INTERNATIONAL BOARD OF LIFESTYLE MEDICINE

Lifestyle Medicine Certification – Case Study Template

<table>
<tr><td>Your full name</td><td colspan="8">Robyn Chuter</td></tr>
<tr><td>Patient/ subject information</td><td>Age/Sex</td><td colspan="7">56 year old male</td></tr>
<tr><td></td><td>Presentation</td><td colspan="7">Diagnosed with prostate cancer, Gleason score 7 (3+4), 4 months before presenting to my clinic.
At upper limit of healthy weight range (BMI 24.9); appeared overfat and undermuscled.
History of moderate dyslipidaemia with elevated total and LDL cholesterol and triglycerides.
History of elevated ferritin, with no prior investigation regarding its cause.
Had commenced eating a vegan diet after prostate cancer diagnosis.
History of hayfever and arthritic pain in hands which had both resolved since changing his diet.</td></tr>
<tr><td rowspan="8"></td><td>Investigations/ approaches</td><td colspan="7">PSA testing, a prostate MRI and biopsy had already been ordered by the client's primary care provider and urologist prior to our first meeting, in order to confirm and stage the prostate cancer.</td></tr>
<tr><td>Biometrics</td><td></td><td>Weight</td><td>BP</td><td>Ferritin</td><td>Total chol-esterol</td><td>Triglycerides</td><td>LDL</td></tr>
<tr><td></td><td>pre</td><td>89 kg</td><td>124/78</td><td>338</td><td>6.1</td><td>1.63</td><td>4.2</td></tr>
<tr><td></td><td>post</td><td>86.5 kg</td><td>118/72</td><td>236</td><td>4.9</td><td>1.11</td><td>3.2</td></tr>
<tr><td colspan="3">Relevant Medication</td><td colspan="2">Dosage Before Intervention</td><td colspan="3">Dosage After Intervention</td></tr>
<tr><td colspan="3">No prescribed medication; client was taking self-prescribed supplements as follows.</td><td colspan="2"></td><td colspan="3"></td></tr>
<tr><td colspan="3">Vitamin D</td><td colspan="2">1000 IU t.i.d.</td><td colspan="3">Continue with current dose but ask GP to monitor 25 hydroxyvitamin D regularly, and cease supplementation once level reaches 70 nmol/L (Kristal et al., 2014).</td></tr>
<tr><td colspan="3">Vitamin E</td><td colspan="2">500 IU 1 d.</td><td colspan="3">Discontinue – vitamin E supplementation may increase</td></tr>
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			prostate cancer risk (Klein et al., 2011).
	V-Omega 3	1 d.	Continue to ensure adequate omega 3 intake on a vegan diet.
	Zinc Plus	1 d.	Continue – moderate supplemental zinc may reduce invasive prostate cancer risk (Gonzalez, Peters, Lampe, & White, 2009).
	Vitamin B12	1 mg q.w.	1 mg q.o.d.; ask GP to monitor serum B12 level and aim for 400-600 pmol/L (257 at previous blood test).
	Ultra Muscleze (magnesium supplement)	5 g q.d	Continue at same dose – client notices decreased muscle tension when using this product.
	Diagnoses	The client had already been diagnosed with prostate cancer, Gleason score 7 (3 + 4) and scheduled for radical prostatectomy at the time of presentation.	
LM treatment/ intervention	Nutrition	Low fat wholefood plant-based diet as per diet successfully used to contain early-stage prostate cancer, as reported by Ornish et al. (2005) and Frattaroli et al. (2008). Increase intake of green leafy vegetables, particularly cruciferous vegetables to supply isothiocyanates (Liu, Mao, Cao, & Xie, 2012; Watson, Beaver, Williams, Dashwood, & Ho, 2013), and legumes (Diallo et al., 2016). Include 1 heaped tbsp. of ground flaxseed/linseed in the diet daily to supply lignans (Azrad et al., 2013; Demark-Wahnefried et al., 2008). Reduce bread intake and replace with less refined foods in order to lower glycaemic load (Hardin, Cheng, & Witte, 2011).	
	Physical activity	Client's exercise frequency at presentation was below American College of Sports Medicine recommendations of at least 150 minutes of moderate-intensity exercise per week. He had retired from competitive squash after 30 years, and was bushwalking once per week, and doing a yoga class sporadically. My exercise prescription specified walking 2 mornings per week, while listening to work-related podcasts (since he was currently studying in the mornings instead of exercising), doing 1-2 yoga classes per week, continuing to bushwalk on weekends, and adding weight training under the guidance of an exercise physiologist once he was cleared by his surgeon. The client was also referred to www.fitnessblender.com to provide options for home workouts when he was unable to go for a walk or attend a yoga class due to inclement weather or time pressure.	
	Resilience (stress, sleep)	Client was advised of the importance of securing an adequate quantity and quality of sleep. He disclosed that concerns regarding the health of his daughter, who is disabled by fibromyalgia, caused him significant psychological stress and frequently disturbed his sleep. He was taught Emotional Freedom Techniques (EFT) and advised to use EFT as soon as he became aware of worry, procrastination, frustration or any other disturbing emotion.	

		Client expressed interest in learning meditation. I recommended the Headspace app to provide him with an introduction to meditation techniques, and encouraged him to experiment with various forms of meditation until he found one that resonated with him, and to practice meditation daily.
	Social support/connectedness	Client reports being happily married, although some conflict has arisen with his wife since he began undertaking dietary changes. Fortunately, his sexual function was not adversely affected by prostatectomy. His wife and daughter have not adopted his eating pattern, so he makes his own meals and is frequently exposed to temptation to make unhealthy dietary choices. Client disclosed that his wife is significantly overweight but is resistant to any discussion of her own eating habits, hence he is unable to negotiate with her to avoid having unhealthy food in the house. Consequently, I discussed communication skills with the client, stressing the importance of emotional reflection in order to establish trust as the foundation of win/win negotiation. I advised him to join the Whole Food Plant-Based Aussies Facebook group. This large (11000 + members) and active online community was established to provide psychosocial support to people who are following, or wish to adopt, a low fat wholefood plant-based diet in line with the recommendations of Dr Ornish. The group provides practical support in the form of recipe sharing, meal planning suggestions, rapid answers to members' nutrition questions from well-informed administrators and experienced members, and links to reputable sources of information on plant-based nutrition. It also provides expressive support for members who are experiencing social and relationship challenges as a consequence of their dietary choices, which would be useful for this client. I also advised the client to join attend local plant-based groups and attend meet-ups in order to form social connections with people who understand and support his dietary choices. Jabs, Devine, and Sobal (1998) found that membership of in-person support groups facilitated adherence to a vegetarian diet, while my own research (Honours thesis, downloadable here) confirmed that a well-moderated online support group provides assistance with adoption and maintenance of a wholefood plant-based diet.

Clinical summary	Process / management / review	As the client resides 3 hours' drive away from my practice, all consultations except the fourth (which was scheduled to coincide with other medical appointments in Sydney) were conducted using Zoom online video conferencing. The initial consultation was 1.5 hours and subsequent consultations were 1 hour in duration. An initial treatment plan, comprising detailed dietary recommendations and links to sample recipes from my website, was emailed to him after the initial consultation, along with PDF versions of peer-reviewed journal articles that provided the evidence base for the treatment plan. The client was encouraged to discuss these articles with his doctors and advise them of the dietary changes he undertook. Updated treatment plans were emailed after each consultation. A follow-up appointment was scheduled 3 weeks after the initial consultation. The client's compliance with the recommended dietary

		changes was excellent. Trouble-shooting of impediments to full compliance was conducted, with additional suggestions made regarding batch cooking and packing lunches to eat at work. An exercise prescription was also added during the second consultation after a detailed discussion regarding the client's preferences in regards to type of exercise and time of day in which to perform it, and current obstacles to physical activity. In the third consultation, conducted 3 weeks later, the client was taught EFT, provided with extensive resources on the use of the technique, and advised to download the Headspace app in order to learn meditation. During the 4th consultation, 8 weeks later, the client disclosed some of the stressors in his marriage and family life including communication difficulties with his wife. Strategies for effective communication, especially emotional reflection, were discussed, basic skills training was carried out and links to online resources were provided.
	Outcomes/results	After reading the literature provided to him, the client elected to proceed with scheduled radical prostatectomy and to use diet and lifestyle modification to reduce his risk of recurrence. His recovery from surgery was excellent, with only transient urinary incontinence and no disturbance to erectile function. The client was highly motivated and responded well to the accountability imposed by regular follow-up appointments. He achieved significant improvements in blood pressure, total and LDL cholesterol and triglycerides, his ferritin level returned to the normal range and he reported greater stress resilience despite an increase in his overall stress level.
Reflections/ Notes (500-800 words as a guide) (use a separate sheet if desired)	Interaction with this client provided ample opportunity to apply many of the Lifestyle Medicine (LM) principles and processes described by Lianov and Johnson (2010). A strong foundation for success was already in place because the client had commenced educating himself about the impact of diet and lifestyle on his health before consulting me, and showed strong interest in learning about the impact of his habits of living on his diagnosis and prognosis. Hence, the first and third LM competencies described by Lianov and Johnson (2010) – promoting healthy behaviours as foundational to medical care, disease prevention, and health promotion, and demonstrating knowledge of the evidence that specific lifestyle changes can have a positive effect on patients' health outcomes – were easy to implement. Discussing and sending him the published research on treatment of early-stage prostate cancer with the comprehensive lifestyle intervention developed by Dr Dean Ornish (Frattaroli et al., 2008; Ornish et al., 2005), raised his confidence and sense of self-efficacy, and motivated him to explore lifestyle changes beyond those he had initially contemplated, including learning how to apply EFT to stressful situations in his life, and beginning a meditation practice. Having integrated the second competency – seeking to practise healthy behaviours and create work and home environments that support healthy behaviours – into my own daily life assisted me in implementing the eleventh competency, helping patients to manage and sustain healthy lifestyle patterns, as I can draw on my own long-term experience with maintaining health-promoting behaviours in an unhealthy world. For example, when discussing how to fit exercise into his daily routine, the client nominated mornings as his preferred time to exercise. However, he had been using this time to study for a promotion at work. I shared with him my own solution to the time-crunch problem, which is to do my weight training at home while watching or listening to educational videos or podcasts. I also	

	helped him develop a weekly batch cooking schedule, a method that I have found useful for maintaining healthy eating habits in the face of extreme time-poverty. Structural features of my practice include health, lifestyle and psychosocial history questionnaires and food journals that clients fill out before their initial appointment; long appointments (1.5 hours for initial appointments and 1 hour for subsequent appointments); and regularly-scheduled follow-up appointments, especially in the early stage of treatment. These facilitate the clinician engagement with patients that the fourth LM core competency flags as important for positively affecting patients' health behaviours, as well as the fifth, sixth and seventh competencies: assessing the social, psychological, and biological predispositions of patients' behaviours and the resulting health outcomes; assessing patient and family readiness, willingness, and ability to make health behaviour changes; and performing a history and physical examination specific to lifestyle-related health status, including lifestyle 'vital signs,' such as tobacco use, alcohol consumption, diet, physical activity, body mass index, stress level, sleep, and emotional well being. Additional training that I have undertaken in counselling and EFT assists me with the ninth LM competency, establishing effective relationships with patients to effect and sustain behavioural change using evidence-based counselling methods. Furthermore, counselling training instilled in me the client-centred orientation that facilitates the tenth competency, collaborating with patients to develop action plans and lifestyle prescriptions. This client-centred focus also facilitates the twelfth competency, supporting a team approach to the patient's healthcare, as well as fostering adoption of a coaching rather than directive mindset, and non-attachment to the outcome of the client's decision-making process. For example, I advised the client that a 3 + 4 Gleason score indicated a more favourable prognosis than a 4 + 3 score (Stark et al., 2009), making active surveillance a feasible alternative to radical prostatectomy. Given the high probability of post-surgical urinary incontinence and sexual dysfunction, and the likely psychosocial impact of such outcomes on an individual of this client's relatively young age, I advised him to discuss with his urologist the possibility of deferring surgery, adopting comprehensive lifestyle changes, and increasing the frequency of PSA testing in order to monitor disease activity. After considering my suggestion, the client elected to proceed with prostatectomy. He divulged that, after reading the studies that I sent him, he was not confident he could maintain the high level of compliance with lifestyle interventions that Ornish et al. (2005) found were associated with the best clinical outcomes, due to unremitting stress arising from his daughter's illness and the financial pressures arising from it. The client was more concerned about his family losing its primary breadwinner if he succumbed to metastatic prostate cancer than about losing his sexual function and continence. This was an excellent reminder of the importance of establishing good communication in order to elicit the client's priorities and help him or her define and achieve goals that are geared toward those priorities. Consequently, at this point I shifted focus to helping him achieve the best possible outcome from surgery and preventing recurrence. The final LM competency described by Lianov and Johnson (2010), using appropriate community referral resources that support the implementation of healthy lifestyles, was particularly important in this case because the lack of buy-in from the client's family regularly compromised his capacity to adhere to a healthy diet and lifestyle. I recommended that he join online and in-person support groups in order to build a social network of like-minded people.

	An ongoing aspect of work with this client will be coaching him to develop communication skills and strategies in order to successfully recruit family support for his healthy lifestyle behaviours and, hopefully, buy-in from his wife and daughter, which will facilitate his long-term adherence to a health-promoting diet and regular physical activity, and minimise the risk of prostate cancer recurrence (Frattaroli et al., 2008). In hindsight, I would have discussed this issue at more length in the initial consultation, as the schism in dietary practices between the client, and his wife and daughter, emerged as a significant contributing factor to his high stress level.

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