement of human is 100 fl oz; which is equivalent to 3 litres [13]. This portion can be safely broken to 50% of water (portable and safe) and the other half non water

beverages. The non-water based section can be further halved to tea and coffee to non-tea / coffee sector. The tea / coffee should be drunk plain and unsweetened for optimal benefit. The non-tea / coffee counter can be divided to two equal halves representing milk and non-milk beverages. A further breakup of the non-milk section to juice and non-juice sector at equal proportion seems apt. The non-juice section can accommodate fluids from food items and carbonated and alcoholic beverages at 1:1 proportion. The carbonated and alcoholic beverages section is optional and should preferably be avoided and compensated by juice and fluids from different food preparations if possible.

Proving the code

This concept can explain our needs in terms of recommended nutrient break ups proposed by different regulatory bodies. The segmentation of items is for easy comprehension; cross sector support very much exist. The "universal diet code" is designed to deliver the following deliverables in accordance with internationally acclaimed guidelines be it the highly acclaimed DRI (dietary reference intake) of US or DV (dietary Value) of national academy of science for Australia and New Zealand [17-20].

The desired carbohydrates in the range of 45-65% will be delivered mostly from the cereal counter and aptly supported by contributions from pulses and legumes, roots and tubers and energy dense fruits and some beverages. The proposed protein, fat and fruits and vegetable counters them self-appear self-sufficient to provide the required proteins at 10-35%, fat at 20-35% and dietary fibres in the range of 30-40 grams. The proportionate division with sound emphasis on nature of food is estimated to take care of the vitamins and mineral requirements as well. This is also expected to take care of other nutritional concerns like glycemic index and, glycemic load, and omega 3:6 ratio [18-21].

The beverage code toes established guide lines 12. It can provide on average portable and safe water in the amount of 1500 ml, tea / coffee 750 ml, milk 375 ml, juice 190 ml, and non-juice counter equally presented by liquids from food (95 ml) and carbonated and alcoholic drinks each representing 45 ml per day.

Conclusion

Whether it is a 3000 Kcal diet or a 1900 Kcal one, the universal diet code holds well. Thus this code applies to all healthy adults across genders. This can also act as an excellent tool in working out a balance between the fat dominated developed / western diet and cereal based developing / eastern diet.

Dietary recommendations for special groups and disease conditions are outside its preview.

We foresee the universal application / adaptation of this concept will play a pivotal role in amelioration of the 'diet / nutrition related diseases'. It will act as an excellent tool for primordial prevention of these conditions across the world. If we all can come together in supporting and enriching this simple guideline it will do a sea of good to the present and upcoming generations in terms of healthy, durable and productive life.

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