

FOCUSING ON DIETARY MANAGEMENT IN
DIABETIC, HYPERTENSIVE AND DYSLIPIDAEMIC PATIENTS



RecipeGuard

Sugar, Oil & Salt Sachets



ABSTRACT

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Amilia Chai Hui Yong, Toh Ker Ro, Tew Xin Nee, Nermesh Singh

School of Pharmacy, International Medical University, Bukit Jalil, Kuala Lumpur

Abstract


As medicine and technology advances in today's age, the majority of the world's population enjoys the highest quality of life of all time, in a world of reduced poverty and malnutrition. Nonetheless, there is always two sides of the coin. An improved lifestyle calls for the rise of another threat to health: non-communicable diseases (NCDs) such as diabetes mellitus, hypertension and dyslipidaemia. According to the Global Burden of Disease Study 2016, deaths of NCDs represented 72.3% of deaths in 2016 with 19.3% of deaths in that year occurring from communicable, maternal, neonatal, and nutritional (CMNN) diseases and a further 8.43% from injuries. [1] The mortality rate of diabetes mellitus has increased by 31.1% from the year 2006 to 2016, while it is 14.5% for cardiovascular diseases. In Malaysia, diseases of the circulatory system is the number one principal causes of death in the government hospital. [2] Hypertension, being one of the risk factors for cardiovascular diseases and diabetic nephropathy, also recorded an increasing trend over the years. [3]

However, the current clinical practice we have to treat these three diseases does not seem to catch up with their rising trend. Besides pharmacological management, patients who have diabetes mellitus, cardiovascular diseases and/or hypertension would also be advised to restrict their intakes of salt, sugar and oil. Malaysia's Clinical Practice Guideline (CPG) Management of Hypertension recommends an intake of <100 mmol of sodium or 6g of sodium chloride a day to patients with hypertension; [4] CPG of Management of Type 2 Diabetes Mellitus recommends the total carbohydrate intake should be monitored among diabetic patients; [5] while CPG Management of Dyslipidaemia recommends a total fat intake of 20 – 25% with an upper limit of 30% of total energy among patients with dyslipidaemia. [6] The caveat of such practices is that the quantification of sugar, salt and oil does not

always translate to current clinical practices. Healthcare professionals rarely conduct diet counselling which helps defining the amount of those three substances, instead, they would only recommend patients to take ‘less’ salt, sugar and oil. Most of the patients do not measure the amount of those three substances, instead, they would only arbitrarily taste the food to check if it is ‘too sweet or salty’. As taste is a subjective and inaccurate estimation of the constituents of food, the majority of the patients ended up consuming more salts, sugar and oil than they should be.

In light of that, we would like to propose a revolutionary idea: making salt, sugar and oil into pharmaceutical dosage forms, and patients shall receive their daily recommendations of those three substances in the form of prescription by the doctor. For example, if a clinician decided that a patient with hypertension should only receive maximum 5g of salt per day, the patient will be given a sachet of 5g of salt under prescription. The patient is then advised to sprinkle the sachet of salt into his daily cooking, and the same applies to sugar and oil for diabetic and dyslipidaemic patients. We believe by doing this, not only we can accurately quantify and track the amount of salt, sugar and oil patient is taking, we can change the patient’s attitude towards those three substances. By receiving salt, sugar and oil in the form of a prescription, the patient is more likely to perceive them as medications, rather than harmless condiments, therefore improving patient’s adherence to dietary restrictions. Improved adherence to dietary restrictions means that not only patient’s diseases can be well-controlled, thus preventing complications; it also means less reliance on pharmaceutical medications, which reduces the exposures to their accompanying side effects.

Example of a prescription:

Nama: <i>Nurul Ain Binti Abdullah</i>	Perubatan 6A- XXXX
No. K/P : 610417-54-XXXX No. Daftar:	R_x <i>7 Sachets RecipeGuard Salt 5mg x 1/52</i>
Umur: 58 tahun	 DR. JAMES BOND PEGAWAI PERUBATAN UD44 KLINIK KESIHATAN XYZ (Tandatangan)
Tarikh: 28/1/2019	
Penyakit: <i>Hypertension</i>	HOSPITAL NEGERI

Example of a sachet:



References (Vancouver)

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2. Minister of Health Malaysia. Health Facts 2017 [Internet]. 2017 [cited 27 Jan 2019]. Available from: <http://www.moh.gov.my/images/gallery/publications/HEALTH%20FACTS%202017.pdf>
3. Forouzanfar MH, Liu P, Roth GA, Ng M, Biryukov S, Marczak L, et al. Global burden of hypertension and systolic blood pressure of at least 110 to 115mmHg, 1990-2015. *JAMA - Journal of the American Medical Association*; 2017.
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