

APPENDICES

APPENDIX 1

DEFINITION OF KEY CONCEPTS

TYPE 2 DIABETES MELLITUS

The latest classification of diabetes was adopted by the World Health Organisation in 1999 and will be used in this study (WHO 1999).

Diabetes mellitus is defined as a group of metabolic diseases characterised by hyperglycaemia resulting from defects in insulin secretion, insulin action of both. Type 2 includes the common major form of diabetes, which results from defects in insulin secretion, almost always with a major contribution from insulin resistance. The chronic hyperglycaemia is associated with long-term damage, dysfunction and failure of various organs, especially the eyes, kidneys, nerves, heart and blood vessels.

De Courten M, Bennett PH, Tuomilehto J, et al. Epidemiology of NIDDM in Non-Europids. In: Alberti KGMM, Zimmet P, DeFronzo RA, Keen H, editors. International Textbook of Diabetes Mellitus 2nd ed. West Sussex: John Wiley & Sons Ltd.; 2001.p. 150.

PHYSICAL ACTIVITY

The definition of the American College of Sports Medicine is accepted for this study. Physical activity is defined as bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure.

Pate RR, Pratt M, Blair SN et al. Physical activity and public health: a recommendation from the Centres for Disease Control and Prevention and the American College of Sports Medicine. JAMA 1995;273:402-7.

EXERCISE

Exercise is a subclass of physical activity and is defined as planned, structured and repetitive bodily movement done to improve or maintain one or more components of physical fitness for the purposes of this study.

Both the quality and quantity of physical activity recommended relate to exercise recommendations by the American College of Sports Medicine.

Pate RR, Pratt M, Blair SN et al. Physical activity and public health: a recommendation from the Centres for Disease Control and Prevention and the American College of Sports Medicine. JAMA 1995;273:402-7.

MODERATE EXERCISE

Moderate exercise is defined as activities that are approximately 3-6 METs or the equivalent of brisk walking. Since brisk walking might be considered to be “hard” to “very hard” by some sedentary, older persons, an alternative definition is provided. Moderate exercise can also be defined as intensity well within the individual's capacity and which can be comfortably sustained for a long period of time. It has a gradual initiation and progression and is generally not competitive.

American College of Sports Medicine. Guidelines for exercise testing and prescription. 6th ed. Philadelphia: Lippincott Williams and Wilkins; 2000.

HEALTH-RELATED PHYSICAL FITNESS

The American College of Sports Medicine's definition is accepted for this study. Physical fitness is defined as a set of attributes that people have or achieve that relates to the ability to perform physical activity. Health-related physical fitness includes cardio respiratory endurance, body composition, muscular strength and endurance and flexibility. A better status in each of the components is associated with lower risk for development of disease and/or functional disability.

Pate RR, Pratt M, Blair SN et al. Physical activity and public health: a recommendation from the Centres for Disease Control and Prevention and the American College of Sports Medicine. JAMA 1995;273:402-7.

American College of Sports Medicine. Guidelines for exercise testing and prescription. 6th ed. Philadelphia: Lippincott Williams and Wilkins; 2000.

PHYSICAL INACTIVITY

The National Institutes of Health's definition states that physical inactivity denotes a level of activity less than that needed to maintain good health.

Pate RR, Pratt M, Blair SN et al. Physical activity and public health: a recommendation from the Centres for Disease Control and Prevention and the American College of Sports Medicine. *JAMA* 1995;273:402-7.

EFFECTIVENESS

Effectiveness is the extent to which the intervention does what is intended to do 'in the field' or 'in the real world'. The term is accepted for the purposes of this study.

Cochrane AL. Effectiveness and efficiency: random reflections on health services. In: Williams R, Herman W, Kinmonth AL, Wareham NJ, editors. *The Evidence Base for Diabetes Care*. West Sussex: John Wiley & Sons; 2002. p. 5.

SELF-MANAGEMENT

Self-management is defined as active patient engagement in making decisions about the management plan and carrying out the planned treatment behaviors and activities.

Roter D, Kinmonth A-L. What is the evidence that increasing participation of individuals in self-management improves the processes and outcomes of care? In: Williams R, Herman W, Kinmonth AL, Wareham NJ, editors. *The Evidence Base for Diabetes Care*. West Sussex: John Wiley & Sons; 2002. p.682-700.

APPENDIX 2

PROTOCOL NUMBER

INTRODUCTION OF PROJECT AT CLINIC BEFORE RECRUITMENT STARTED

EXAMPLES OF INFORMED CONSENT FORMS USED DURING THE STUDY (ENGLISH VERSIONS)

The nurse in charge of the diabetes outpatient clinic introduced the researcher and informed the patients about the intended project in an African language according to these guidelines. This was done everyday before recruitment of subjects started for the duration of the study.

DIABETES RESEARCH PROJECT

My name is Tania van Rooijen and I am a physiotherapist from the University of Pretoria.

I am doing research about the effect of exercise and education on the sugar level of the blood.

The co-operation of ladies 40-65 years with Diabetes, who are not working, is requested.

I am also requesting permission to look in you files for the medication, and to ask a few questions about your health.

Patients who are interested, will be divided into 2 groups by the computer:

- All patients will be tested for blood pressure; weight, height, walking and one test tube of blood will be taken for the blood glucose.
- One group will do exercise for 12 weeks – they will have to come to the Mamelodi hospital every second week straight to physiotherapy – they do not need to take out the files.
- One group will receive education for 12 weeks – they will have to come to the Mamelodi hospital every second week straight to physiotherapy – they do not need to take out the files.
- After 12 weeks the 2 groups will be compared to see which group of patients benefited the most.
- All patients attending the research will receive a transport fee, every time they attend a session.

Patients will receive appointment dates.

The Physiotherapy department is in the main corridor. Walk past the Pharmacy (where you get the tablets) and find it on your left.

Thank you very much for receiving me.

UNIVERSITY OF PRETORIA

DEPARTMENT OF PHYSIOTHERAPY

INFORMED CONSENT

AUTHORISATION TO PARTICIPATE IN AN RESEARCH PROJECT

TITLE OF THE STUDY: A cost-effective intervention including an exercise programme to improve the quality of life of urban female patients with non-insulin-dependent Diabetes Mellitus

Dear Mr./Ms

Date :...../...../2000

1. THE NATURE AND PURPOSE OF THE STUDY:

I understand that I am being requested to take part in a research study. The aim of this study is to assess the knowledge of and attitudes towards Non-insulin-dependent Diabetes Mellitus, and exercise of female patients with NIDDM attending the Diabetes Clinic at the Pretoria Academic Hospital.

2. EXPLANATION OF PROCEDURES TO BE FOLLOWED:

For the purpose of this study we will ask some personal questions concerning yourself. The questions will be asked in a language, which you understand.

3. RISK AND DISCOMFORT INVOLVED:

For the purpose of this study only questions will be asked. Some questions are of a personal nature.

4. POSSIBLE BENEFITS OF THIS STUDY:

This study will provide a better understanding regarding the knowledge of and attitudes towards the disease, and the benefit of exercise of diabetic patients for improving the quality of health care.

5. INFORMATION:

Should I have any questions concerning this study, I should contact: Mrs AJ van Rooijen

(Tel (012) 3542018, of the Department of Physiotherapy, University of Pretoria.

6. VOLUNTARY PARTICIPATION:

Participation in this study is voluntary. No compensation for participation will be given. You are free to withdraw your consent to participate in this study at any time. Refusing to participate will involve no penalty or loss of benefits.

7. CONFIDENTIALITY:

All records obtained in this study will be regarded as confidential. Results will be published or presented in such a way that no person will be identified by name.

8. CONSENT TO PARTICIPATE IN THIS STUDY:

I have read or had read to me in a language that I understand the above information before signing this consent form. The content and meaning of this information have been explained to me. I have been given the opportunity to ask questions and am satisfied that they have been answered satisfactorily. I hereby volunteer to take part in this study. I have received a signed copy of this informed consent agreement.

Interviewee signature

Date

Witness

Date

Witness

Date

UNIVERSITY OF PRETORIA

DEPARTMENT OF PHYSIOTHERAPY

PATIENT INFORMATION AND INFORMED CONSENT

Authorisation to participate in a Research Project

Study title:

The effect of an exercise / physical activity intervention on the HbA_{1c} and weight in a sample of black female Type 2 Diabetes Mellitus patients.

The purpose of the study:

I understand that I am being requested to take part in a research study. The aim of this study is to test a culturally acceptable physical activity program in urban black female patients with Type 2 Diabetes.

Explanation of procedures to be followed:

For this study we will at the beginning and the end of the study:

- Ask some personal questions concerning yourself and your diabetes.
- Draw one vial of blood.
- Do a physical examination.
- Do an exercise test.

Duration of the study:

If you decide to take part, you will be one of approximately 160 patients. The study will last for 3 months (12 weeks).

Ethical approval:

This study protocol was submitted to the Research Ethics Committee of the Pretoria Academic Hospital and written approval has been granted by that committee (116/99).

Rights as a participant in this study:

Participation in this study is voluntary. No compensation for participation will be given. I may withdraw from this study at any point in time without it affecting my treatment in any way.

Risk and discomfort involved:

The blood test may be a bit painful. All the other physical tests will not be painful at all. You will have to undress for the physical examination, but this will be done in a private place and you will at no stage be exposed to people

other than the researchers. The exercise test and classes, where applicable, will be conducted in a safe place at normal walking speed and contraindications. You may sweat a bit from it, but all patients will be observed for discomfort at all times.

Possible benefits of the study:

The study will contribute to our knowledge of diabetes and may lead to improved care in the future.

Confidentiality:

All records obtained in this study will be regarded as confidential. Results will be published or presented in such a fashion that patients remain unidentifiable.

Information:

If I have any questions concerning this study, I should contact:

Mrs AJ van Rooijen
Tel (012) 3542018
Dept of Physiotherapy
University of Pretoria

Consent to participate in this study:

I have read or had read to me in a language that I understand the above information before signing this consent form. The content and meaning of this information have been explained to me. I have been given the opportunity to ask questions and I am satisfied that they have been answered satisfactorily.

I understand that if I do not want to partake in this study, I shall still receive standard treatment for my illness.

I hereby volunteer to take part in this study. I have received a signed copy of this informed consent agreement.

Patient's name:

Please print

**AJ VAN ROOIJEN
Researcher**

I, AJ van Rooijen herewith confirm that the above patient has been informed fully about the nature, conduct and risks of the above study.

Witness:

Please print

Date:

VERBAL PATIENT INFORMED CONSENT

(Applicable when patients cannot read or write)

I, the undersigned, Mrs AJ van Rooijen, have read and have explained fully to the patient, named----- and/or her relative, the patient information, which has indicated the nature and purpose of the study in which I have asked the patient to participate.

The explanation I have given has mentioned both the possible risks and benefits of the study.

The patient indicated that she understands that she will be free to withdraw from the study at any time for any reason and without jeopardising her treatment.

I hereby certify that the patient has agreed to participate in this study.

Patient's name

Researcher's name

Witness' name

(Please print)

Date

APPENDIX 3

QUESTIONNAIRE: PHASE 1

DATA COLLECTION SHEETS PHASE 3

QUESTIONNAIRES: PHASE 3

QUESTIONNAIRE USED: PHASE 1 OF THE STUDY

Demographic questionnaire

V1	Respondent number	<input type="text"/> <input type="text"/> <input type="text"/>	1-3
V2	Card number	<input type="text"/> <input type="text"/>	4-5
V3	Area	<input type="text"/>	6
V4	Age	<input type="text"/> <input type="text"/>	7-8
V5	Weight	<input type="text"/> <input type="text"/> <input type="text"/>	9-11
V6	Height	<input type="text"/> <input type="text"/> <input type="text"/>	12-14
V7	Body Mass Index (kg.m ²)	<input type="text"/> <input type="text"/> <input type="text"/>	15-17
V8	Blood pressure (mmHg)	Systolic <input type="text"/> <input type="text"/> <input type="text"/> Diastolic <input type="text"/> <input type="text"/> <input type="text"/>	18-23
V9	Pulse rate (min)	<input type="text"/> <input type="text"/> <input type="text"/>	24-26
V10	Blood Glucose level (mmol/l)	<input type="text"/> <input type="text"/> <input type="text"/>	27-29

V 11 Educational level	None	1	<input type="checkbox"/>	30
	St 1-4	2	<input type="checkbox"/>	
	St 5-7	3	<input type="checkbox"/>	
	St 8-10	4	<input type="checkbox"/>	
	Post St 10	5	<input type="checkbox"/>	
Current employment status	None	1	<input type="checkbox"/>	31
	Part-time	2	<input type="checkbox"/>	
	Full-time	3	<input type="checkbox"/>	
	Pensioner	4	<input type="checkbox"/>	

V 13 Housing	Live with family	1	<input type="checkbox"/>	32
	Live alone	2	<input type="checkbox"/>	
	Other	3	<input type="checkbox"/>	

V 14 Ethnicity	Black	1	<input type="checkbox"/>	33
	Indian	2	<input type="checkbox"/>	
	Coloured	3	<input type="checkbox"/>	
	White	4	<input type="checkbox"/>	

DAS 3 ATTITUDE Scale

In general I believe that:

		Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	<input type="checkbox"/>
V15	Health care professionals who treat people with diabetes should be trained to communicate well with their patients	1	2	3	4	5	<input type="checkbox"/> 34
V16	People who do not need to take insulin to treat their diabetes have a pretty mild disease						<input type="checkbox"/> 35
V17	There is not much use in trying to have good blood sugar control because the complications of diabetes will happen anyway						<input type="checkbox"/> 36
V18	Diabetes affects almost every part of a diabetic person's life						<input type="checkbox"/> 37
V19	The important decisions regarding daily diabetes care should be made by the person with diabetes						<input type="checkbox"/> 38
V20	Health care professionals should be taught how daily diabetes care affects patient's lives						<input type="checkbox"/> 39
V21	Older people with Type 2 diabetes do not usually get complications						<input type="checkbox"/> 40
V22	Keeping the blood sugar close to normal can help prevent the complications of diabetes						<input type="checkbox"/> 41
V23	Most people can enjoy life and still keep tight blood sugar control						<input type="checkbox"/> 42
V24	Health care professionals should help patients make informed choices about their care plans						<input type="checkbox"/> 43
V25	It is important for the nurses and dieticians who teach people with diabetes to learn counselling skills						<input type="checkbox"/> 44
V26	People whose diabetes is treated by just a diet do not have to worry about getting long-term complications						<input type="checkbox"/> 45
V27	Almost everyone with diabetes should do whatever it takes to keep their blood sugar close to normal						<input type="checkbox"/> 46

V28	The emotional effects of diabetes are pretty small						<input type="checkbox"/> 47
V29	People with diabetes should have the final say in setting their blood glucose goals						<input type="checkbox"/> 48
V30	Blood sugar testing is nit needed for people with Type 2 diabetes						<input type="checkbox"/> 49
V31	Low blood sugar reactions make tight control too risky for most people						<input type="checkbox"/> 50
V32	Health professionals should learn how to set goals with patients, not just tell them what to do						<input type="checkbox"/> 51
V33	Diabetes is hard because you never get a break from it.						<input type="checkbox"/> 52
V34	The person with diabetes is the most important member of the diabetes care team						<input type="checkbox"/> 53
V35	To do a good job, diabetes educators should learn a lot about being teachers						<input type="checkbox"/> 54
V36	Type 2 diabetes is a very serious disease						<input type="checkbox"/> 55
V37	Having diabetes changes a person's outlook on life						<input type="checkbox"/> 56
V38	People who have Type 2 diabetes will probably not get much payoff form tight control of their blood sugars						<input type="checkbox"/> 57
V39	People with diabetes should learn a lot about the disease so that they can be in charge of their own diabetes care						<input type="checkbox"/> 58
V40	Type 2 diabetes is as serious as Type I diabetes						<input type="checkbox"/> 59
V41	Tight control is too much work						<input type="checkbox"/> 60
V42	A person with diabetes can lead a normal life						<input type="checkbox"/> 61
V43	What the patient does has more effect on the outcome of diabetes care than anything a health professional does						<input type="checkbox"/> 62

V44	Tight control of blood sugar makes sense only for people with Type 1 diabetes						<input type="checkbox"/>	63
V45	It is frustrating for people with diabetes to take care of their disease						<input type="checkbox"/>	64
V46	People with diabetes have a right to decide how hard they will work to control their blood sugar						<input type="checkbox"/>	65
V47	People who takes diabetes pills should be as concerned about their blood sugar as people who take insulin						<input type="checkbox"/>	66
V48	People with diabetes have the right <u>not</u> to take good care of their diabetes						<input type="checkbox"/>	67
V49	Support form family and friends is important in dealing with diabetes						<input type="checkbox"/>	68

DKN SCALE FORM C

V50	When a person with diabetes on insulin undertakes unusually heavy exercise, they should have:	More insulin	1	69	<input type="checkbox"/>
		Extra carbohydrate (bread) beforehand	2		
		Less food beforehand	3		
		I don't know	4		
V51	People with diabetes should	Have their food cooked separately from that of the family	1	70	<input type="checkbox"/>
		Eat the same foods at the same time each day	2		
		Vary their diet by substituting different foods at the same time each day	3		
		I don't know	4		
V52	The normal range for blood glucose is:	4-8mmol/l	1	71	<input type="checkbox"/>
		7-15mmol/l	2		
		2-10mmol/l	3		
		I don't know	4		
V53	Rice is mainly:	Protein	1	72	<input type="checkbox"/>
		Carbohydrate	2		
		Fat	3		
		Mineral and vitamin	4		
		I don't know	5		
V54	Insulin causes blood sugar to:	Decrease	1	73	<input type="checkbox"/>
		Increase	2		
		Neither of the above	3		
		I don't know	4		
V55	Which of the following is rich in carbohydrate?	Meat	1	74	<input type="checkbox"/>
		Eggs	2		
		Butter	3		
		Corn	4		
		I don't know	5		
V56	Which of the following is not usually associated with low blood sugar	Weakness	1	75	<input type="checkbox"/>
		Hunger	2		
		Chest pain	3		
		I don't know	4		
V57	If a person on insulin has a high blood or urine sugar level and ketones were present they should:	Increase insulin	1	76	<input type="checkbox"/>
		Decrease insulin	2		
		Keep insulin and diet the same and test blood/urine later	3		
		I don't know	4		

V58	When a person with diabetes on insulin becomes ill and unable to eat the prescribed diet:	They should immediately stop taking insulin	1	77	<input type="checkbox"/>
		They must continue to take insulin	2		
		They should use tablets instead of insulin	3		
		I don't know	4		
V59	You can eat as much as you like of which one of the following foods?	Fruit	1		<input type="checkbox"/>
		Lettuce	2	78	
		Steak	3		
		Honey	4		
		I don't know	5		
V60	You must avoid becoming overweight if you have diabetes because:	Insulin can be harmful to overweight people	1	79	<input type="checkbox"/>
		Being overweight makes diabetes worse	2		
		Hypo attacks occur more frequently in overweight people	3		
		I don't know	4		
V61	Low blood sugar is caused by:	Too much insulin	1	80	<input type="checkbox"/>
		Too little insulin	2		
		Too little exercise	3		
		I don't know	4		
V62	Which of the following so-called Diabetic food items are approved by the diabetic clinic?	Diabetic jam	1	81	<input type="checkbox"/>
		Diabetic jellies	2		
		Sugar free canned fruit	3		
		Low calorie soft drinks	4		
		I don't know	5		
V63	If someone with diabetes becomes sick and has vomiting and diarrhoea, he/she should:	Stop all food and drink	1	82	<input type="checkbox"/>
		Take their insulin	2		
		Take sugar sweetened drinks every two hours	3		
		Call the doctor if vomiting persists	4		
		I don't know	5		
V64	Special DIABETIC foods are:	Forbidden in a diabetic diet	1	83	<input type="checkbox"/>
		Essential in a diabetic diet	2		
		Acceptable if used selectively and correctly	3		
		Usually more expensive than the non-diabetic equivalent	4		
		I don't know	5		

MODIFIED BAECKE QUESTIONNAIRE FOR OLDER ADULTS

Household activities

V65	Do you do the light household work (dusting, washing dishes, repairing clothes, etc.)	Never (once a month)	0	84 <input type="checkbox"/>
		Sometimes	1	
		Mostly	2	
		Always	3	
V66	Do you the heavy housework? (Washing floors, windows, carrying trash bags)	Never (< once a month)	0	85 <input type="checkbox"/>
		Sometimes	1	
		Mostly	2	
		Always	3	
V67	For how many persons do you keep house? (Including yourself)	Fill in 0 if answered "never" in questions 65 and 66		<input type="checkbox"/> <input type="checkbox"/> 86-87
V68	How many rooms do you keep clean, including kitchen, bedroom, bathroom, etc.?	Never do housekeeping	0	88 <input type="checkbox"/>
		1 to 6 rooms	1	
		7 to 9 rooms	2	
		10 or more rooms	3	
V69	If any rooms, how many floors?	Fill in 0 if "never" in V68		<input type="checkbox"/> <input type="checkbox"/> 89-90
V70	Do you prepare warm meals yourself, or do you assist in preparing?	Never	0	91 <input type="checkbox"/>
		Sometimes (once or twice a week)	1	
		Mostly (3-5 times as week)	2	
		Always (more than 5 times a week)	3	
V71	How many flights of stairs do you walk up per day?	I never walk stairs	0	92 <input type="checkbox"/>
		1-5 stairs	1	
		6-10 stairs	2	
		More than 10	3	
V72	If you go somewhere in your hometown, what kind of transport do you use?	I never go out	0	93 <input type="checkbox"/>
		Car	1	
		Public transport	2	
		Bicycle	3	
		Walking	4	
V73	How often do you go out for shopping?	Never or less than once a week	0	94 <input type="checkbox"/>
		Once a week	1	
		2-4 times a week	2	
		Every day	3	
V74	If you go out for shopping, what kind of transportation do you use?	I never go out	0	95 <input type="checkbox"/>
		Car	1	
		Public transport	2	
		Bicycle	3	
		Walking	4	

Sport activities			
V75	Do you play sport?	No	0
		Yes	1
	Name of sport		
	Intensity (code)		
	Hours per week (code)		
	Period of the year (code)		
V76	Do you have any other physical activities?	No	0
		Yes	1
	Name		
	Intensity (code)		
	Hours per week (code)		
	Period of the year (code)		

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HEALTH QUESTIONNAIRE USED FOR SCREENING OF THE PATIENTS IN PHASE 3 OF THE STUDY

Patient name	
Tel Contact no	
Hospital File no	
Study number	

Cardiovascular questionnaire

V1	Have you ever been admitted to hospital because of heart problems? 1= yes 2= no What? Where? When?	<input type="checkbox"/>	1
V2	Do you suffer from any heart problems? 1= yes 2= no verify from file no verification possible patient says verified form file as being:	<input type="checkbox"/>	2

Rose questionnaire Dyspnea

V3	Do you get short of breath walking with other people of your own age on level ground? 1= yes 2= no if "no" stop here if Yes" proceed to next question	<input type="checkbox"/>	3
V4	Do you have to stop for breath when walking at your won pace on level ground? 1= yes 2= no 3= not applicable	<input type="checkbox"/>	4
V5	Are you short of breath on washing or dressing? 1= yes 2= no 3= not applicable	<input type="checkbox"/>	5

Section A: Angina

V6	Have you ever had any pain or discomfort in your chest? 1= yes 2= no if "no" proceed to Section C if "yes" ask next question if during the remainder of section A an answer is recorded in a box marked *, proceed to section B	<input type="checkbox"/>	6
V7	Do you get it when you walk uphill or hurry? 1= yes 2= no 3= never hurries or walks uphill 4= not applicable	<input type="checkbox"/>	7

V8	Do you get it when you walk at an ordinary pace on level ground? 1= yes 2= no 3= not applicable	<input type="checkbox"/>	8
V9	What do you do if you get it while walking? 1= stop or slow down 2= carry on 3= not applicable Record "stop or slow down" if subject carries on after taking nitroglycerine	<input type="checkbox"/>	9
V10	If you stand still, what happens to it? 1= relieved 2= not relieved 3= not applicable	<input type="checkbox"/>	10
V11	How soon is it relieved? 1= 10 minutes or less 2= more than 10 minutes 3= not applicable	<input type="checkbox"/>	11
V12	Will you show me where it was? 1= sternum (upper or middle) 2= sternum (lower) 3= Left anterior chest 4= left arm 5= other 6= not applicable Record all areas mentioned	<input type="checkbox"/>	12
V13	Do you feel it anywhere else? 1= yes 2= no 3= not applicable if "yes" record additional information	<input type="checkbox"/>	13
Section B: Possible infarction			
V14	Have you ever had a severe pain across the front of your chest lasting for half an hour or more? 1= yes 2= no 3= not applicable	<input type="checkbox"/>	14
Section C: Intermittent claudication			
V15	IF an answer is recorded in a box marked * no further questions need to be asked Do you get pain in either leg on walking? 1= yes 2= no*	<input type="checkbox"/>	15
V16	Does the pain ever begin when you are standing or sitting? 1= yes* 2= no 3= not applicable	<input type="checkbox"/>	16

V17	In what part of your leg do you feel it? 1= pain includes calves 2= pain does not include calves* 3= not applicable	<input type="checkbox"/>	17
V18	Do you get it when you walk uphill or hurry? 1= yes 2= no* 3= never hurries or walk uphill 4= not applicable	<input type="checkbox"/>	18
V19	Do you get it when you walk at an ordinary pace on the level? 1 = yes 2= no 3= not applicable	<input type="checkbox"/>	19
V20	Does the pain ever disappear while you are Walking? 1= Yes* 2= no 3= not applicable	<input type="checkbox"/>	20
V21	What do you do if you get it while walking? 1= stop or slow down? 2= carry on* 3= not applicable	<input type="checkbox"/>	21
V22	What happens to it if you stand still? 1= relieved 2= not relieved* 3= not applicable	<input type="checkbox"/>	22
V23	How soon? 1= 10 minutes or less 2= more than 10 minutes 3= not applicable	<input type="checkbox"/>	23
Stroke			
V24	Have you ever had a paralysis of the arm or leg or face? 1 = yes 2= no	<input type="checkbox"/>	24
V25	It lasted 1= less than 24 hours 2= more than 24 hours 3= not applicable	<input type="checkbox"/>	25
V26	Did a doctor diagnosed stroke 1= yes 2= no 3= not applicable When Where	<input type="checkbox"/>	26

Arthritis		
V27	Did you ever have a fracture of the hip?	<input type="checkbox"/>
	1= yes 2= no	27
V28	Do you fall more than twice a year?	<input type="checkbox"/>
	1= yes 2= no	28
V29	Do you have painful knees or hips?	<input type="checkbox"/>
	1= yes 2= no	29
V30	Does this limit you walking?	<input type="checkbox"/>
	1= yes 2= no 3= not applicable	30
Micro-Vascular disease		
V31	Do you have any ulcerated wounds or cuts on your feet that do no seem to heal?	<input type="checkbox"/>
	1= yes 2= no	31
General health		
V32	Do you have any other big diseases that I have not asked you about?	<input type="checkbox"/>
	1= yes 2= no what?	32
Retinopathy		
V33	Have you ever been referred to HF Verwoerd or Kalafong Hospital to have your eyes checked?	<input type="checkbox"/>
	1= yes 2= no	33
V34	Have you ever had "laser therapy" to your eyes? (Light shot at your eyes)	<input type="checkbox"/>
	1= yes 2= no	34

FIELDWORK CLINICAL DATA

Variables	Data
Name	
Informed consent	
Study number	
File number	
HQOL-questionnaire	
Pulse	
Arm circumference	
Blood Pressure	
Height	
Weight	
6-minute walk test	
RPE	
HbA _{1c}	
Next appointment	

<p>Next appointment Maandag/Monday 17 Junie 2002 08:00 Diabetes Exercise/Oefening Tania van Rooijen Tel 6620548</p>	<p>Next appointment Maandag/Monday 17 Junie 2002 08:00 Diabetes Exercise/Oefening Tania van Rooijen Tel 6620548</p>	<p>Next appointment Maandag/Monday 17 Junie 2002 08:00 Diabetes Exercise/Oefening Tania van Rooijen Tel 6620548</p>	<p>Next appointment Maandag/Monday 17 Junie 2002 08:00 Diabetes Exercise/Oefening Tania van Rooijen Tel 6620548</p>
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QUESTIONNAIRE USED FOR PHASE 3

V1	Study number	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	1-5
V2	Age (in years)		<input type="text"/> <input type="text"/>	6-7
V3	Years of schooling Do not know St 1-4 St 5-7 St 8-10 Post St 10	1 2 3 4 5	<input type="text"/>	8
V4	Home language (preferred) Zulu Sotho Xhosa Tsonga Pedi Tswana Venda/ Ndebele/ Swazi Afrikaans English	1 2 3 4 5 6 7 8 9	<input type="text"/>	9
V5	Marital status Single Married Widowed Separated/Divorced	1 2 3 4	<input type="text"/>	10
V6	Employment status Are you working? Yes No	1 2	<input type="text"/>	11
V7	Kind of work Selling Domestic Cleaning Dressmaking Office Other (specify) Not applicable	1 2 3 4 5 6 7	<input type="text"/>	12
V8	Remuneration How do you get money to live? Husband Relatives Piece jobs Pension Friends/ disability/grant/retrenched No answer	1 2 3 4 5 6	<input type="text"/>	13

HEALTH RELATED QUALITY OF LIFE QUESTIONNAIRE

Mark only 1 answer

V1	In general would you say your health is:		<input type="checkbox"/>	14
	Excellent	1		
	Very good	2		
	Good	3		
	Fair	4		
Poor	5			

Circle one number on each line

V2	I seem to get sick a little easier than other people		<input type="checkbox"/>	15
	Definitely true	1		
	Mostly true	2		
	Don't know	3		
	Mostly false	4		
Definitely false	5			
V3	I am as healthy as anybody I know		<input type="checkbox"/>	16
	Definitely true	1		
	Mostly true	2		
	Don't know	3		
	Mostly false	4		
Definitely false	5			
V4	I expect my health to get worse		<input type="checkbox"/>	17
	Definitely true	1		
	Mostly true	2		
	Don't know	3		
	Mostly false	4		
Definitely false	5			
V5	My health is excellent		<input type="checkbox"/>	18
	Definitely true	1		
	Mostly true	2		
	Don't know	3		
	Mostly false	4		
Definitely false	5			
V6	Do you have any other long standing illness, disability or infirmity?		<input type="checkbox"/>	19
	Yes	1		
	No	2		
V7	What kind of treatment do you receive for your diabetes?		<input type="checkbox"/>	20
	Injections only	1		
	Tablets	2		
	Tablets and injections	3		
	Nothing (diet)	4		

TREATMENT SATISFACTION

The following questions are concerned with the treatment for your diabetes (including insulin, tablets and/or diet) and your experience over the past 2 weeks. Please answer each question by circling a number on each of the scales.

V8 21

How satisfied are you with your current treatment?

Very satisfied 6 5 4 3 2 1 0 very dissatisfied

V9 22

How often have you felt that your blood sugars have been unacceptably high recently?

Most of the time 6 5 4 3 2 1 0 none of the time

V10 23

How often have you felt that your blood sugars have been unacceptably low recently?

Most of the time 6 5 4 3 2 1 0 none of the time

V11 24

How convenient have you been finding your treatment to be recently?

Very convenient 6 5 4 3 2 1 0 very inconvenient

V12 25

How flexible have you been finding your treatment to be recently?

Very flexible 6 5 4 3 2 1 0 very inflexible

V13 26

How satisfied are you with your understanding of your diabetes?

Very satisfied 6 5 4 3 2 1 0 very dissatisfied

V14 27

Would you recommend this form of treatment to someone else?

Yes, I would definitely 6 5 4 3 2 1 0 No, I would not

V15

How satisfied would you be to continue with your present form of treatment?

Very satisfied 6 5 4 3 2 1 0 very dissatisfied

Please make sure that you have circled one number on each of the scales.

Please indicate how often you felt each statement applied to you in the last two weeks from 3 (all the time) to 0 (not at all)

DEPRESSION

		All the time			Not at all	
V16	I feel that I am useful and needed	3	2	1	0	<input type="checkbox"/> 29
V17	I have crying spells or feel like crying	3	2	1	0	<input type="checkbox"/> 30
V18	I find I can think quite clearly	3	2	1	0	<input type="checkbox"/> 31
V19	My life is pretty full	3	2	1	0	<input type="checkbox"/> 32
V20	I feel downhearted and blue	3	2	1	0	<input type="checkbox"/> 33
V21	I enjoy the things I do	3	2	1	0	<input type="checkbox"/> 34

ANXIETY

		All the time			Not at all	
V22	I feel nervous and anxious	3	2	1	0	<input type="checkbox"/> 35
V23	I feel afraid for no reason at all	3	2	1	0	<input type="checkbox"/> 36
V24	I get upset easily or feel panicky	3	2	1	0	<input type="checkbox"/> 37
V25	I feel like I'm falling apart and going to pieces	3	2	1	0	<input type="checkbox"/> 38
V26	I feel calm and can sit still easily	3	2	1	0	<input type="checkbox"/> 39

V27	I fall asleep easily and get a good night's rest	3	2	1	0	<input type="checkbox"/>	40
-----	--------------------------------------------------	---	---	---	---	--------------------------	----

POSITIVE WELL-BEING

		All the time			Not at all		
V28	I have been happy, satisfied or pleased with my personal life	3	2	1	0	<input type="checkbox"/>	41
V29	I have felt well adjusted to my life situation	3	2	1	0	<input type="checkbox"/>	42
V30	I have lived the kind of life I wanted to	3	2	1	0	<input type="checkbox"/>	43
V31	I have felt eager to tackle my daily tasks or make new decisions	3	2	1	0	<input type="checkbox"/>	44
V32	I have felt I could easily handle or cope with any serious problem or major change in my life	3	2	1	0	<input type="checkbox"/>	45
V33	My daily life has been full of things that were interesting to me	3	2	1	0	<input type="checkbox"/>	46

**DIABETES PROJECT
MAMELODI HOSPITAL
POST TEST QUALITATIVE DATA**

**NAME
STUDYNO**

V1	Did you enjoy the program? 1 = yes 2 = some what 3 = no	<input type="checkbox"/>
V2	If yes, what did you enjoy the most? 1= exercises at the hospital 2= education 3= meeting other women with diabetes? 4 = everything 5 = not applicable	<input type="checkbox"/>
V3	Do you want to continue with the program at the hospital? 1 = yes 2 = no	<input type="checkbox"/>
V4	What will keep you from coming to an exercise class regularly? 1 = responsibilities at home 2 = transport fees 3 = nothing 4 = other, please name	<input type="checkbox"/>
V5	Which day of the week will be best for an exercise class? 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday	<input type="checkbox"/>
V6	Is the Mamelodi hospital a suitable venue for exercise? 1 = yes 2 = no	<input type="checkbox"/>
V7	Are you interested in becoming a voluntary leader of an exercise support group for women living near to you? 1 = yes 2 = no	<input type="checkbox"/>
V8	If yes, please give your physical address to Debra	<input type="checkbox"/>
V9	Do you feel that you as a woman benefited from this program? 1 = yes 2 = no	<input type="checkbox"/>
V10	If yes, how?	
V11	Do you have any suggestions or comments?	

BORG RATE OF PERCEIVED EXERTION SCALE

Lebitso la molwetse

Study number:

BORG rate of perceived exertion scale RPE





Tlhagiso ya molomo	Sekala
	6
Botlhofo thata thata (E ya bonagala)	7
	8
Botlhofo thata	9
	10
Botlhofo go le gonye	11
	12
Magareng	13
	14
Bokete	15
	16
Bokete thata	17
	18
Bokete thata thata	19
	20

RPE < 11 e emela 70% ya pelo e o e otlang sentle ya balwetse


RPE of 12-14 e tsamaelana le go otlia ga pelo ya molwetse 70-80%.




APPENDIX 4

PHYSICAL ACTIVITY DIARY

Physical activity	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
							
							
							
							





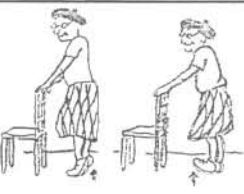
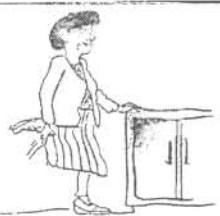
Physical activity	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
							
							
							
							

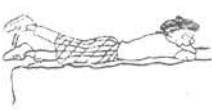
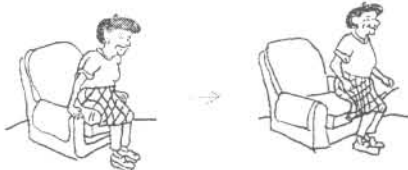




Physical activity	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
							
							
							
							







Physical activity	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
							
							
							
							







APPENDIX 5







HOME EXERCISE

<p>Walk on the spot Stap op die plek 20X</p> 	<p>Shoulder stretch Relax in position for 60 counts Skouer strek Ontspan in posisie vir 60 tellings</p> 
<p>Shoulder circles forward and backward Skouer sirkels vorentoe en agtertoe 10 X</p> 	<p>Hamstring stretch Hold for 30 counts Hamstring strek Hou vir 30 tellings</p> 
<p>Toe and heel raises Toon en hak oplig Count 30 in each direction X 5 Tel 30 in elke rigting X 5</p> 	<p>Quadriceps stretch Hold for 30 counts Quadriceps strek Hou vir 30 tellings</p> 

<p>Leg lift Been oplig 5 X</p> 	<p>Hip lifts out of armchair Opstote uit gemakstoel 5 X</p> 
<p>Trunk stretch with broom Lyf strek met besem Count to 10 Tel tot 10 in elke rigting</p> 	<p>Calf stretch Kuit strek Count to 30 Tel vir 30</p> 
<p>Shoulder stretch backwards Skouer strek agtertoe Count for 30 Tel vir 30 tellings</p> 	<p>Shake out Los skut Vir 20 tellings</p> 

<p>March on the spot 20 X Masjeer op die plek 20X</p> 	<p>Push-ups against wall 5 X Opstote teen muur 5 X</p> 
<p>Leg lifts Each leg X 5 Been oplig Elke been X 5</p> 	<p>Bicep curl 10 X</p> 
<p>Leg swings Been swaal 10 X</p> 	<p>Curly-up Opsitte 2 X</p> 

<p>Forearm stretch Voorarm strek 5 X</p> 	<p>Shoulder stretch Hold for 30 counts Skouer strek Hou vir 30 tellings</p> 
<p>Arms raise Arms oplig Hold for 30 counts hou vir 30 tellings</p> 	<p>Hamstring stretch Hold for 30 counts Hamstring strek Hou vir 30 tellings</p> 
<p>Ankle stretch Enke! strek Count 30 in each direction X 5 Tel 30 in elke rigting X 5</p> 	<p>Quadriceps stretch Hold for 30 counts Quadriceps strek Hou vir 30 tellings</p> 

<p>Leg swing 10 X Been swaaie 20X</p> 	<p>Sideward bending Hold for 30 counts Sywaarts buig Hou vir 30 tellings</p> 
<p>Elbow and shoulder exercise Hold for 30 counts Elmboog en skouer oefening Hou vir 30 tellings</p> 	<p>Strengthening exercise 5 X Versterkingsoefening 5 X</p> 
	

APPENDIX 6

EDUCATION NOTES



LEARNING ABOUT DIABETES 1

WHAT IS DIABETES?

- Everything we eat (fruit, vegetables, pap, bread and meat) are broken down to sugar (glucose) after eating it
- These sugars go to the blood and are the fuel (petrol) the body uses
- Insulin, that the pancreas (lebetes) makes, takes the sugar out of the blood and to the body, where it is used as energy
- People with Diabetes can not use the sugar properly because the sugar can not be taken out of the blood into the body itself, not enough insulin
- Sugar stays behind in the blood and that is why we also call Diabetes high blood sugar
- Three important things help us to control the sugar in the blood
 - Medicine
 - Exercise
 - Diet

HOW CAN I CHANGE MY DIET?

- lose weight if you are overweight
- eat small meals often, rather than one big meal a day
- do not skip meals
- always eat when taking medication
- do not eat sugar - also things like brown sugar, jam, syrup, honey, sweets, chocolate, pudding, cake, biscuits, white bread and normal Coke should not be eaten. Rather drink Coke light, Tab or any other diet cold drink and use saccharine in coffee/tea



LEARNING ABOUT DIABETES 2

HOW CAN I CHANGE MY DIET? (continue)

Eat less fat because of the risk for heart disease, by:

- Using low fat/skimmed milk and milk products. Skimmed milk powder are also cheaper than full cream milk powder
- Using very little margarine in a tub rather than a brick
- Using very little peanut butter on bread, without margarine
- Not using coffee creamers like Cremora
- Cutting extra fat off meat
- Taking off the chicken's skin
- Avoiding fatty foods like bacon, polony, viennas, russians, boerewors, meat pies, liver, mala/mogodu, atchar, vetkoek
- Not using fish oil to cook or add it to food
- Rather cooking, steaming, roasting or baking food
- Using fish canned in water NOT oil
- Using low fat mayonnaise and salad dressing

Eat more fibre (roughage) to help lower blood sugar by:

- Using wheat products with fibre like brown bread, provitas, weetbix, samp, jungle oats, mabela
- Eating at least one fruit and one vegetable a day (with skin and raw if possible) REMEMBER fruit have natural sugar in and should be eaten in small amounts
- Eating legumes like dried beans, lentils, soya beans, dried peas one to twice a week. This can be used in soup or with meat dishes to save money on meat



LEARNING ABOUT DIABETES 3

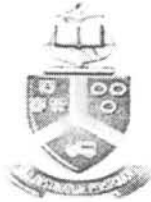
HOW CAN I CHANGE MY DIET? (continue)

Eat less salt because of hypertension and the risk for kidney disease by:

- Adding very little salt when cooking and NO salt afterwards
- Avoiding products in bottles, like
 - Tomato sauce, mustard sauce, Worchester sauce, soya sauce
 - Chutney
 - Beef and chicken stock
 - Aromat
 - Chicken and barbeque spice
 - Garlic and onion salt
 - Bovril, oxo and marmite
 - Fish paste, sandwich spread
- Avoiding products in packets, like
 - Soup powder (Maggie) and gravy powder (Bisto)
 - Soya mince (Imana, Toppers)
- Avoiding products in cans, like
 - Canned vegetables (mixed vegetables, green beans)
 - Bully beef
 - Canned fish in brine
 - Canned soup
 - Spaghetti in tomato sauce, baked beans
- Avoiding snacks and high salt foods, like
 - Crisps (Simba)
 - Salted peanuts and biscuits
 - Processed meat (polony, salami, viennas, boerewors)
 - Meat pies
- Use the following products to flavor food with
 - Herbs, like parsley, sage, thyme and mixed herbs
 - Pepper, curry, turmeric, mustard powder, paprika, coriander
 - Nutmeg, cinnamon, vanilla essence
 - Onions, tomato, onion, chillies, green pepper, garlic
 - Vinegar, lemon juice

APPENDIX 7

CERTIFICATE OF RECOGNITION



Certificate of Recognition

Awarded to

for completing a

Diabetes Exercise Program.

For the period of : _____ to _____

Date: _____

Signed: *A.J. van Rooijen*

A.J. van Rooijen
Physiotherapy Department
University of Pretoria