Indian Health Service
Division of Diabetes Treatment and Prevention
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Instituting Modest Therapeutic Lifestyle Changes for Those at High Cardiometabolic Risk in Primary Care

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Part 2 -
This part 2 of our "Modest Therapeutic Lifestyle Changes" podcast.

So how do we regain our enthusiasm for as providers for modest but measurable therapeutic lifestyle changes?

So, for those of us who have lost our frame of reference with respect to genuinely valuing lifestyle changes – even small changes – what incremental TLC behavior should we value for ourselves and our patients? It is now quite clear that pragmatic forms of TLC can reduce cardiometabolic risk (CMR) risk with or without dramatic changes in either LDL-C or reduced body weight ? This has important implications for Indian Country where at least one recent report found that in those 18 - 40 years of age, the overall prevalence of the metabolic syndrome was about 54%, and 55% after excluding individuals with diabetes (26).
The following are some examples of these TLC that can be instituted in the office or exam room.

Example Number 1

Give your patients credit for each and every step they take in terms of walking with as recorded with well-engineered reliable pedometers) irrespective of laboratory measures or body weight changes. Prescribe walking programs through the systematic use of clinical pedometry. Have patients record weekly step-count; some have up to 6-month memories and step-filters which filter out spontaneous non-walking movements. And this all permits the patient to accurately record steps over a longer period of time without inadvertently resetting. Some examples are the Accusplit 2720 and or the new Life Styles 800, two different types of pedometers. At the patient's return visit chart and give credit for each and every recordable walking step much as you would for charting their glucophage or statin. There is good reason to believe that each intentional walking step (i.e., muscle contraction) is an AMPK and PPAR activator working very similar to many of the antidiabetic agents. It is important to know that the step count itself is the principle outcome measure not the estimated distance or caloric expenditure.

As an example: add at least 1000 kcal of exercise per week to existing weekly activity pattern in your patients. This would be the equivalent of adding approximately 10 miles of walking a week or ~20,000 stepcounts on a reliable pedometer. In general it's about 200 steps per mile walked. Ideally, graduating to at least 1500 kcal per week over time would be near optimal (~15 miles/wk) depending on goals. American Indian *Pedometer Trekking* protocols can also help and are posted on the IHS DDTP website under the *Quick Guide Card* section on Physical Activity. A variety of treks ranging from 0.5 to 5 miles (1000-10,000 steps) can be "prescribed" much like drugs or diets can be prescibed. Such treks can include sacred sites in the circuit as a means for engaging in more spiritual (and thus meaningful) walk.

Example Number 2

When asking patients to change their dietary behavior, first make changes in only one food-group per return visit, or even one problem food within a food group – rather than wholesale dietary changes. The *Mediterranean Diet Score* is another example simple tool that scores on a 0-10 scale the relative compliance with Mediterranean dietary pattern and it shows various healthier patterns for the Mediterranean Diet. (27) This scale is easily adaptable to Native populations. Individual and incremental changes in nut, soy, legume, fruit, and fish consumption can be translated to some level of metabolic risk reduction.

Example Number 3

Employ more objective measures of body fat changes other than just body weight. Many patients actually reduce total body adiposity without changes in body weight owing to small increases in lean muscle weight as a result of a new exercise program especially resistance training programs. Select skinfold measures (SKMs) can be helpful in demonstrating reduced adiposity and total body fat, for example the subscapular and/or tricep skinfolds are particularly sensitive to changes in total body fat – as are others. There is no need to convert the millimeters skinfold changes to percent body fat. You just use the millimeters themselves as the outcomes measure. If you use SFM's use only professional clinical quality calipers, e.g. Lange or Harpenden calipers. For more details on SF assessment go to the DDTP website Quick Guide Card Section and select Anthropometry Measures.

Example Number 4

Write exercise prescriptions as combination therapy. Clinicians need to quantify and prescribe physical activity (in terms of kcal/day or /week or stepcount/week) as prescribed combination therapy with drug therapy when applicable. For example, 1500 kcal of weekly exercise when added to omega 3 fatty acid fish oil therapy would further reduce triglycerides and VLDL-cholesterol knowing that 1500 kcal of energy expenditure at moderate exercise intensities will oxidize intramuscular and adipose tissue stores of triglycerides and fatty acids even much added to the effect of the fish oil itself.

Example Number 5

Begin to objectively score and chart TLC behaviors in the same way you would objectively chart laboratory measures on each patient visit. Each TLC measure can be serially scored on a numerical or Likert scale (e.g., 0-10) and translated into some meaningful level of CMR risk reduction with or without changes in lipids or body weight. For example the number of weekly *fast food encounters* as defined as any fast food choice encounters a patient has regardless of the size or caloric density of the food or beverage. Several metabolic syndrome clinics have reported average *fast food encounters* outcomes decreasing from 20-25 per week to 10-12. This is a very helpful behavioral measure that depicts patient's food choice behavior versus calories or BMI changes. So again you are measuring the behavior itself which is really the bottom line of wht we are trying ot get patients to institute here.

Example Number 6

Systematize household/pueblo domestic chores into a circuit of short utilitarian activities such that the patient expends 200-350 or even more kcal during one household circuit session. This would provide a sense of accomplishing both household/yard/pueblo tasks as well as generating increased daily energy expenditure. Again there is a figure for this on the DDTP website Quick Guide Card section and this figure depicts a patient household circuit prescription form for which the patient rotates between 6-10 minute work stations over the entire circuit.
And finally to conclude many of these strategies are depicted graphically and narratively on the IHS DDTP website under the new *Quick Guide Cards* link and then under Physical Activity and

Anthropometry. Interested readers may email the myself for more detailed protocols for: (1) systematic clinical pedometry instructions for those at high CMR risk, (2) household circuit activity protocol instructions, or (3) a 15-month metabolic syndrome/CMR TLC flow-sheet. My Email address is: rlaforge@nc.rr.com.
Thank you for listening

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