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2012 eHealth Innovator Award

Southeast Texas Medical Associates, LLP

The LESS Initiative
(Lose Weight, Exercise, Stop Smoking)

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The LESS Initiative Tutorial

Origin of the LESS Initiative

In October, 1997, SETMA attended the Medical Group Management Association meeting to preview electronic-health-record (EHR) solutions. In March, 1998, SETMA signed a contract with NextGen to purchase their EHR and their EPM (enterprise practice management system). We deployed the EPM side of the system in August, 1998 and the EHR on January 26, 1999. By Friday, January 29th, we documented every patient encounter in the EHR. In May, 1999, three seminal events transformed SETMA's healthcare vision and delivery.

The first event led to the LESS. We concluded that EHR was too hard and too expensive if all we gained was the ability to document an encounter electronically. EHR was only "worth it," if we leveraged electronics to improve care for each patient; to eliminate errors which were dangerous to the health of our patients; and, if we could develop electronic functionalities for improving the health and the care of our patients. We also recognized that healthcare costs were out of control and that EHR could help decrease that cost while improving care. Therefore, we began designing disease-management and population-health tools, which included "follow-up documents," allowing SETMA providers to summarize patients' healthcare goals with personalized steps of action through which to meet those goals. We transformed our vision from how many x-rays and lab tests were done and how many patients were seen, to measurable standards of excellence of care and to actions for the reducing of the cost of care. We learned that excellence and expensive are not synonyms.

After developing, several disease management tools, we realized that in the plan of care for each, we identified three life-style changes which we wanted everyone to make. One of them was to stop smoking. Whether it was for diabetes, cholesterol, hypertension or others, it was critical that our patients decrease the inflammatory burden on their cardiovascular systems by avoiding primary, secondary and now tertiary tobacco products. We want patients to decrease their risk by losing weight and to increase their cardiovascular health with routine, regular aerobic exercise, strengthening and stretching exercise.

To address these issues with one patient is not problem, but how to do it with 400+ patients a day and how to know that you are doing it, is a different matter. As a result we designed the LESS Initiative (Lose weight, exercise, stop smoking). The program included a diabetes risk assessment, a diabetes screening assessment and a hypertension prevention program.

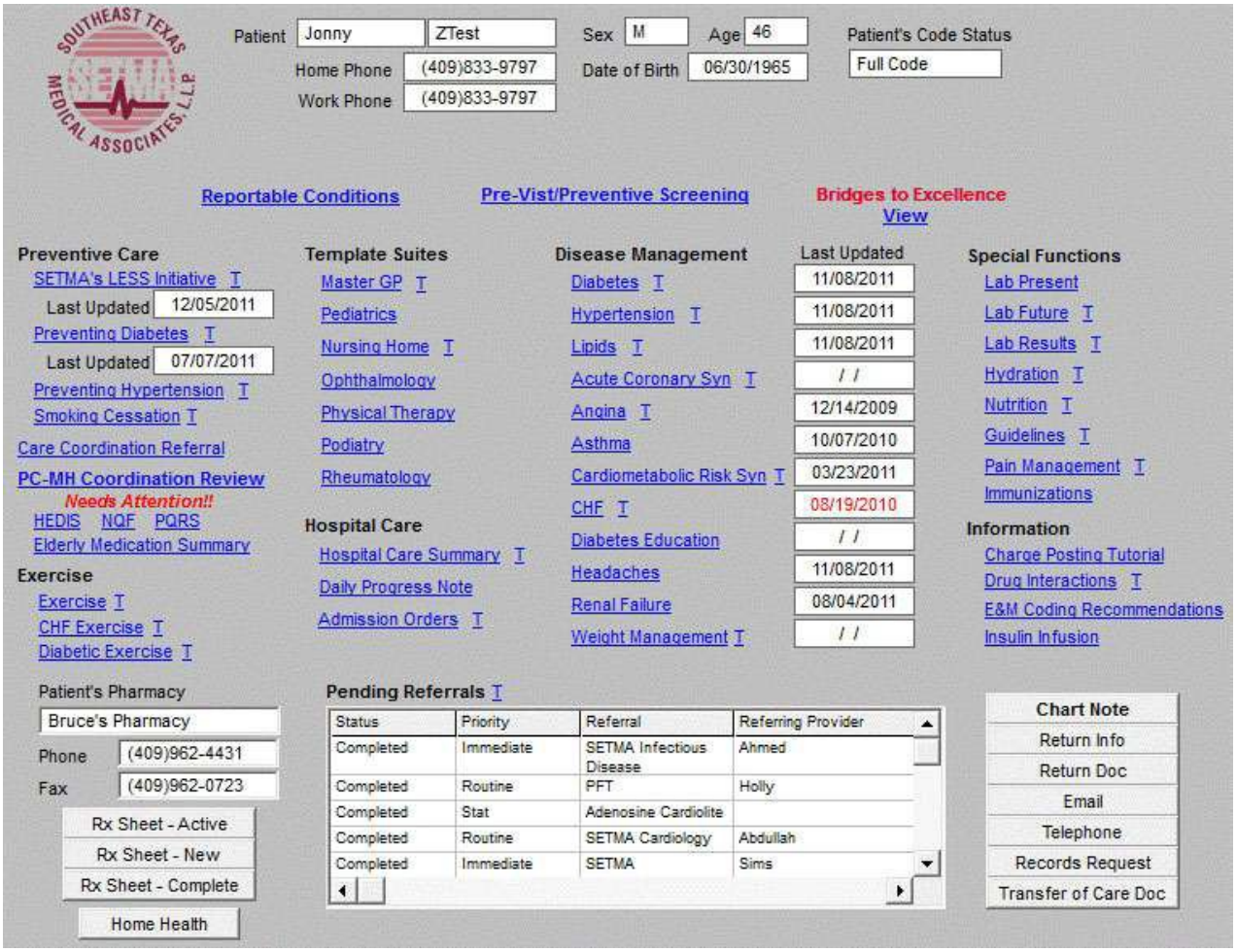
This tutorial explains the LESS and other tutorials explain the Diabetes and Hypertension Prevention programs. Those can be found on the web site under Prevention Tools, also.

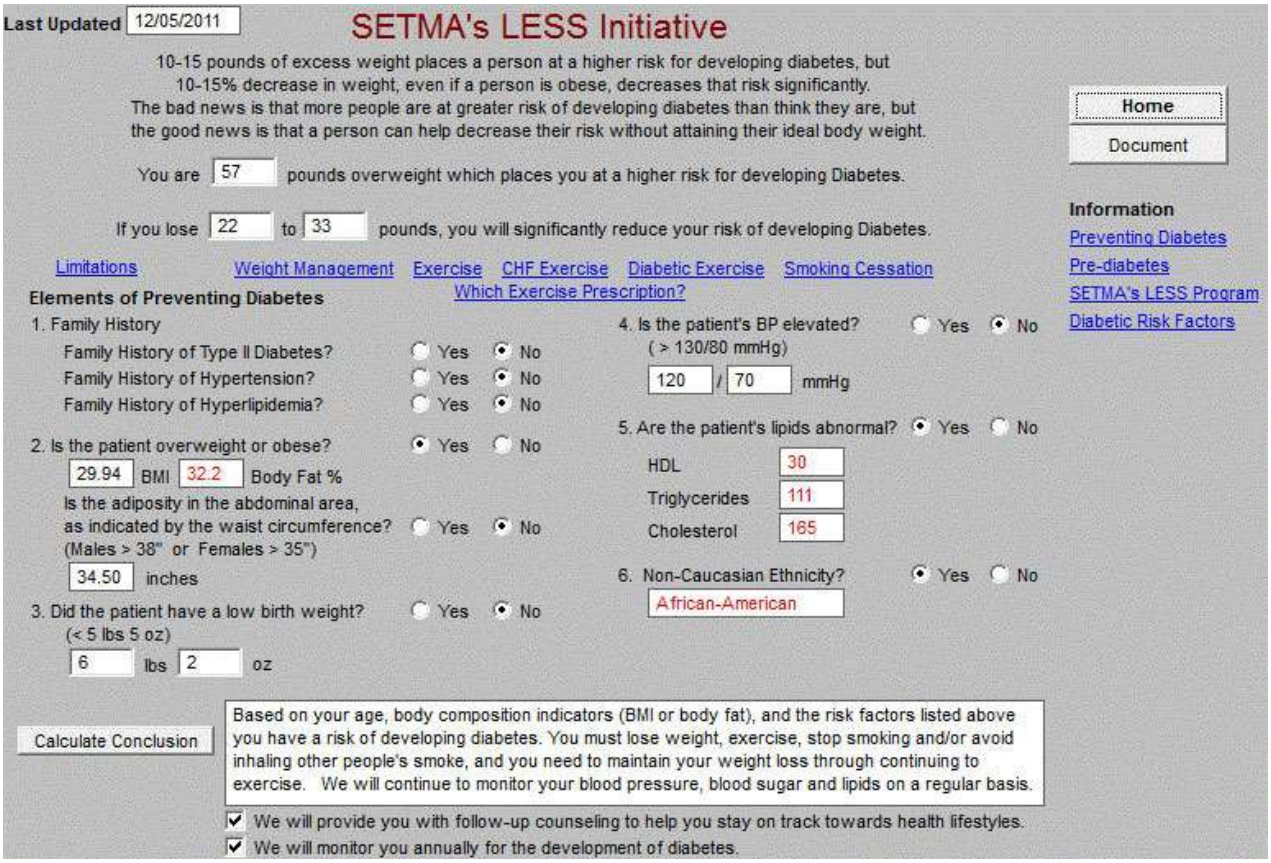
The premiere primary preventive health initiative of SETMA is the LESS Initiative. LESS is an acronym for: lose weight, exercise, and stop smoking. Included in the LESS Initiative are diabetes prevention, hypertension prevention and insulin resistance risk analyses. The following procedure is the proper way to complete the LESS Initiative.

The LESS Initiative contains the following templates, pop-ups and links:

1. At the top of the AAA Home Template there are three hyperlinks:
    a. The LESS Initiative hyperlink launches the Less Initiative.
    b. The Diabetes Prevention hyperlink launches an analysis of diabetes screening with eight pop-ups which will be explained below
    c. Hypertension Prevention hyperlink

2. Completed properly and explained to the patient properly, the LESS Initiative is an effective tool in SETMA's commitment to excellent in the care of our patients.




Last Updated 12/05/2011
SETMA's LESS Initiative
10-15 pounds of excess weight places a person at a higher risk for developing diabetes, but
10-15% decrease in weight, even if a person is obese, decreases that risk significantly.
The bad news is that more people are at greater risk of developing diabetes than think they are, but
the good news is that a person can help decrease their risk without attaining their ideal body weight.
Home
Document
You are 57 pounds overweight which places you at a higher risk for developing Diabetes.
Information
If you lose 22 to 33 pounds, you will significantly reduce your risk of developing Diabetes.
Preventing Diabetes
Pre-diabetes
SETMA's LESS Program
Diabetic Risk Factors
Limitations
Weight Management
Exercise
CHF Exercise
Diabetic Exercise
Smoking Cessation
Which Exercise Prescription?
Elements of Preventing Diabetes
1. Family History
Family History of Type II Diabetes? Yes No
Family History of Hypertension? Yes No
Family History of Hyperlipidemia? Yes No
2. Is the patient overweight or obese? Yes No
29.94 BMI 32.2 Body Fat %
Is the adiposity in the abdominal area, as indicated by the waist circumference? Yes No
(Males > 38" or Females > 35")
34.50 inches
3. Did the patient have a low birth weight? Yes No
(< 5 lbs 5 oz)
6 lbs 2 oz
4. Is the patient's BP elevated? Yes No
(> 130/80 mmHg)
120 / 70 mmHg
5. Are the patient's lipids abnormal? Yes No
HDL 30
Triglycerides 111
Cholesterol 165
6. Non-Caucasian Ethnicity? Yes No
African-American
Calculate Conclusion
Based on your age, body composition indicators (BMI or body fat), and the risk factors listed above you have a risk of developing diabetes. You must lose weight, exercise, stop smoking and/or avoid inhaling other people's smoke, and you need to maintain your weight loss through continuing to exercise. We will continue to monitor your blood pressure, blood sugar and lipids on a regular basis.
We will provide you with follow-up counseling to help you stay on track towards health lifestyles.
We will monitor you annually for the development of diabetes.

LESS Initiative Template

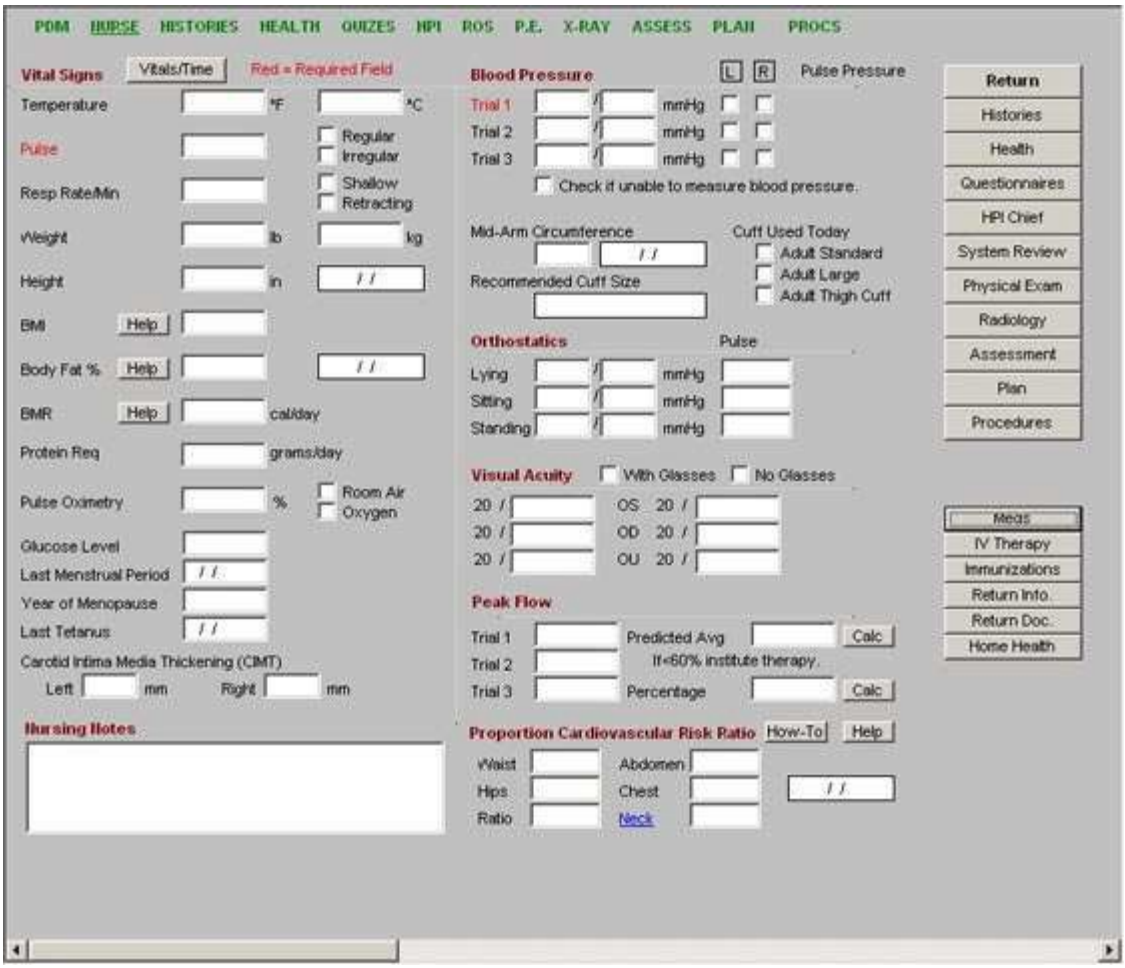
1. When the LESS Initiative hyperlink is single clicked, if the patient's vital signs havenot been completed (particularly blood pressure and pulse), a pop-up will appear which states, "The patient's vitals signs must be completed before proceeding to the LESS template."

You will automatically be taken to the Vital Signs template.

Once the vital signs have been completed including the patient's:

- Blood pressure
- Pulse
- Respiratory rate
- height,
- weight,
- percent body fat,
- abdomen
- waist,
- hips and
- chest
- BMR
- pulse oximeter (if indicated)
- Glucose (if indicated)
- Tidal volume (if indicated)

you are ready to complete the LESS Initiative by single clicking the return button on the vital signs template and then single click the "LESS Initiative" hyperlink again (note: at this point a pop up will appear reminding you to ask the patient about their tobacco use)

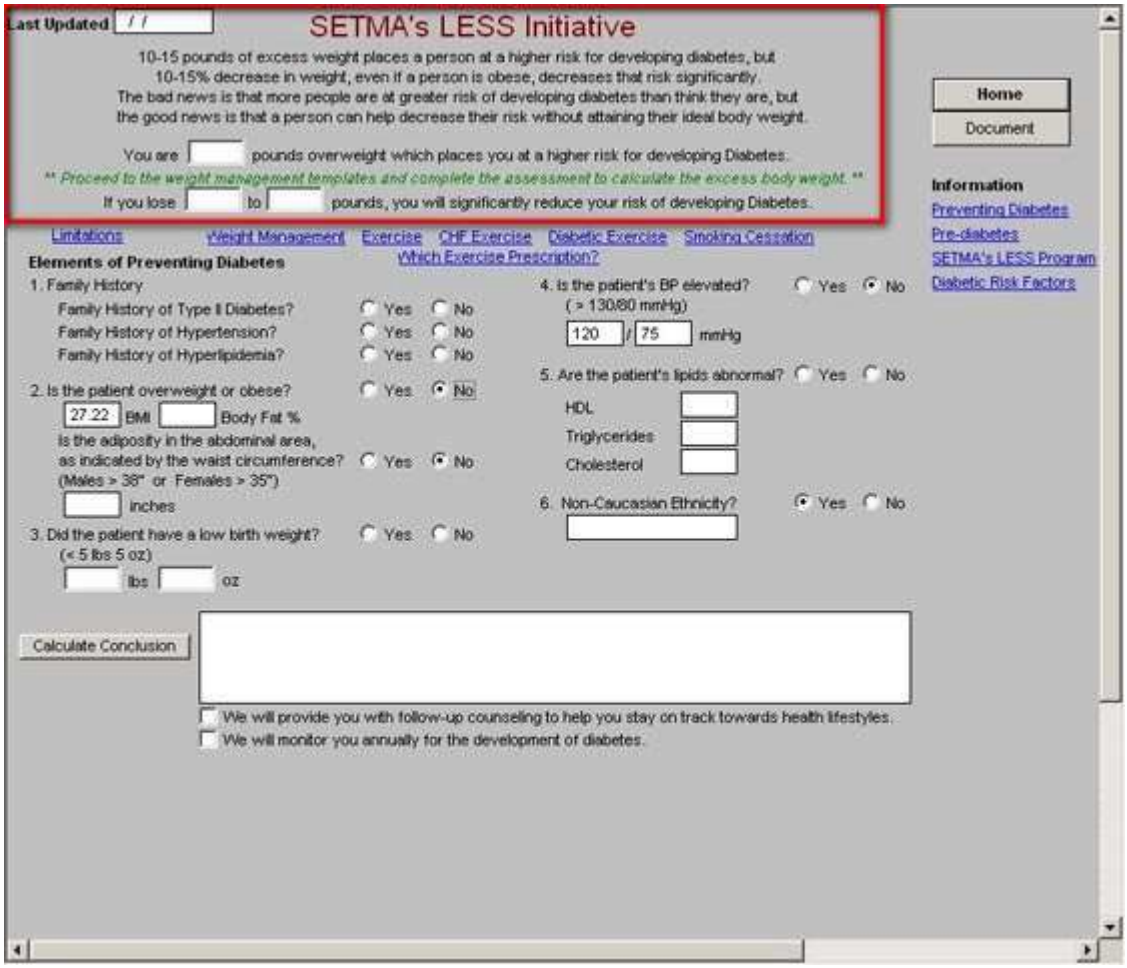


- remember, all but the patient's weight, blood pressure and pulse are in demographic fields, which means that once they are done, they will copy forward in subsequent visits and only need to be repeated if the patient loses or gains a significant amount of weight, or gains or loses height. Of course, the glucose, pulse oximeter, and tidal volume values are not carried forward to subsequent visits either.

2. If the patient has had the LESS Initiative completed within the past two months, a pop-up will appear which will indicate that the patient has had this material given to them in that time frame and it is not necessary to do it again at this time. It is permissible and perhaps ideal to give it to the patient again, but it is not required.

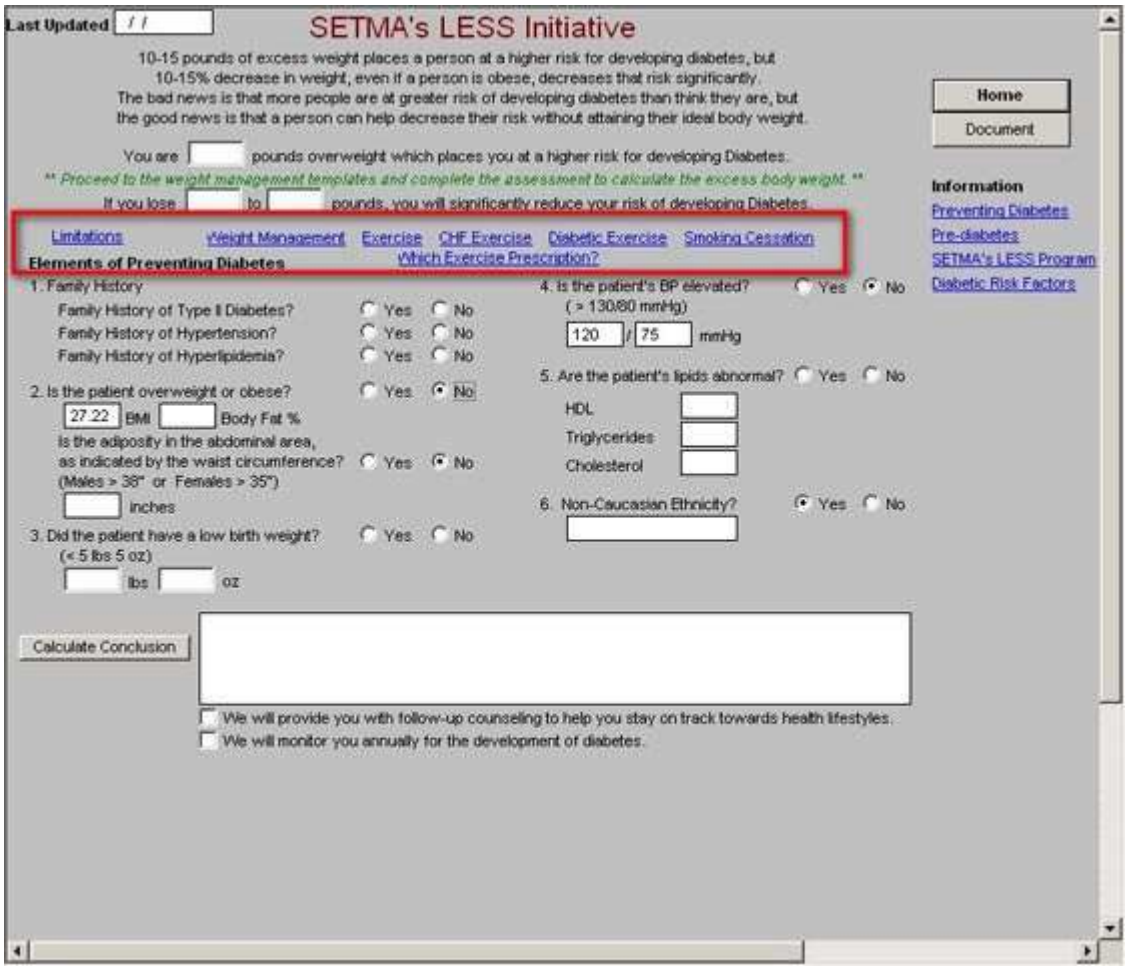
3. The LESS Initiative template is divided into four parts:

    a. At the top is a statement about the contribution which excess weight makes to diabetes risk and the benefit of weight loss to the decreasing of that risk. When the Weight Management Assessment is access (see below), numbers will be added to the blank spaces indicating how much overweight the patient is and how much weight they need to lose in order to reduce their risk of developing diabetes.

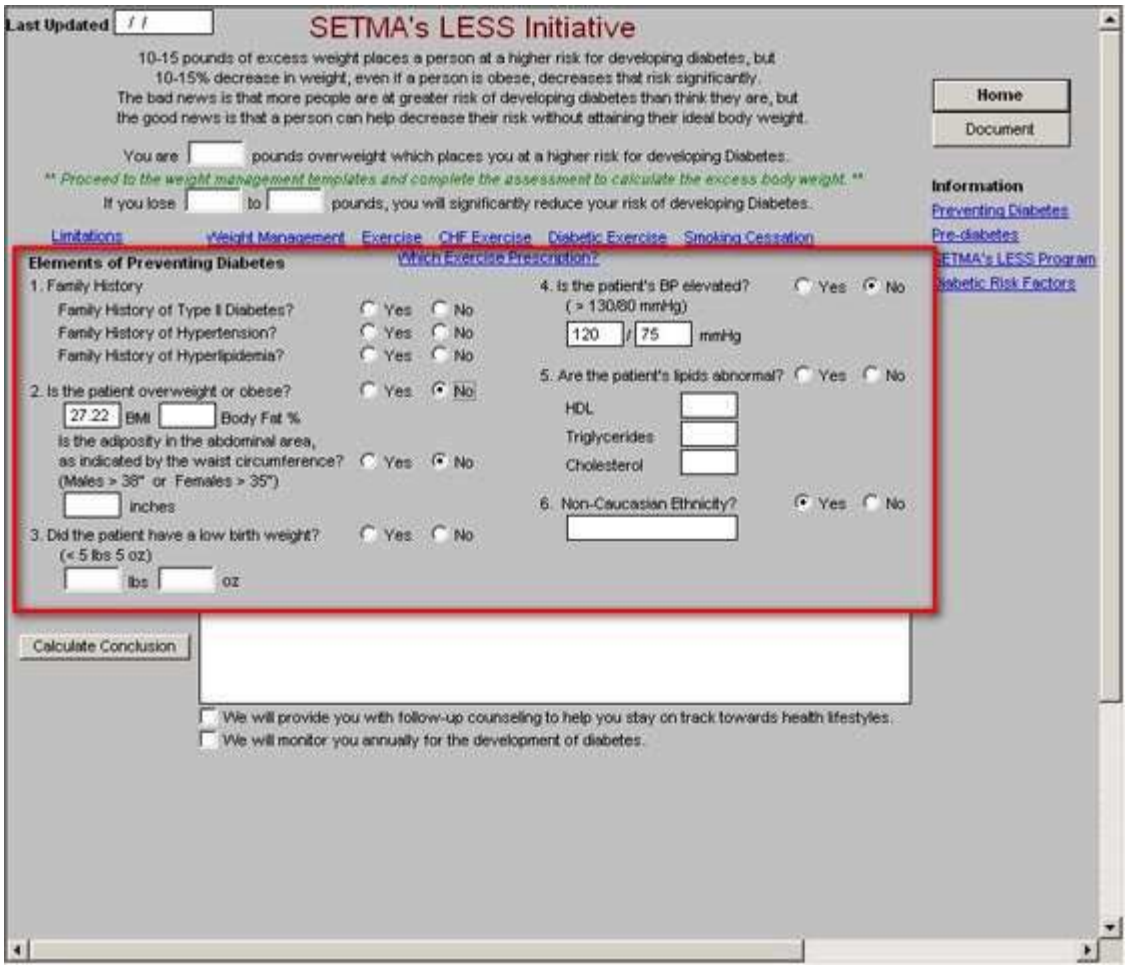


    b. The second part of the LESS template contains six hyperlinks:
        1. Limitations - this hyperlink launches a pop-up which allows for the notation that the patient either "refused to be weighed" or "could not be weighed."
        2. Weight Management - this launches the Weight Management Assessment template
        3. Exercise - this launches the Exercise template
        4. CHF Exercise - this launches the CHF Exercise template
        5. Diabetes Exercise - this launches the Diabetes Exercise template
        6. Smoking Cessation - this launches the Smoking Cessation template.

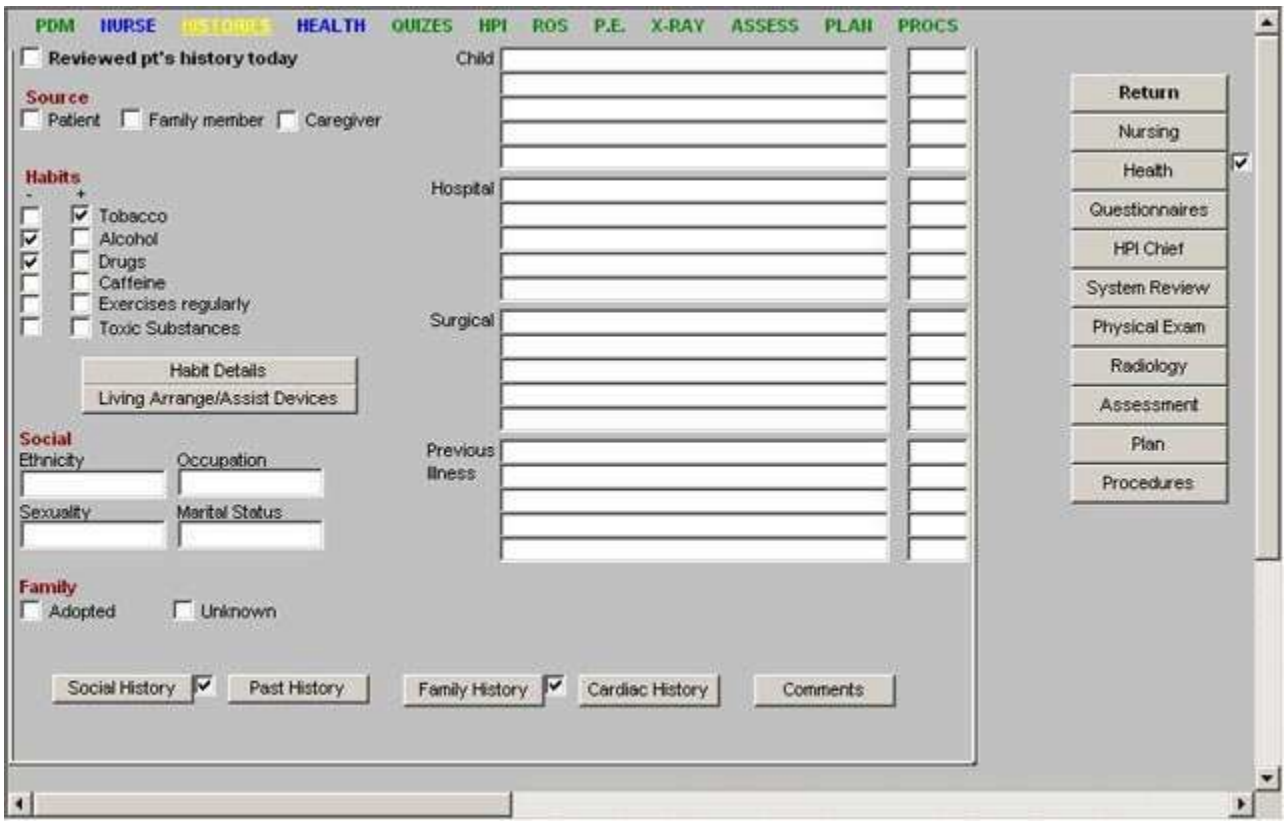
7. Details of these six hyperlinks will be given below.



c. The third part of the LESS template contains the risk factors for the development of diabetes. There are six for males and seven for females. These are automatically noted. Under the following circumstances;

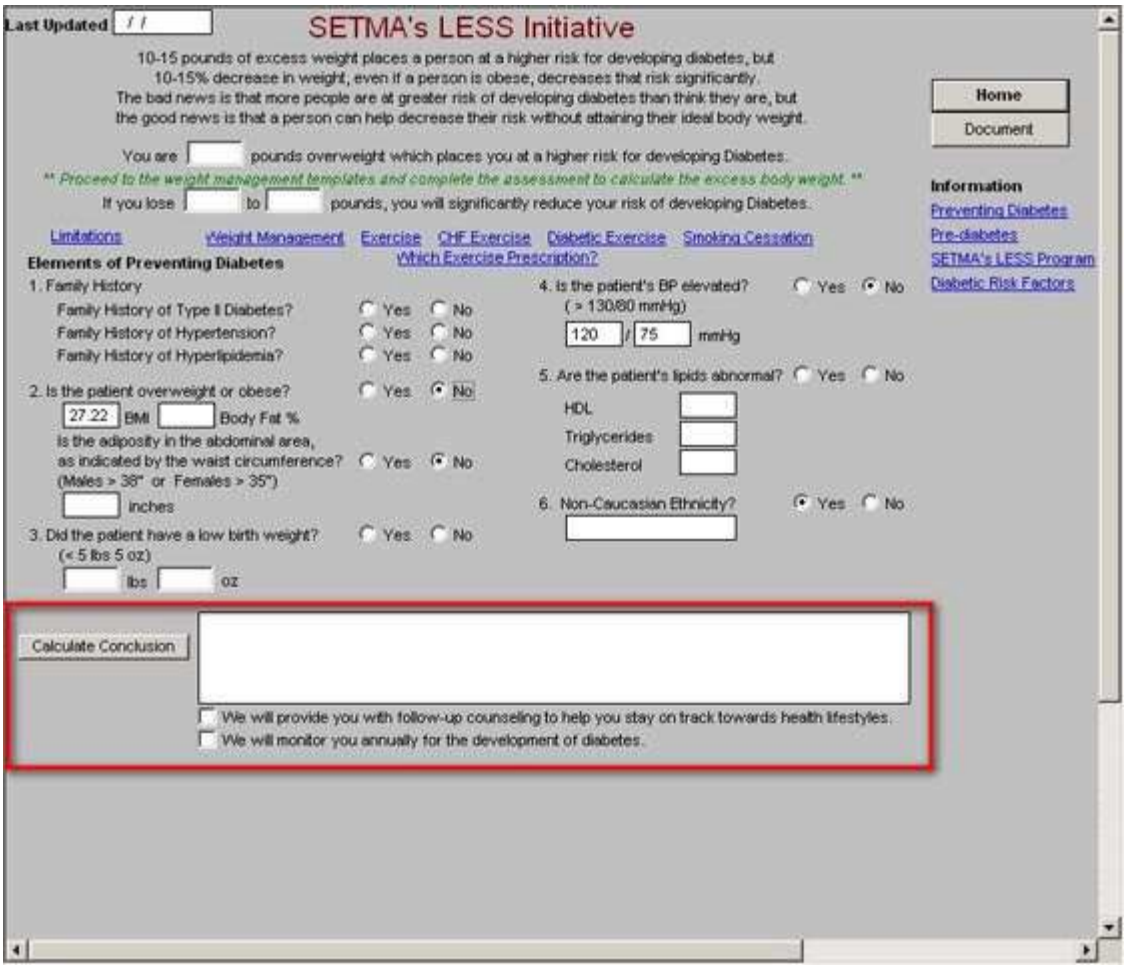


On the History Template, there is an "Ext Fam Hx" (Extended family history) button at the bottom of the template. On this template, there are check boxes for noting whether the patient has a family history of Diabetes II, Other Endocrine disorders, Hypertension, Lipid abnormalities.



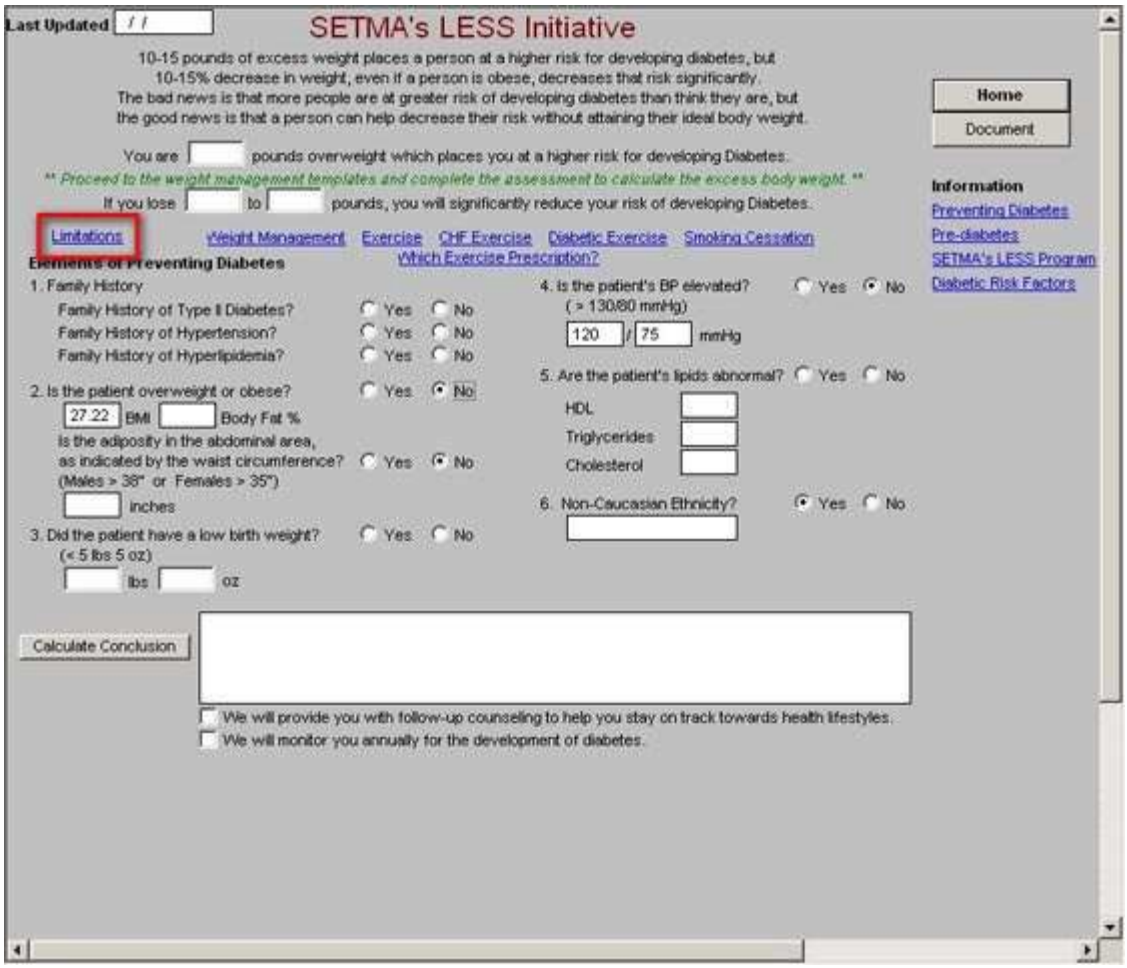
If this function has been completed, it will automatically populate this section of the LESS Initiative. We do not capture the information for questions number three (birth weight), or number seven (gestational diabetes, only for females obviously), therefore these two pieces of information need to be added. These two data points are in demographic fields so if they are added, in that they never change, they will always copy forward.

d. The fourth part of the LESS template is the Calculate Conclusion button, which analyzes all of the information above and determines whether the patient has a high or a low risk of developing diabetes. In order for this to be completed it is necessary to click on the Calculate Conclusion button.

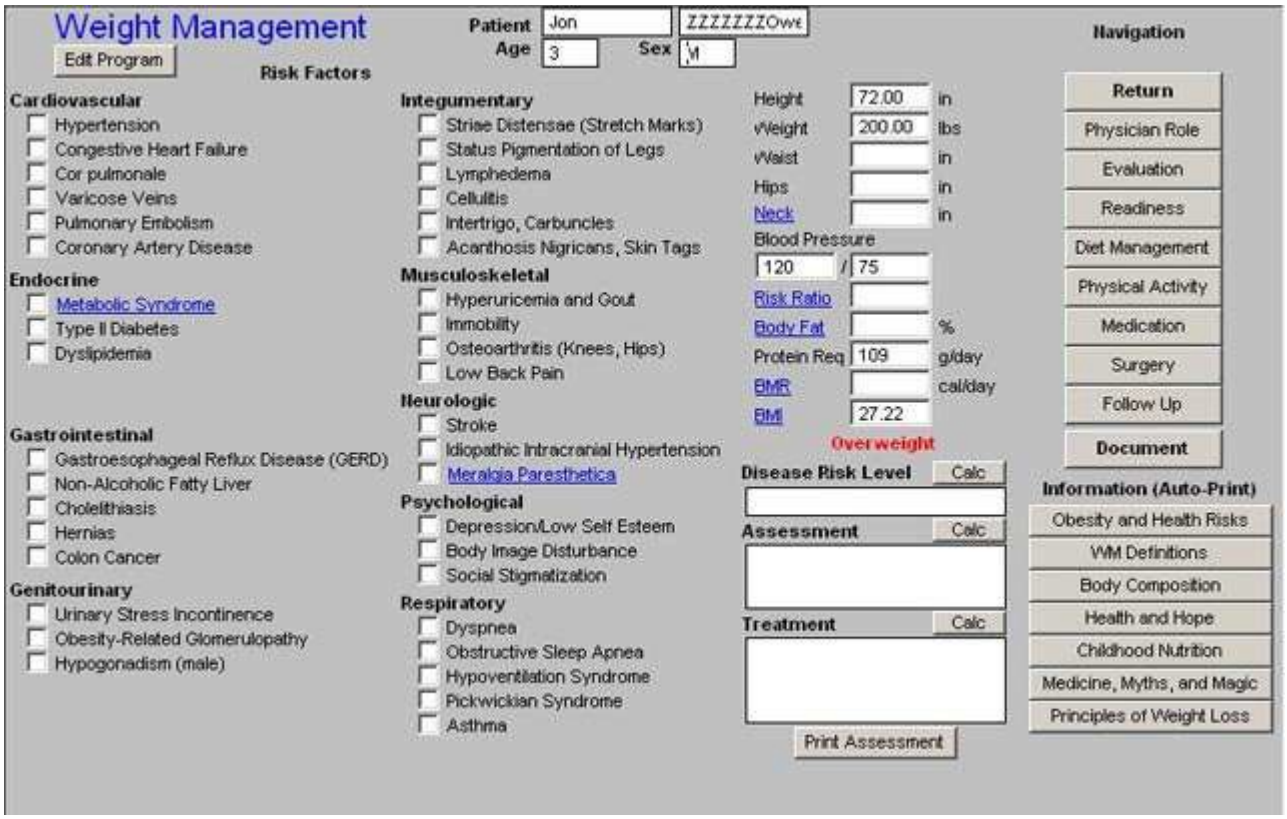


Successfully completing the LESS Initiative: The Six hyperlinks on the second part of the template.

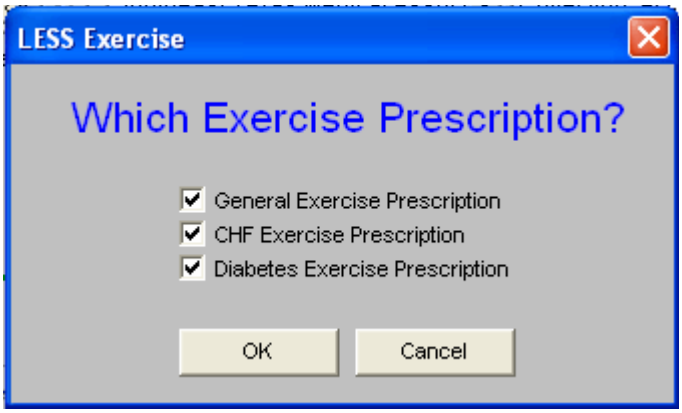
1. Limitations hyperlink is the first hyperlink which is explained above. If an option is checked, it excuses the completion of the weight management part of the LESS, but the Exercise and the Smoking Cessation should be completed.



2. Weight Management hyperlink is the second hyperlink, which accesses the Weight Management templates. In order to properly complete this part of the LESS, the three "calculate" buttons in the third column must be checked. Then click return, which will take you back to the LESS Template.

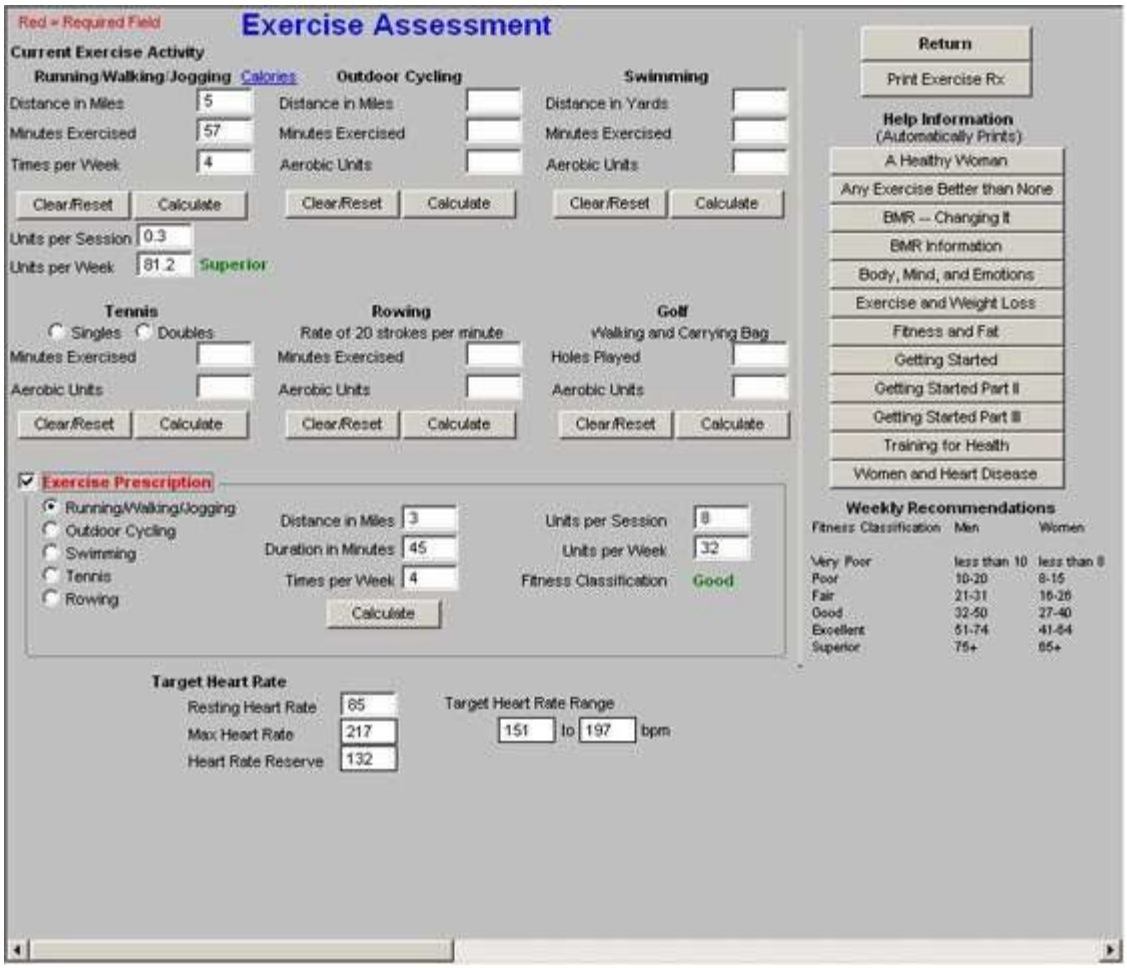


3. Exercise hyperlink is next.
    a. Note: It is necessary and appropriate only to complete one form of exercise prescription, not all three.
    b. If you complete the standard Exercise prescription which is this one, do not complete the other two.
    c. If the patient has CHF or physical limitations, complete only the CHF Exercise prescription.
    d. If the patient has diabetes, complete only the diabetes exercise prescription.
    e. If you inadvertently complete more than one Exercise prescription, in order to make sure that only one of them prints, click the hyperlink entitled "Which Exercise Prescription?," which is just below the Exercise/CHF Exercise hyperlinks and only the one you check in the pop-up will print on your LESS Initiative document which you will give to the patient.



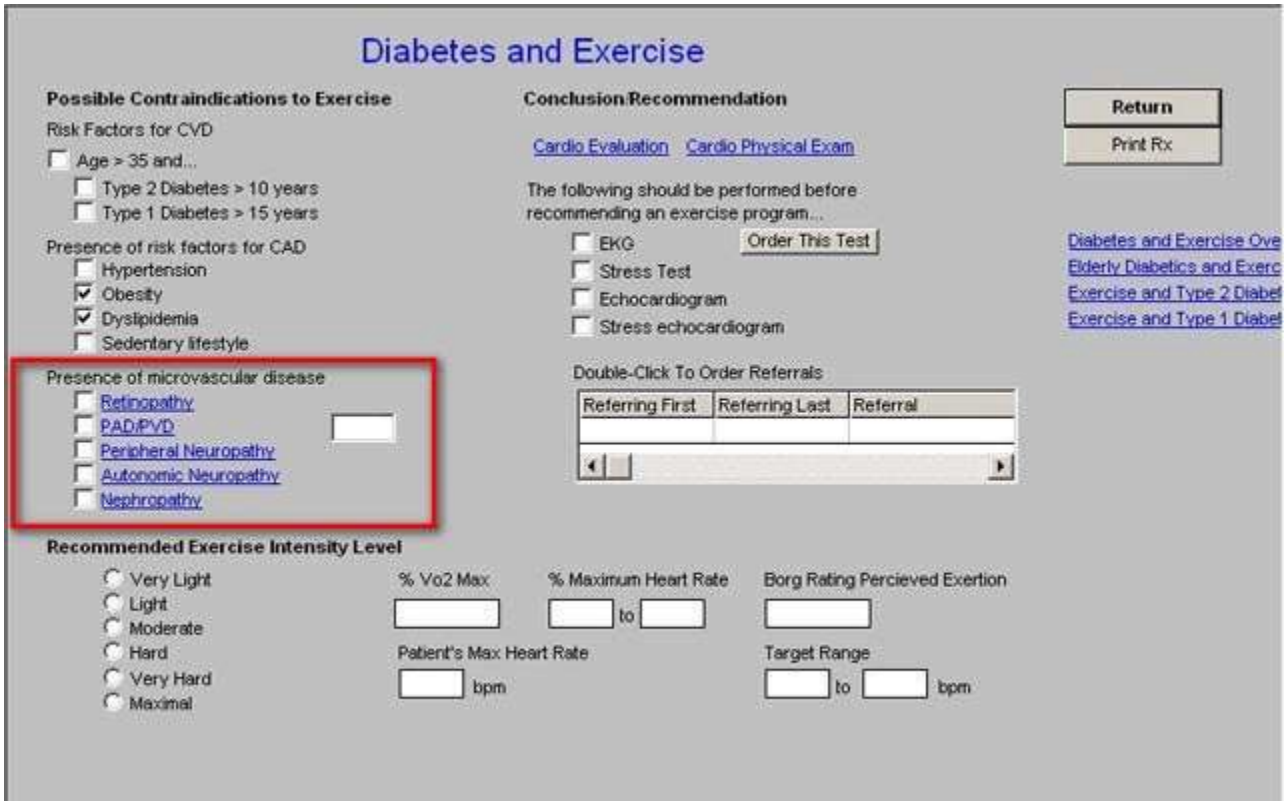
To properly complete the Exercise Prescription, click on Exercise:

f. If the patient is currently exercising, complete the type, speed, duration and frequency of their exercise. Then click "calculate."
g. This will calculate how many aerobic points they are getting each week. The standard is that they should get at least 27 a week for females and 32 for males.
h. Then click on "running/walking/jogging," then click the calculate button. This will place on the exercise prescription a minimal goal for the patient to reach. Then click return which will take you back to the front page.

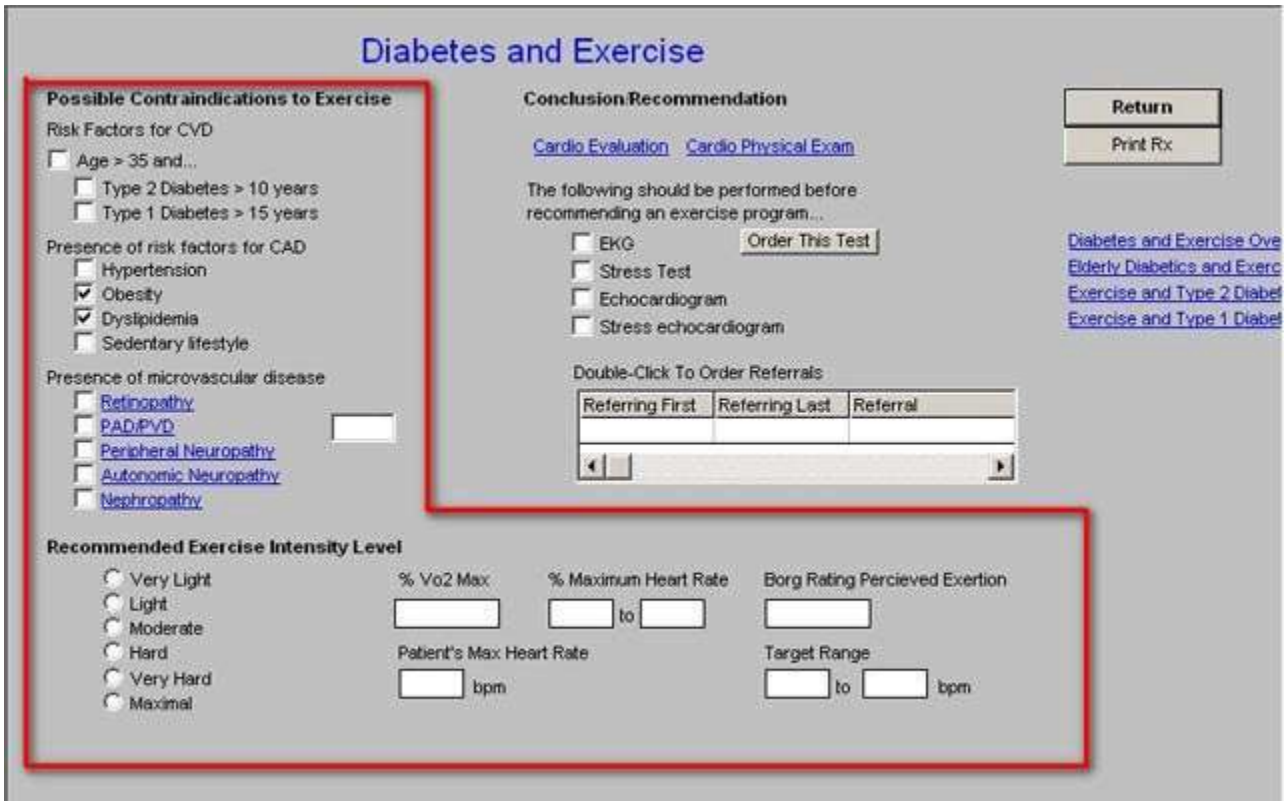


4. CHF Exercise hyperlink is next. If you have completed the Exercise prescription and if the patient is not severely limited, then skip this hyperlink. If the patient has serious limitations and/or has CHF, complete this exercise prescription as follows.
    a. Click on the CHF Exercise hyperlink
    b. Click on the Exercise Prescription hyperlink which appears on the CHF Exercise template. This creates the CHF exercise prescription document which will appear on the LESS Initiative Document.

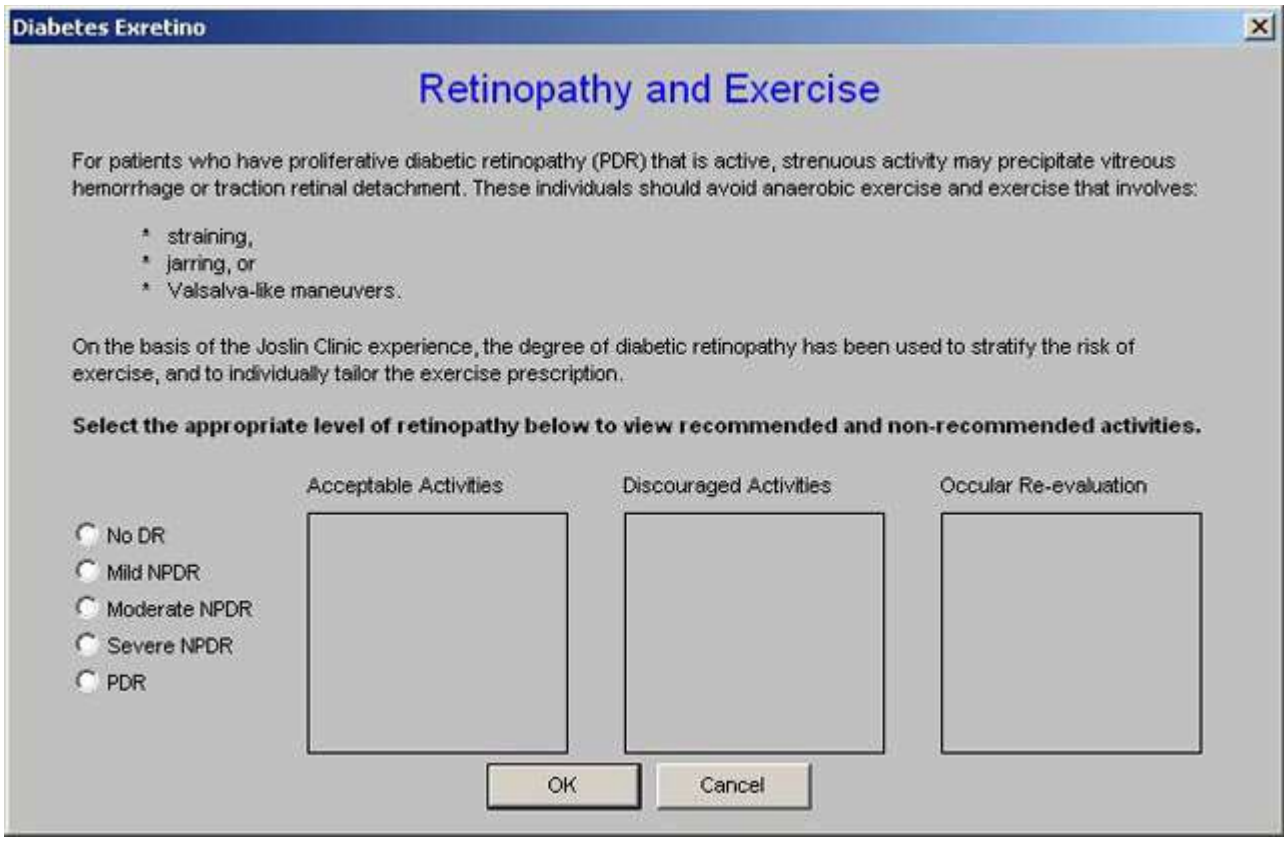
5. Diabetes Exercise hyperlink is next. **Once again, if you have completed either the Exercise or the CHF Exercise template do not complete this one.** If the patient is a long-standing diabetic with complications, use this template.
    a. This is the most complex of all of the Exercise prescriptions. However, even in its complexity, it is relatively easy to use. If you follow the hyperlinks down the left hand side of the template it will guide you.



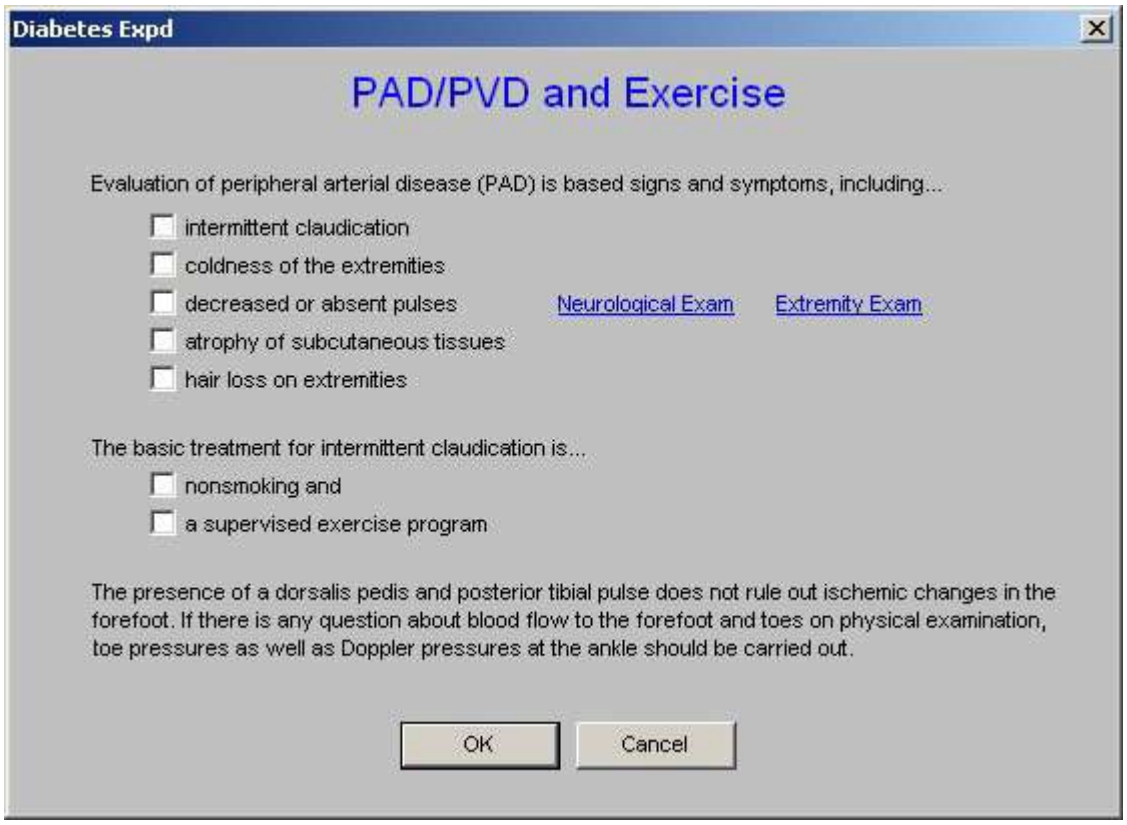
    b. The first column is entitled "Possible Contraindications to Exercise," under which there are four categories:

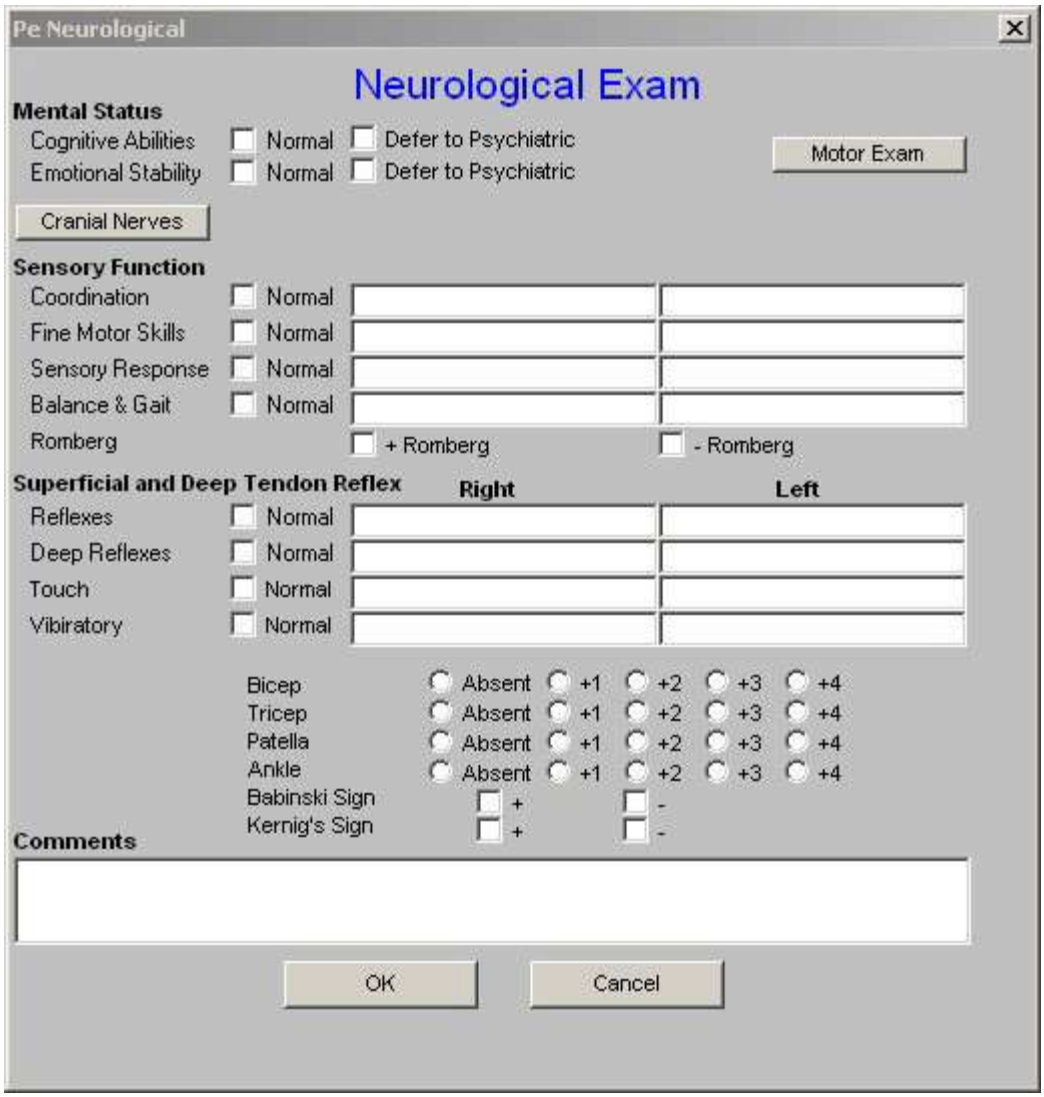


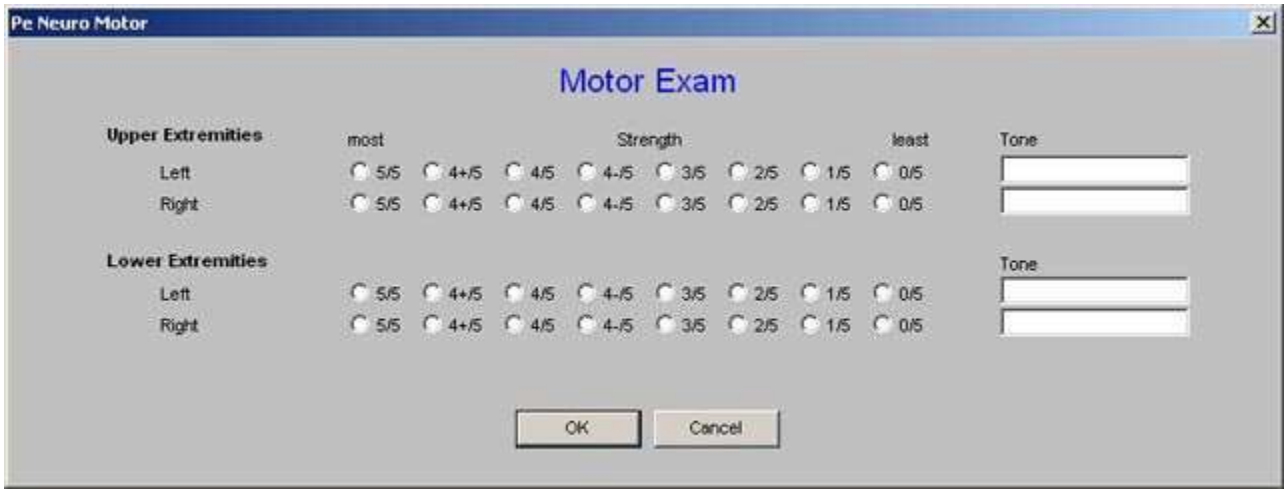
1. Risk Factors for Cardiovascular Disease
2. Presence of Risk Factors for CAD
3. Presence of Microvascular Disease – There are five conditions under this heading. They are:
    a. Retinopathy

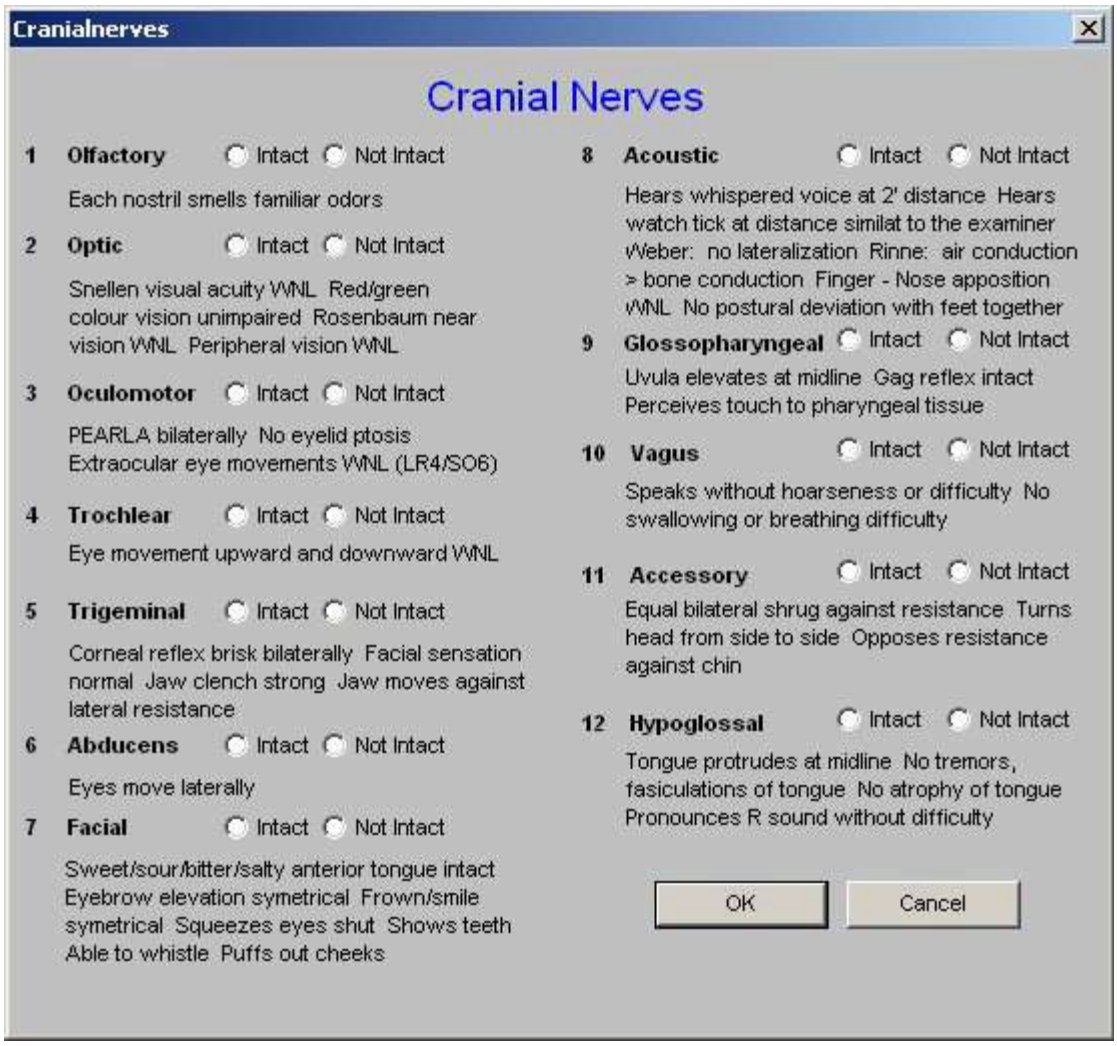

Diabetes Exretino
Retinopathy and Exercise
For patients who have proliferative diabetic retinopathy (PDR) that is active, strenuous activity may precipitate vitreous hemorrhage or traction retinal detachment. These individuals should avoid anaerobic exercise and exercise that involves:
* straining,
* jarring, or
* Valsalva-like maneuvers.
On the basis of the Joslin Clinic experience, the degree of diabetic retinopathy has been used to stratify the risk of exercise, and to individually tailor the exercise prescription.
Select the appropriate level of retinopathy below to view recommended and non-recommended activities.
Acceptable Activities
Discouraged Activities
Ocular Re-evaluation
No DR
Mild NPDR
Moderate NPDR
Severe NPDR
PDR
OK
Cancel

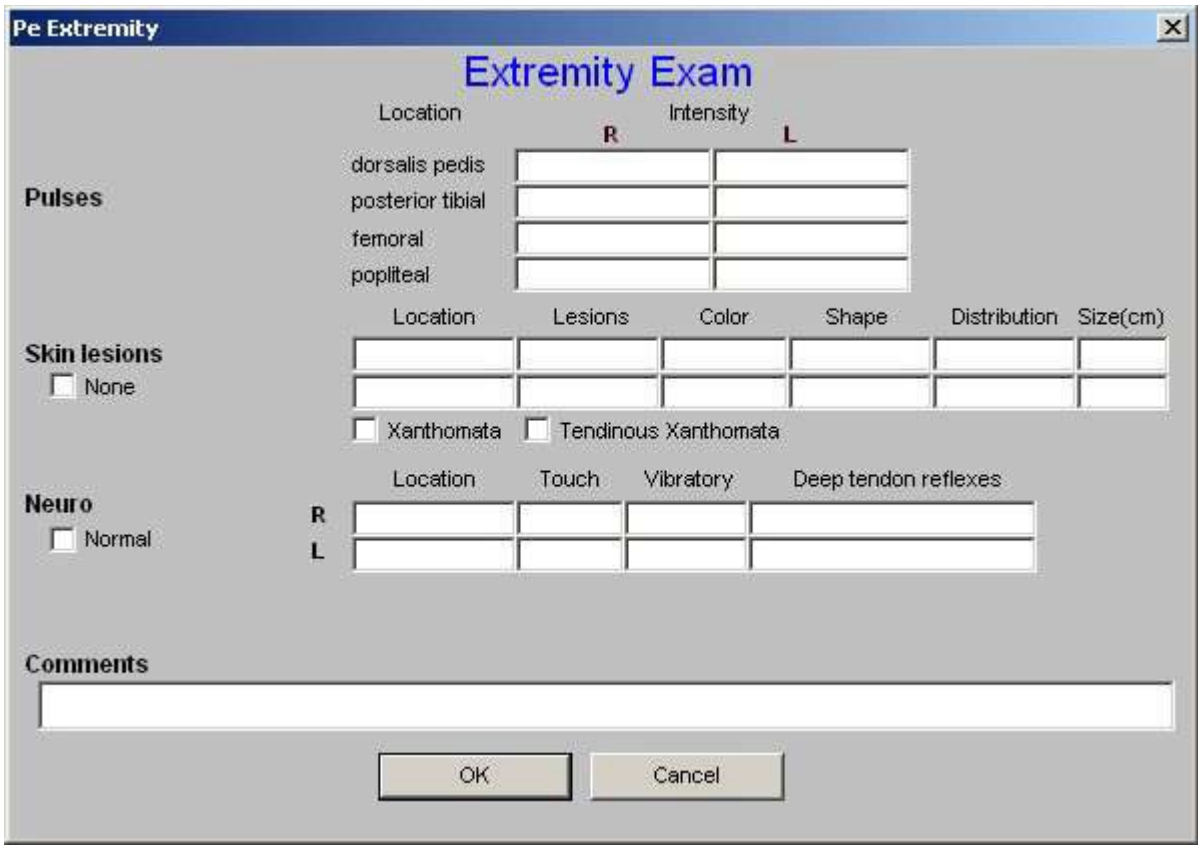
b. PAD/PVD


Diabetes Expd
PAD/PVD and Exercise
Evaluation of peripheral arterial disease (PAD) is based signs and symptoms, including...
intermittent claudication
coldness of the extremities
decreased or absent pulses
Neurological Exam
Extremity Exam
atrophy of subcutaneous tissues
hair loss on extremities
The basic treatment for intermittent claudication is...
nonsmoking and
a supervised exercise program
The presence of a dorsalis pedis and posterior tibial pulse does not rule out ischemic changes in the forefoot. If there is any question about blood flow to the forefoot and toes on physical examination, toe pressures as well as Doppler pressures at the ankle should be carried out.
OK
Cancel

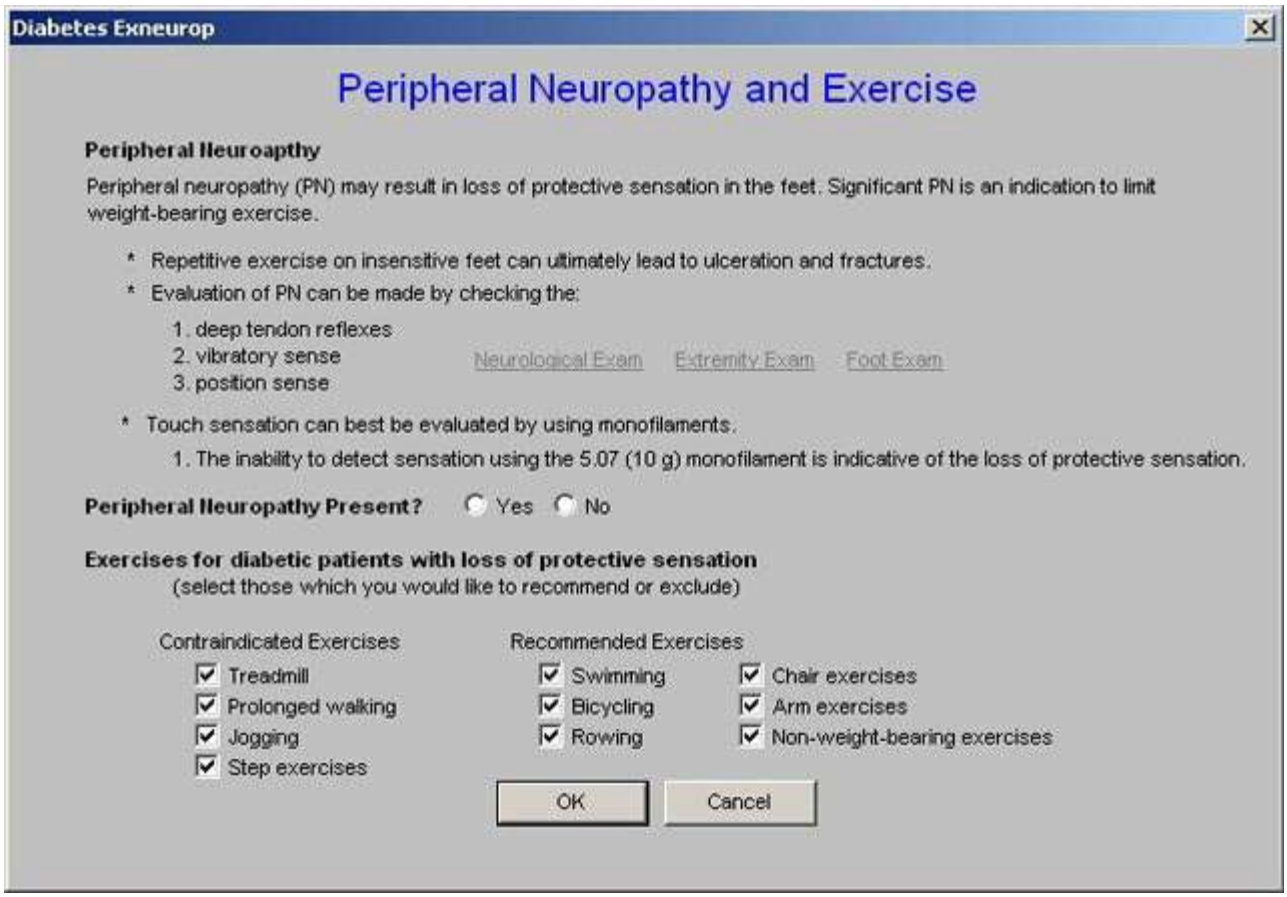

Pe Neurological
Neurological Exam
Mental Status
Cognitive Abilities
Normal
Defer to Psychiatric
Emotional Stability
Normal
Defer to Psychiatric
Motor Exam
Cranial Nerves
Sensory Function
Coordination
Normal
Fine Motor Skills
Normal
Sensory Response
Normal
Balance & Gait
Normal
Romberg
+ Romberg
- Romberg
Superficial and Deep Tendon Reflex
Right
Left
Reflexes
Normal
Deep Reflexes
Normal
Touch
Normal
Vibiratory
Normal
Bicep
Tricep
Patella
Ankle
Absent
+1
+2
+3
+4
Babinski Sign
Kernig's Sign
+
-
Comments
OK
Cancel

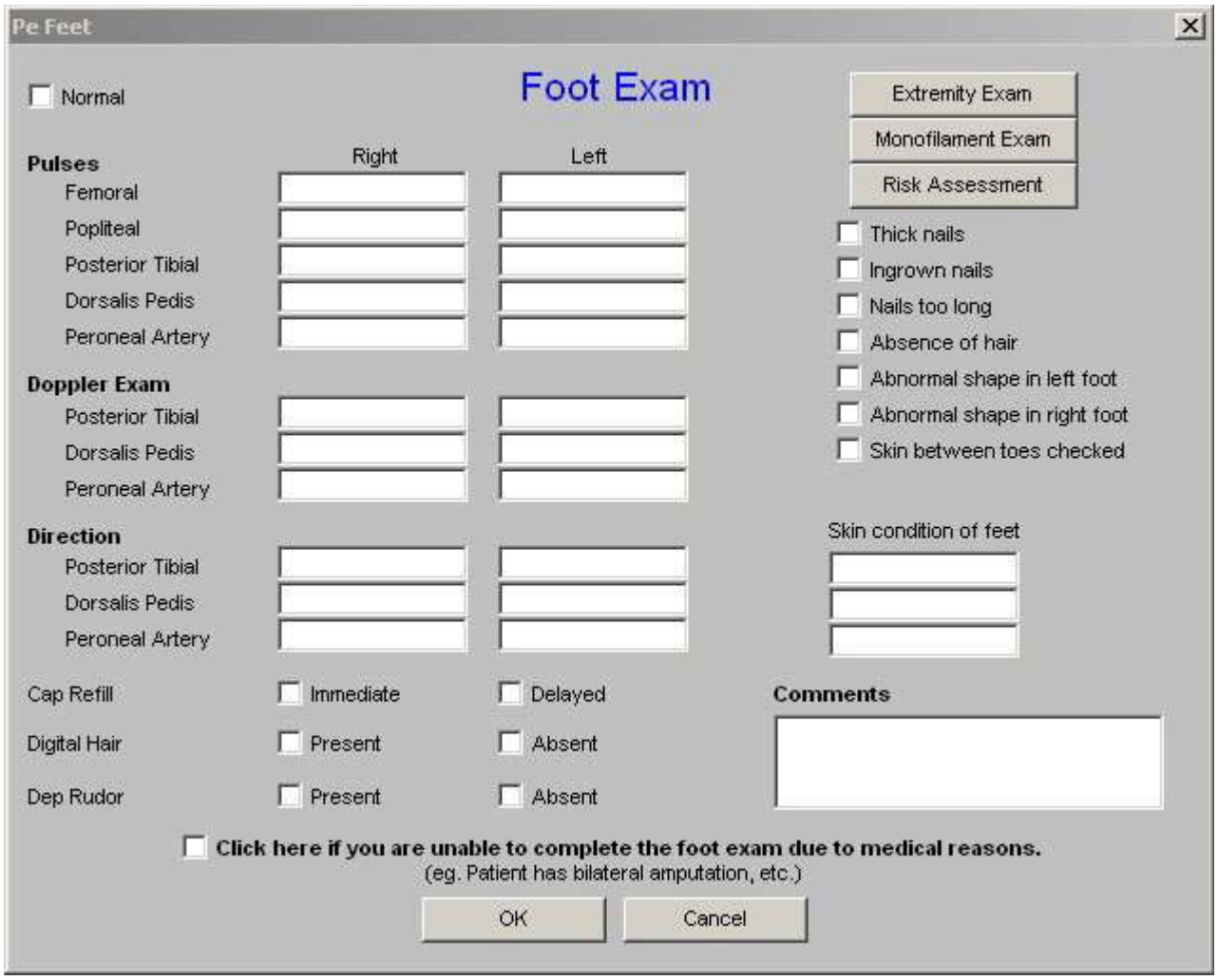

Pe Neuro Motor
Motor Exam
Upper Extremities
most
Strength
least
Tone
Left
Right
5/5
4+/5
4/5
4-/5
3/5
2/5
1/5
0/5
Lower Extremities
Tone
Left
Right
OK
Cancel


Cranialnerves
Cranial Nerves
1 Olfactory Intact Not Intact
Each nostril smells familiar odors
2 Optic Intact Not Intact
Snellen visual acuity WNL Red/green colour vision unimpaired Rosenbaum near vision WNL Peripheral vision WNL
3 Oculomotor Intact Not Intact
PEARLA bilaterally No eyelid ptosis Extraocular eye movements WNL (LR4/SO6)
4 Trochlear Intact Not Intact
Eye movement upward and downward WNL
5 Trigeminal Intact Not Intact
Corneal reflex brisk bilaterally Facial sensation normal Jaw clench strong Jaw moves against lateral resistance
6 Abducens Intact Not Intact
Eyes move laterally
7 Facial Intact Not Intact
Sweet/sour/bitter/salty anterior tongue intact Eyebrow elevation symetrical Frown/smile symetrical Squeezes eyes shut Shows teeth Able to whistle Puffs out cheeks
8 Acoustic Intact Not Intact
Hears whispered voice at 2' distance Hears watch tick at distance similat to the examiner Weber: no lateralization Rinne: air conduction > bone conduction Finger - Nose apposition WNL No postural deviation with feet together
9 Glossopharyngeal Intact Not Intact
Uvula elevates at midline Gag reflex intact Perceives touch to pharyngeal tissue
10 Vagus Intact Not Intact
Speaks without hoarseness or difficulty No swallowing or breathing difficulty
11 Accessory Intact Not Intact
Equal bilateral shrug against resistance Turns head from side to side Opposes resistance against chin
12 Hypoglossal Intact Not Intact
Tongue protrudes at midline No tremors, fasiculations of tongue No atrophy of tongue Pronounces R sound without difficulty
OK
Cancel

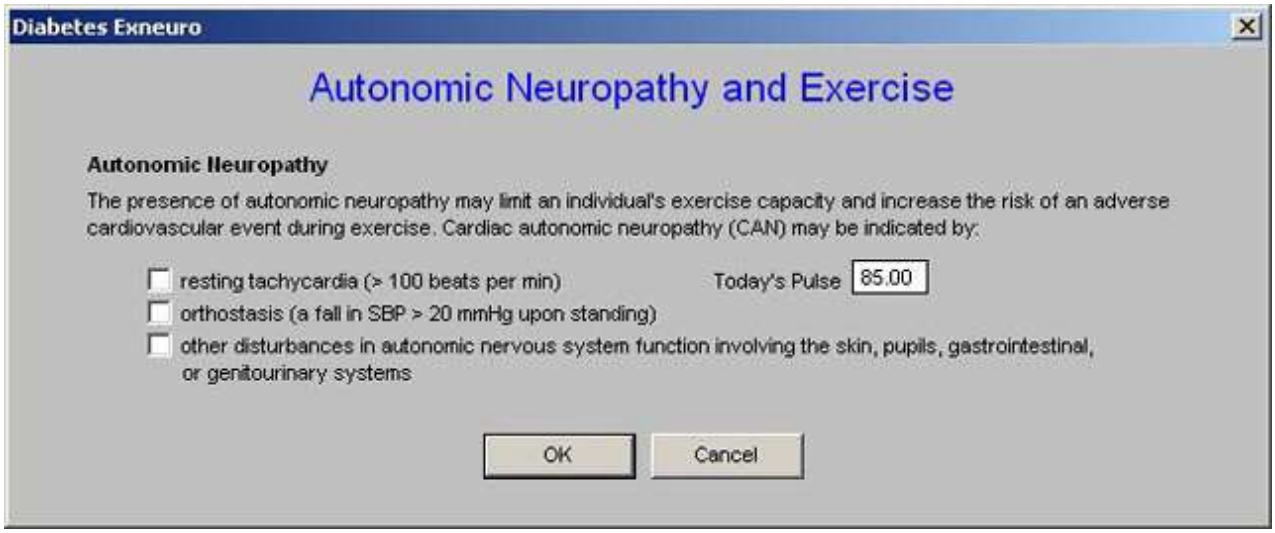


c. Peripheral Neuropathy

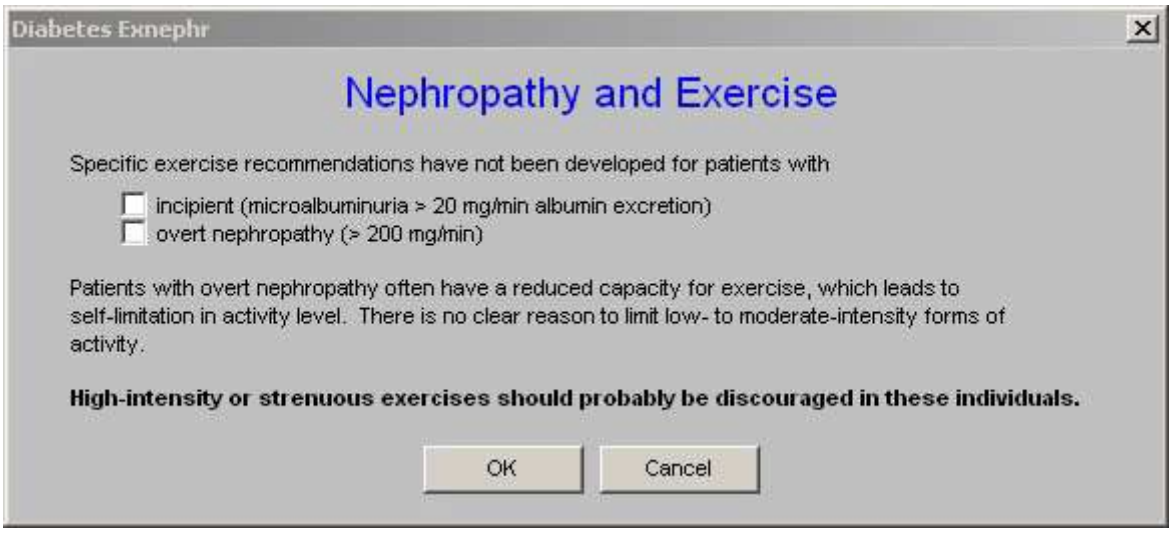

Diabetes Exneurop
Peripheral Neuropathy and Exercise
Peripheral Neuroapthy
Peripheral neuropathy (PN) may result in loss of protective sensation in the feet. Significant PN is an indication to limit weight-bearing exercise.
* Repetitive exercise on insensitive feet can ultimately lead to ulceration and fractures.
* Evaluation of PN can be made by checking the:
1. deep tendon reflexes
2. vibratory sense
3. position sense
Neurological Exam
Extremity Exam
Foot Exam
* Touch sensation can best be evaluated by using monofilaments.
1. The inability to detect sensation using the 5.07 (10 g) monofilament is indicative of the loss of protective sensation.
Peripheral Neuropathy Present?
Yes
No
Exercises for diabetic patients with loss of protective sensation
(select those which you would like to recommend or exclude)
Contraindicated Exercises
Treadmill
Prolonged walking
Jogging
Step exercises
Recommended Exercises
Swimming
Bicycling
Rowing
Chair exercises
Arm exercises
Non-weight-bearing exercises
OK
Cancel



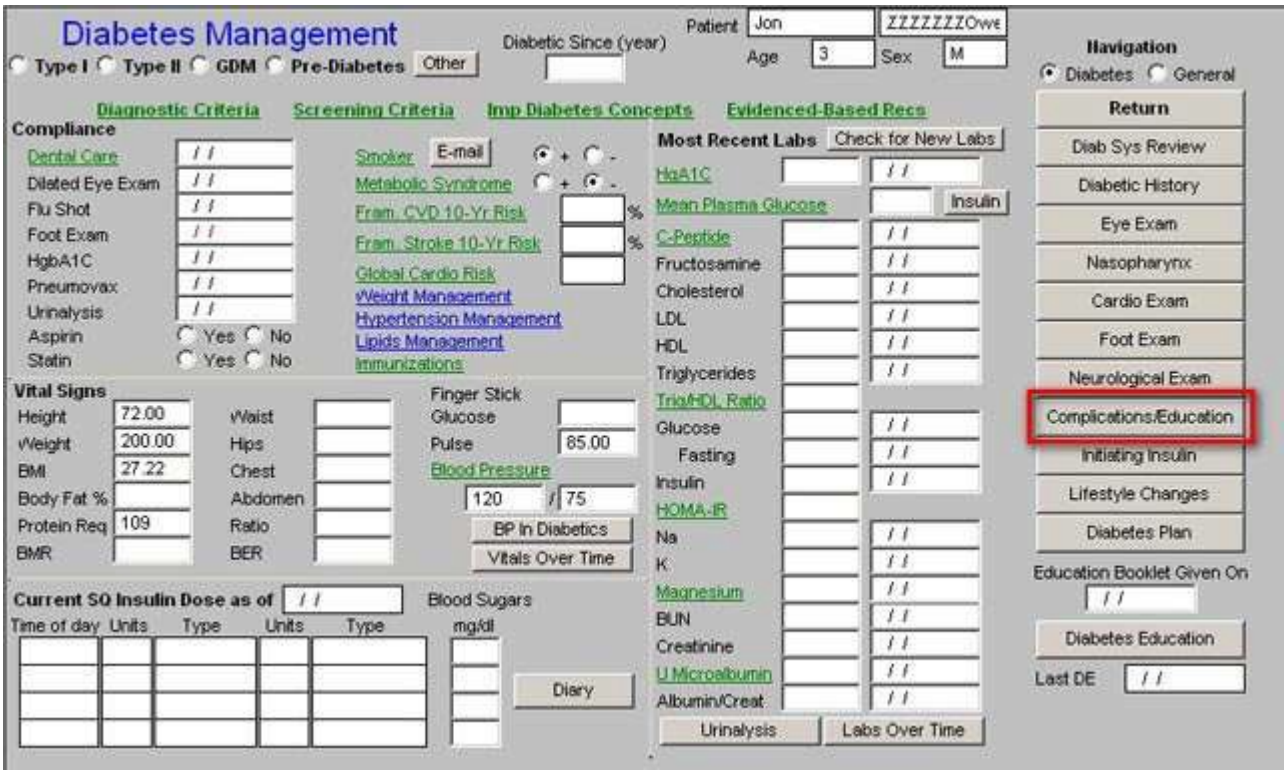
d. Autonomic Neuropathy



e. Nephropathy

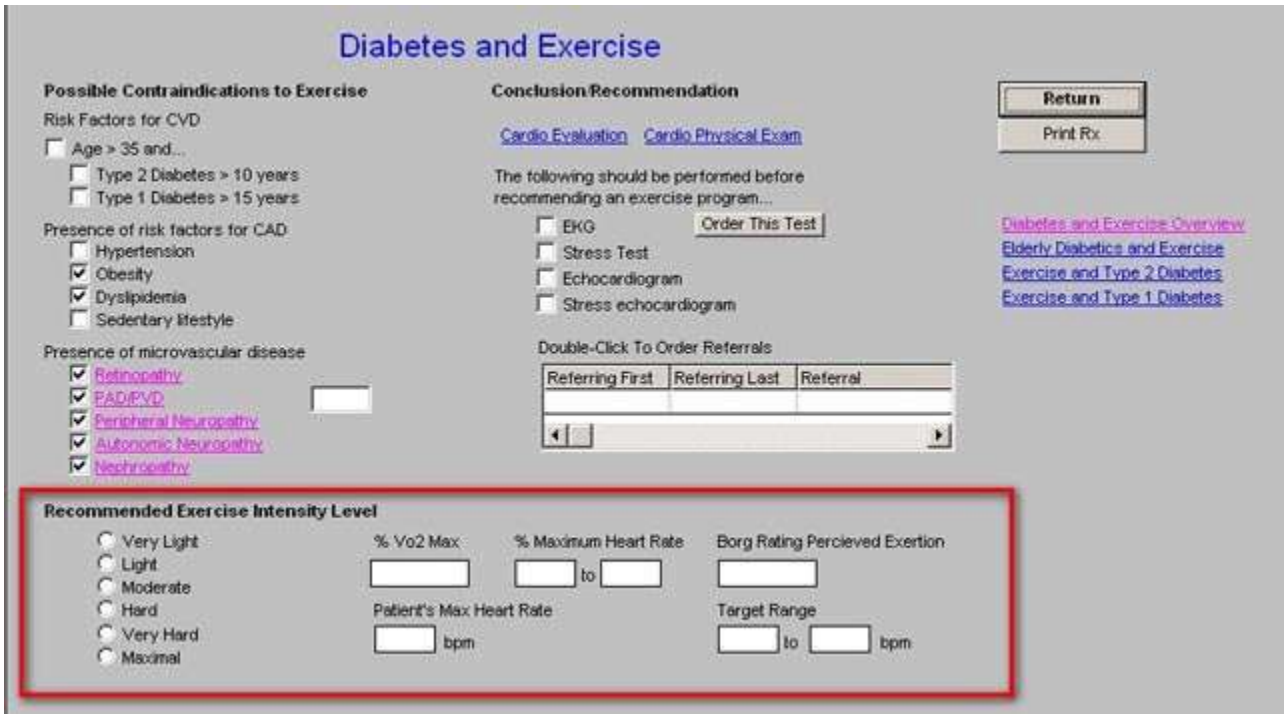


On the Diabetes Disease Management Templates, the eighth button down on the right is entitled "Complications/Education."

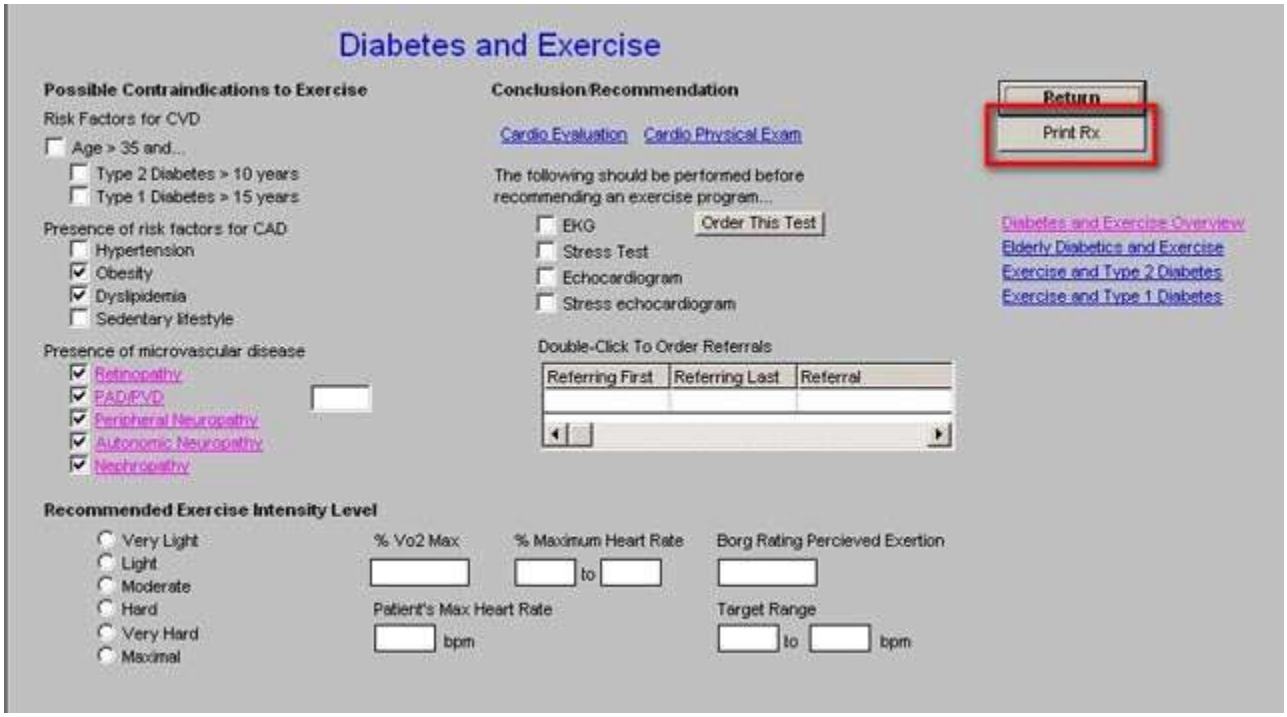


If the diabetic complications were documented there, they will automatically note which of the five categories of complications are positive in this patient. You will then be able to click on that hyperlink and assess how that particular complication limits the physical activity of this patient.

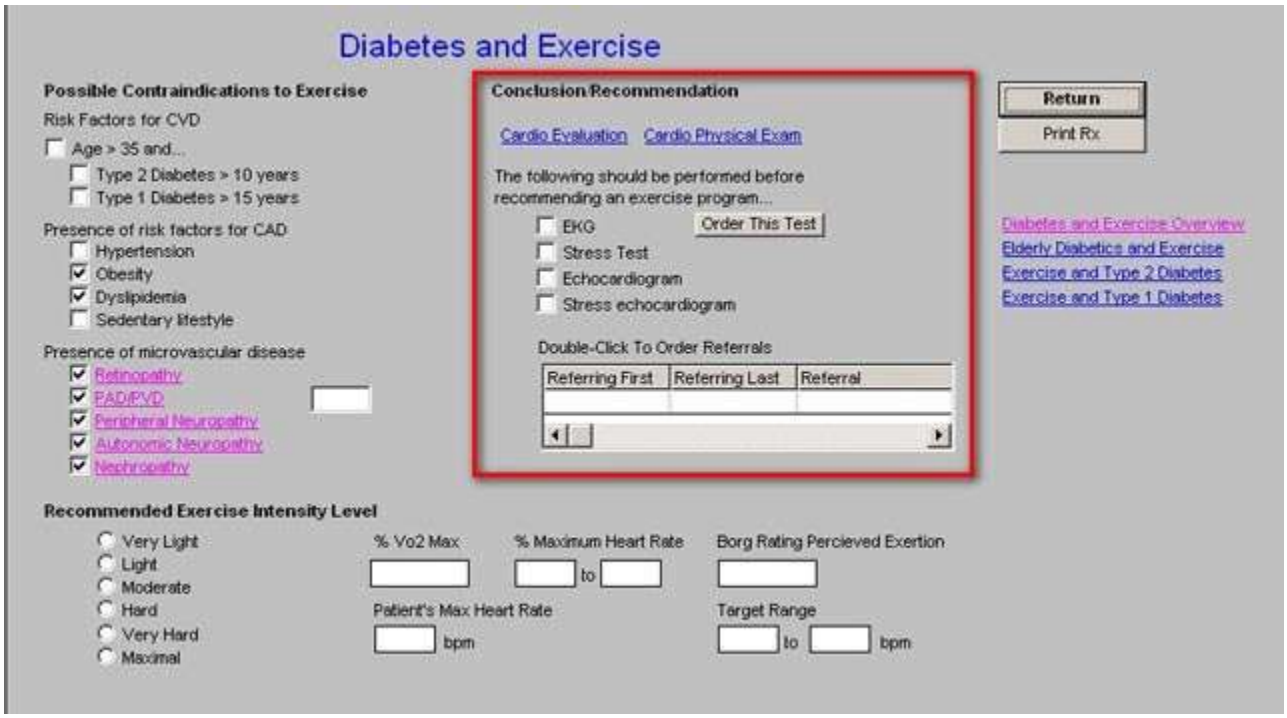
1. Recommended Exercise Intensity – based on the recommendations from the result of the first three sections of the Diabetes Exercise Templates, you will select an intensity of exercise, which will then add the following to the patient's exercise prescription:
    a. %VO2Max
    b. %Maximum Heart Rate
    c. Borg Perceived Exertion – the exercise prescription will explain this concept and how to use it.
    d. Patient's Maximum Heart Rate
    e. Target Heart Rate Range



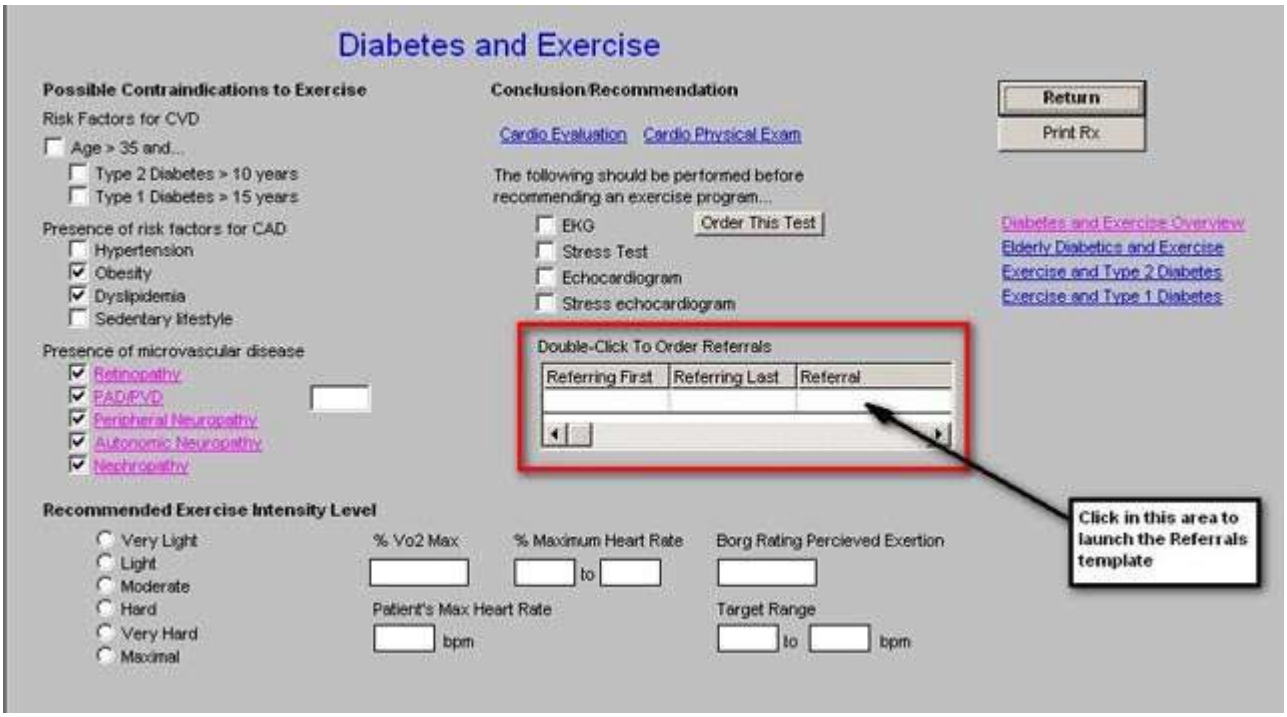
2. Then click on the button labeled Print Rx. This will make all of the Diabetes Exercise Prescription material print on the LESS Initiative document.

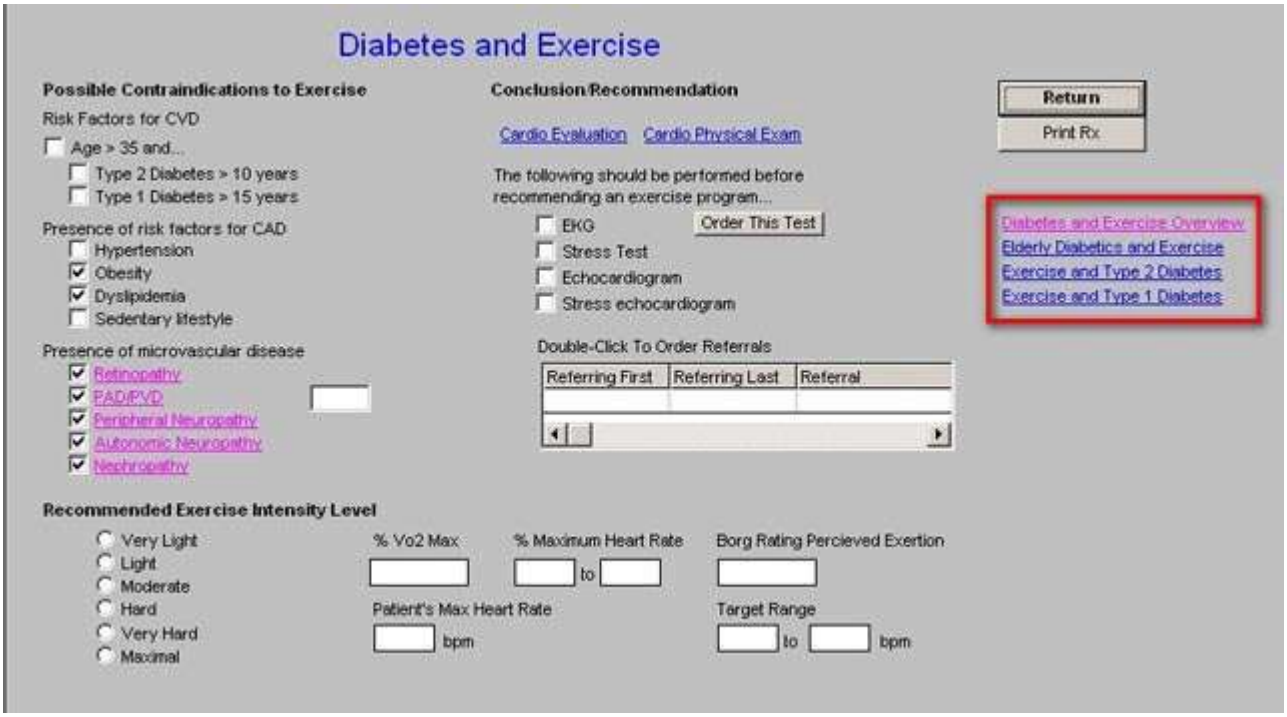


3. There are several other features on the Diabetes Exercise Template, which are:
    a. Conclusion and Recommendation – often, before a diabetic should exercise, certain testing should be obtained.



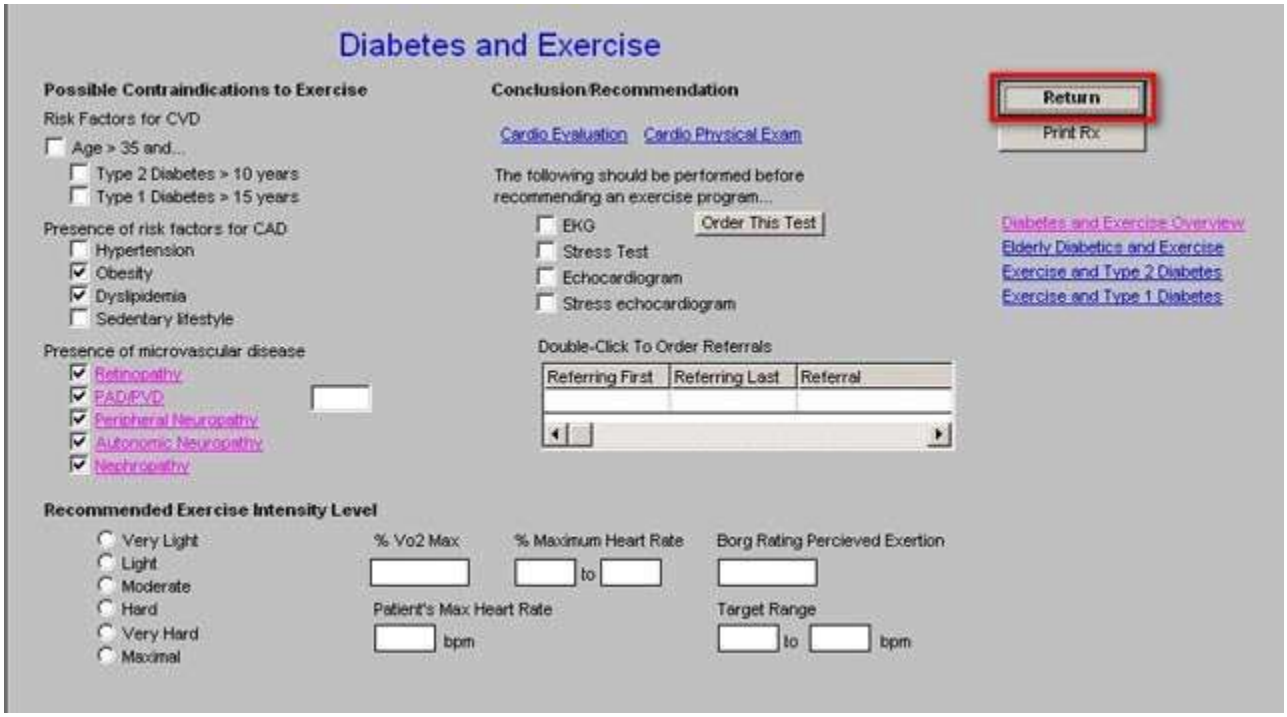
    b. The appropriate tests and/or referrals can be ordered from this template.



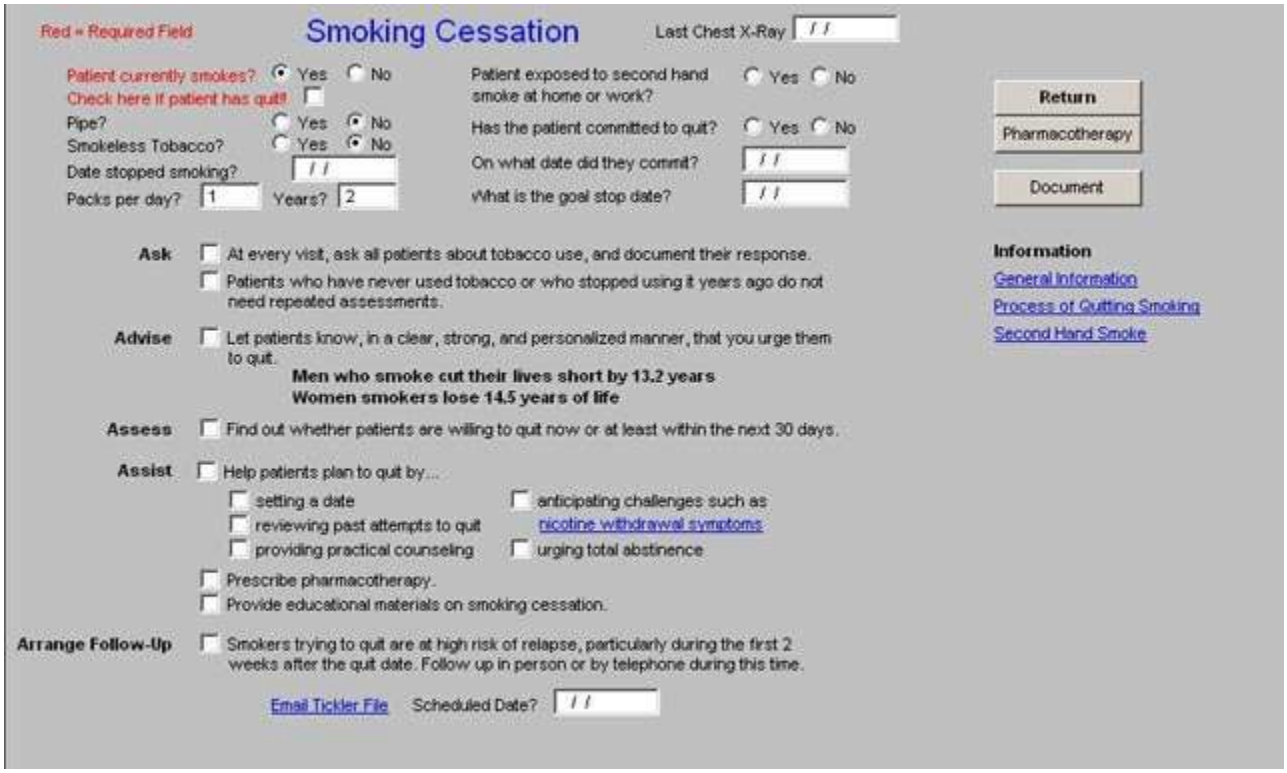


Click here to learn How to Complete a Referral

c. Also, there are four documents on this template concerning diabetes and exercise.



d. Then click on "Return" to take you back to the LESS Initiative Template.



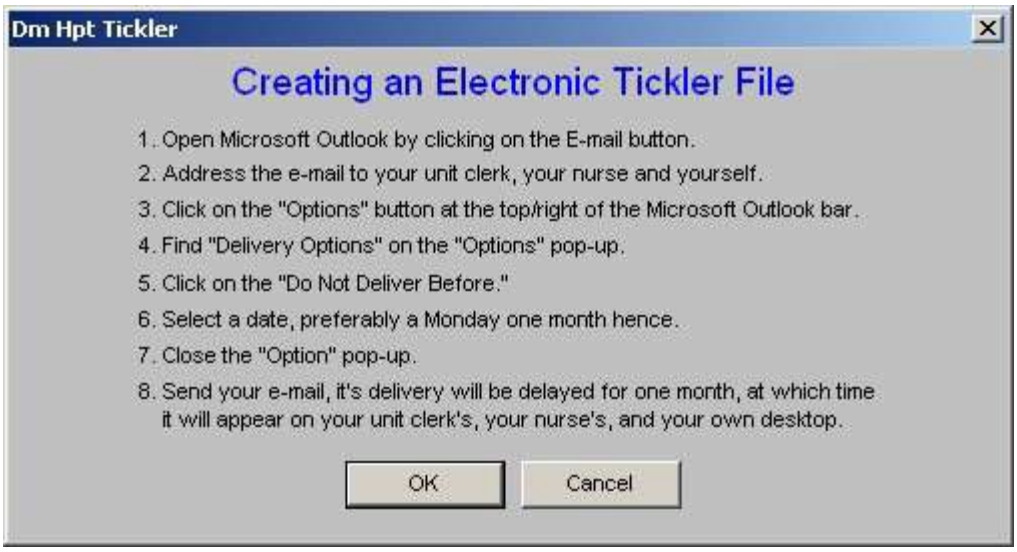
4. Smoking Cessation – this is the sixth hyperlink

a. Every patient must be confronted about whether they smoke and/or whether they are exposed to second hand smoke (also called environmental or side-stream smoke)
b. The first section of this template involves smoking and environmental smoke.
    1. There are five questions on each of these subjects in two columns.
    2. All questions must be answered.

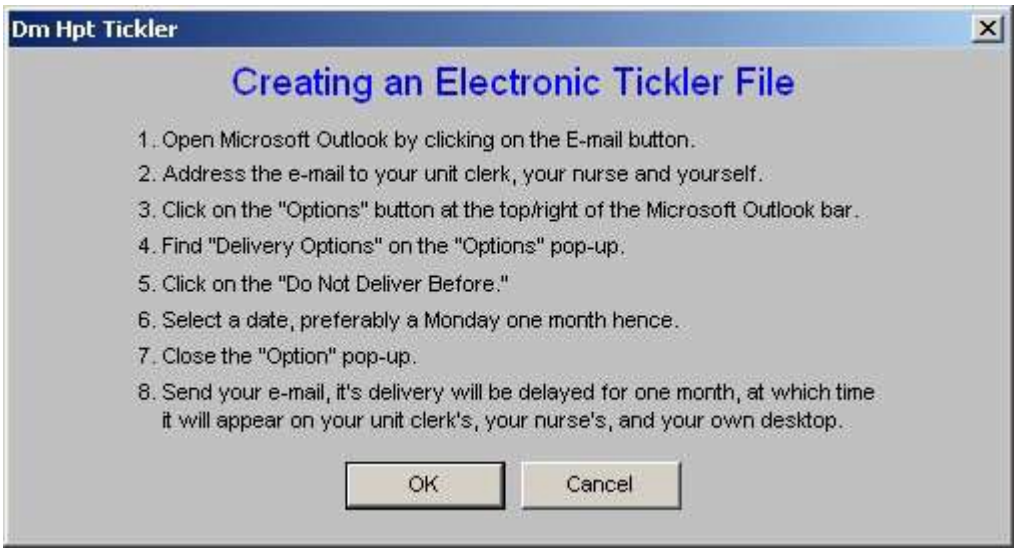
c. The second section consists of four steps of action to help the patient make the decision to stop smoking.
    1. Ask
    2. Advise
    3. Assess
    4. Assist

d. The third section of this template is entitled "Arrange Follow-up"
    1. Function to establish an electronic tickler file is present
    2. Send your unit clerk and yourself an e-mail by clicking on the hyperlink "email tickler file."
    3. Follow the instructions for sending the e-mail and delaying the delivery for one month.

e. If the patient requires pharmacological treatment for smoking cessation, and most will, the provider can access the information on the drugs used in smoking cessation by clicking on the "Pharmacotherapy" button to the right of the template.



f. Once you have done the e-mail tickler file, click on return.



Conclusion

- When you are back at the LESS Initiative Template, click the button entitled "document," which is the second button in the right hand column on the template.
- This creates a document which will contain:
    1. All of the material on the LESS template
    2. All of the material on the Weight Management Assessment
    3. All of the material on the Exercise Prescription which you chose
    4. All of the appropriate material from the Smoking Cessation template, if any.

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SETMA's LESS Initiative

Patient: Test IBM Serv AAA
DOB: 01/11/1932
Age: 73 years

Date: 06/23/2005 9:15 AM

10-15 pounds of excess weight places a person at a higher risk for developing diabetes, but 10-15% decrease in weight, even if a person is obese, decreases that risk significantly. The bad news is that more people are at greater risk of developing diabetes than think they are, but the good news is that a person can help decrease their risk without attaining their ideal body weight.

Risk Factors for Developing Diabetes

1. Family History?
   You do not have a family history of Type II Diabetes which does not represent a risk factor for the development of diabetes.
   You have a family history of hypertension which increases your risk of developing diabetes.
   You have a family history of hyperlipidemia which increases your risk of developing diabetes.

2. Overweight/Obese?
   You have abnormal body composition indicators which increase your risk of developing diabetes.
   BMI - .00
   Body Fat - 31.2 %
   You have an elevated waist circumference which indicates adiposity in the abdominal area which increases your risk of developing diabetes.
   Waist Circumference - 40.00 inches

3. Did You Have A Low Birth Weight?
   Your birth weight is normal and does not represent a risk factor for the development of diabetes.

- This document automatically prints to your default printer.

Explaining the LESS Initiative to your patient

- Now that you have this wealth of information in your hands, you need to get it to the patient.
- If you simply hand it to them, most will not read it, but if you introduce it and then if you follow-up at your next visit and ask if they understood the material, you will increase its usefulness.
- Here is a suggested introduction of the LESS Initiative to your patient:
    - "This is SETMA's LESS Initiative. We give this to every patient we see. LESS stands for "lose weight, exercise and stop smoking and/or avoid second-hand smoke." No matter what your age or health, these are the three most important things you can do for yourself.

Please read this. Ask your healthcare provide why this is important; he/she will be happy to discuss this with you. And, the next time I see you, I would like to know if you have been successful in losing weight, exercising and avoiding tobacco smoke."

		2011			2010			2009	
		Total Seen	LESS (%)		Total Seen	LESS (%)		Total Seen	LESS (%)
Anthony	Jeffrey	2908	95.3		3629	89.1		3673	89.7
Anwar	Syed	3897	96.7		4068	79.4		3864	57.3
Aziz	Muhammad	3606	96.0		3421	87.0		3661	75.9
Cricchio	Michael	3423	88.7		3123	87.5		2836	94.0
Curry	Marissa	2365	94.0		2534	93.8		2693	94.2
Deiparine	Caesar	4223	92.8		3257	88.7		0	0.0
Duncan	Norma	3871	91.6		3786	78.4		3593	29.5
Halbert	Dean	4801	84.8		4649	84.0		4697	72.0
Henderso	Dana	3508	95.4		3471	93.5		3464	79.0
Holly	James	606	99.0		1114	94.6		1457	95.3
Leifeste	Alan	2959	84.4		2926	95.5		2903	93.0
Murphy	Vincent	4574	93.6		4352	82.2		4956	76.4
Palang	Ronald	2764	78.4		0	0.0		0	0.0
Qureshi	Absar	2535	92.8		453	97.6		0	0.0
Satterwhi	Kelli	1475	96.6		1933	84.6		2968	85.6
Thomas	Michael	1595	84.1		3216	71.8		2203	67.0
Vardiman	John	2785	96.5		869	96.0		1597	85.5
Wheeler	Marcella	3099	95.0		3191	88.5		3078	94.6
TOTAL		54994	93.4		49992	86.1		47643	77.3

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SETMA's LESS Initiative

Patient:
DOB: 04/12/1961
Age: 50 years

Date: 01/04/2012 7:52 AM

10-15 pounds of excess weight places a person at a higher risk for developing diabetes, but 10-15% decrease in weight, even if a person is obese, decreases that risk significantly. The bad news is that more people are at greater risk of developing diabetes than think they are, but the good news is that a person can help decrease their risk without attaining their ideal body weight.

You are 23 pounds overweight which places you at a higher risk for developing diabetes.
If you lose 17 to 26 pounds, you will significantly reduce your risk of developing diabetes.

Risk Factors for Developing Diabetes

1. Family History?
   You have a family history of Type II Diabetes which increases your risk of developing diabetes.
   You have a family history of hypertension which increases your risk of developing diabetes.
   You have a family history of hyperlipidemia which increases your risk of developing diabetes.

2. Overweight/Obese?
   Your weight is normal and does not represent a risk factor for the development of diabetes.
      BMI - 27.06
      Body Fat - 19.1 %
   Your waist size is normal and does not represent a risk factor for the development of diabetes.

4. Blood Pressure?
   Blood Pressure - 116 / 76 mmHg
   Your blood pressure is normal and does not represent a risk factor for the development of diabetes.

5. Abnormal Lipids?
   Cholesterol - 210 mg/dL
   HDL - 56 mg/dL
   Triglycerides - 53 mg/dL
   You have abnormal lipids values which increase your risk of developing diabetes.

6. Non Caucasian Ethnicity?
   Your ethnicity (Caucasian) does not represent a risk factor for the development of diabetes.

Conclusion
Based on your age, body composition indicators (BMI or body fat), and the risk factors listed above you have a risk of developing diabetes. You must lose weight, exercise, stop smoking and/or avoid inhaling

other people's smoke, and you need to maintain your weight loss through continuing to exercise. We will continue to monitor your blood pressure, blood sugar and lipids on a regular basis.

Plan
We will provide you with follow-up counseling to help you stay on track towards health lifestyles.
We will monitor you annually for the development of diabetes.

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Weight Management Assessment

Patient:
Age: 50 Years
DOB: 04/12/1961

Assessment Date: 02/24/2011

Your BMI is 27.06 and your waist size is inches. According to the "Classification of overweight and obesity by BMI and waist size" you are overweight which carries with it an Increased level of disease risk.

Based on your current level of activity, your Basal Metabolic Rate (BMR) is 2312 calories per day. This is the number of calories you will need to maintain your current body weight if you are moderately active. Your BMR is based on your height, your weight, your activity level, and your age.

Your current body fat percentage is 19.1 percent. Because it takes only 3 calories per day to maintain fat and because muscle utilizes 35 calories per day, if you lose fat and gain muscle, your BMR will actually go up, making it easier for you to maintain your body weight. Your current weight is 155 pounds. Five percent of your body weight is 7. If you lose 7 pounds of fat through diet and exercise, and if you gain 7 pounds of muscle through strengthening, your BMR will go down 3 calories per pound of fat lost or 21 calories and your BMR will go up by 35 calories per pound of muscle gained or 245 calories for a net change in your BMR of 224 calories.

This means that if you do not take in more calories than you needed to maintain your previous weight, you will lose a pound every 15 days.

As you can see, you don't have to get down to your ideal body weight before you start experiencing benefits from the changing of your body composition by exercise, calorie reduction and strengthening exercises. A five to ten percent change in your body composition, either in fat loss and/or muscle gain, begins to benefit you immediately.

In order to eliminate weight as a negative factor in your health, you need to lose 3.0 pounds of body fat.

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Exercise Prescription

Patient:
DOB: 04/12/1961
Sex: M

Today's Date: 01/04/2012

"Those who think they have not time for bodily exercise will sooner or later have to find time for illness."
- Edward Stanley, Earl of Derby
(from Conduct of Life, address to Liverpool College, 20 December, 1873)

Recommendations for Weekly Aerobic Units

Fitness Classification	Men	Women
Very Poor	less than 10	less than 8
Poor	10 - 20	8 - 15
Fair	21 - 31	16 - 26
Good	32 - 50	27 - 40
Excellent	51 - 74	41 - 64
Superior	75+	65+

Your exercise should include:

Strengthening of your muscles (upper and lower body) -- use weights that are a comfortable size for you and do multiple repetitions rather than one or two liftings of weights you can barely move. The object is to tone and strengthen your muscles, increasing your lean body mass, improving your basal metabolism rate, rather than building big muscles. For weight control, this is the most important part of your exercise regimen. Strengthening exercises should be done four to six days a week, rotating from upper to lower body muscles from day to day. Repeating lifting to fatigue without injury is the best way to gain lean body mass and muscle strength.

Stretching of your muscles -- nothing will contribute more to the decrease of injury than stretching. You should not stretch to the point of injury, but you will stretch to the point of discomfort. Once your muscle is stretched out do not stress it by bouncing against it or trying to go further. Hold the muscle in the stretched position for sixty seconds. Stretching should be an everyday exercise. It does not require any equipment, except possibly for an elastic band.

Striking of your muscles (jogging, walking, running, cycling, swimming, etc) -- this is where the capacity to use oxygen, particularly the heart muscle, is increased. This is called aerobic capacity. If you are contemplating a conditioning program, SETMA's cardiopulmonary physiology test is an excellent way to

establish your baseline and to determine how you are progressing. Ask about it. Aerobic activities should be done at least three days a week and preferably five.

Recommended Minimum Exercise

Walking/Jogging/Running
Distance: 3.0 miles
Duration per Session: 45.0 minutes
Aerobic Units per Session: 8.0 units

This recommended amount of exercise 4 times per week will give you a total of 32.0 aerobic units each week. This will place you in a "good" aerobic conditioning category.

10,000 Steps a Day

The Amish and Activities of Daily Living

A study of Amish men and women was published in the journal Medicine and Science and Exercise in January, 2004. The result of a project at the University of Tennessee, the study documented that Amish men are six times more active than the average American. While the average American takes 2-3,000 steps a day; Amish men take an average of 18,425 steps a day and Amish women take an average of 14,196 steps a day. One Amish man took over 51,000 steps in a day, which is equivalent to walking 25 miles.

What is the result? The Amish have a 4% incidence of obesity and 26% were overweight as opposed to a 31% obesity and 64% overweight in the general American population. And, this is in spite of the very high-calorie, high-fat-content diet which the Amish typically consume.

Activities of Daily Living and Exercise

Can something as simply as walking further to get the mail or the newspaper make a difference in your health? Absolutely! In another study published in the May, 2004 issue of Medicine & Science and Exercise, the official journal of the American College of Sports Medicine, it was reported that middle-aged women who took at least 10,000 steps per day on average were much more likely to fall into recommended ranges for measures of body composition such as total body weight and body fat percentage. Conversely, inactive women those taking fewer than 6,000 steps per day were more likely to be overweight or obese and have higher waist circumferences, a strong predictor of increased risk of cardiovascular disease.

Middle-aged women who accumulate more daily steps have a more favorable body composition profile. This is the first study to specifically examine the relationship between average accumulated steps per day and body composition variables in women who are in their middle years. In the study, eighty women between the ages of 40 and 66 were first weighed and measured, then instructed to wear pedometers for one week and log the number of steps taken each day. They were asked to follow their typical work and leisure routines during the one-week period. Researchers classified the participants into groups of:

* Inactive (6,000 or fewer average daily steps),
* Somewhat active (6,000 9,999) and
* Active (10,000 or more)

They then analyzed body mass index (BMI), body fat, and waist and hip circumference. The study showed a significant inverse correlation between average steps and each of these measurements. On average, those in the active category had only 26 percent body fat and were within the recommended BMI range while those in the inactive group had a body fat percentage of 44 percent and fell well into the overweight category for BMI.

Researchers point out the public health implications of the evidence, particularly the apparent benefit of accumulating steps throughout the day. Although dietary intake is of equal importance, the investigators suggest that this evidence may eventually lead to the establishment of a standard volume of daily walking for middle-aged women that may help to prevent unhealthy weight gain.

These “step” recommendations are not complicated by heart rate monitors or by stop watches or distance measurements. They are simply a means of documenting that you are “moving.”

Get a Pedometer (a device which documents how many steps you take in a day) and increase your activity to 10,000 steps a day. It works as well as "going to the track or to the gym.

Steps Per Day

Ways to increase steps per day:

1. Park further away from buildings
2. Take the stairs
3. Walk to the store
4. Take the long way to where you are going
5. Mow your yard with a mower that you walk behind rather than ride
6. Find excuses to go up and down the stairs at home rather than looking for ways to avoid steps
7. Walk the golf course rather than ride
8. Walk around to a colleague's office rather than calling
9. Get out and walk into the post office rather than using the drive up window
10. Schedule time each day for a 30-60 minute walk

Remember, the more you walk, the healthier you will be. And, if you decrease your calorie intake by 100 calories per day (that's an apple a day less intake) and increase your steps by 10% every two weeks, you will lose 20 pounds in a year without trying.

Target Heart Rate

Your Maximum Heart Rate is 170 beats per minute.
Your Resting Heart Rate is 68 beats per minute.
Your Heart Rate Reserve is 102 beats per minute.

Your **Target Heart Rate Range** is 119 to 154 beats per minute.

To achieve a training effect, i.e., to improve your aerobic capacity, you should exercise so as to have your heart rate between the two values given above. You should not exceed the maximum heart rate without having had a thorough cardiac evaluation. In order to raise your heart rate, you will need to begin your exercise slowly and then gradually increase your speed and/or distance in order to achieve your "target heart rate range." Obviously, there is some incremental training effect the higher your heart rate, but the greatest benefit is achieved by going from a sedentary life style to a regular exercise program within the "target heart rate range" even if it is at the lower end.

As you exercise within your "target heart rate range," you will be strengthening your heart, your muscles and improving your breathing capacity. Your goal should be to exercise for 30-60 minutes 3-5 times a week with your heart rate in your "target heart rate range."

The aerobic points which you achieve each week will help you judge your distance and speed. Your "target heart rate range" will help you judge the benefit your cardiovascular system is realizing from your effort.

Exercise Stress Level

I would also like for you to report how "stressful" your exercise is by the following scale.

During the exercise you are to rate your perception of exertion. Use this scale where 6 means no exertion at all and 20 means a totally maximum effort. The 13 on the scale is a somewhat heavy exercise but capable of being performed at steady state (i.e., anaerobic threshold). When at a level of 17 the effort level requires you to push yourself hard even though it is possible to continue for some time.

Try to appraise the feeling of exertion as honestly as possible. Do not underestimate nor overestimate it. It is of no value to underestimate the level to produce an impression of being "brave" or "tough". Your own feeling of effort and exertion is all that is of interest. Look at the scale and wordings and decide on the word that best describes your effort level and the number alternative associated with that description.

Borg's Ratings of Perceived Exertion (RPE)

6	No exertion at all
7-8	Extremely light (very, very light)
9-10	Very light (warm-up/recovery)
11	Light
12-13	Moderate
14-15	Hard (400 m swimming pace)
16-17	Very hard (200 m swimming pace]
18-19	Extremely hard (very, very hard, 25-50 m pace)
20	Maximum all-out effort with absolutely nothing being held in reserve

Anaerobic Threshold

It is useful to note that the anaerobic threshold will typically be found in the 12-15 levels and most often around the 13. Remember, the anaerobic threshold is the point at which your body's energy needs are no longer met by oxygen consumption and you begin to produce energy by the metabolism of Pyruvate into Lactate. The anaerobic threshold will vary from individual to individual depending on their conditioning. If an individual is poorly conditioned, the anaerobic threshold may be reached at as low as 50% of the maximum heart rate. If they are athletically fit, the anaerobic threshold may be reached at as high as 90% or higher of the maximum heart rate.

Remember, it is important not only to stress your heart and leg muscles but also your tendons and ligaments by stretching and all of your muscles by targeted exercise for each muscle group. There is no "pill," "prescription," or "procedure" which can be given to you which will do you as much good as exercise. Get started and keep going. Good luck."

Wellness Continuum of Conditioning

The wellness continuum consists of three areas of physical well-being

* health,
* fitness, and
* performance.

We need to keep in mind that we're not all going to have the same goals. This is why your friend, who's a veteran marathoner, might complain about what kind of "shape" he or she is in, while you would kill to look the way they do and be so fit and healthy. The health area covers those training zones that promote health but don't primarily improve physical fitness and certainly not performance.

* To measure improvements in health, we seek positive changes in blood pressure, body fat, cholesterol, etc.

* To measure improvements in fitness, however, it's positive changes in oxygen utilization, lactate concentrations and heart rate points we're looking for.

* To measure improvements in performance, positive changes in completion times, accuracy of movement skill, mental attitude, and other indices are used.

Established Zones

Using the knowledge above, we can establish zones of exercise which will either improve our health, fitness or performance. There are five zones.

The Wellness Continuum and the Five Heart Zones

Zone	Name	Perceived Exertion Difficulty (see Borg's scale above)	Heart Rate Range
Zone 1	Healthy Heart Zone	Perceived Exertion is 10-11	85 to 102 bpm - Health Zone
Zone 2	Temperate Zone	Perceived Exertion is 12-13	103 to 119 bpm
Zone 3	Aerobic Zone	Perceived Exertion is 14-15	120 to 136 bpm - Fitness Zone
Zone 4	Threshold Zone	Perceived Exercise is 16-17	137 to 153 bpm
Zone 5	Redline Zone	Perceived Exertion is 18-20	154 to 170 bpm - Performance Zone

Zones use time, not distance, as their measurement tool. That is, the amount of time you spend in the zone is the way you measure your workout, not in miles run, or the number of strokes per minute cycled or rowed. This measurement is called "time in zone" and is measured in the minutes that you spend in each zone. For example, one day you decide to run for 30 minutes in the Aerobic zone; the following day you might choose to walk for 50 minutes in your Fat Burning zone. Varying your workouts, both in activity and zone, allows you to get multiple benefits from your training.

At the lower zones--or "cruise" zones as they are sometimes called--you can train in zone for longer periods of time. But, as you move up to higher intensity zones, you need to decrease the amount of time that you spend in that zone, particularly in the top two, the Anaerobic and Redline zones. This simply makes sense--you can walk farther than you can sprint, and overdoing it is nearly a guarantee of injuries or burnout.

Your five heart rate zones are specific to your maximum heart rate, not anybody else's. The numbers given above are for you, not someone else. With two runners, each maintaining a heart rate of 160 bpm, one might well be in their Threshold Zone and the other may be in their Temperate Zone. It's all relative.

Each heart zone burns a different number of calories per minute based on how fit you are.

Zone 5	20+ calories per minute
Zone 4	17-20 calories per minute
Zone 3	12-17 calories per minute
Zone 2	7-12 calories per minute
Zone 1	3-7 calories per minute

You'll burn a different ratio of fat to carbohydrates in each of the heart zones.

One of the foundation principles of heart zone training is that we need to train in different heart zones to get different benefits. There is no one "training zone". There is no one "target zone". Those are old training concepts that have been shown not to fit with the way the body really trains. In fact, there are multiple zones that provide multiple and varied benefits. Train in the zones that most fit your goals: health, fitness or performance.

Heart Rate Zones

Zone 1 (50 - 60% of MHR) - The lowest level you can exercise in and still increase fitness levels. For beginners or people who have not exercised for a long period of time. This zone can be for just improving your overall health. It can also be a good recovery zone for people who are over-training and need to take a break. This mode is also good for people who want to lose weight as the main source of fuel used by the body is fat stores.

Zone 2 (60 - 70% of MHR) - This is the zone where the heart begins to benefit. Training in this zone will begin improve your hearts ability to pump blood and improve the muscle cells ability to utilize oxygen. In this zone stored body fat is the primary source of energy utilized hence this zone is referred to as the weight management zone. This is a good zone for long slow distance exercise as the body becomes more efficient at feeding the working muscles more efficiently especially with fat as the main fuel source.

Zone 3 (70 - 80% of MHR) - This zone is the most effective for overall cardiovascular fitness and is often called the "aerobic zone" or "target heart rate zone". This is the optimal zone to workout in to increase your cardio-respiratory capacity or the bodies ability to transport oxygenated blood to the muscle cells and carbon dioxide away from the cells. After a while you will be able to cover more distance during workouts in less time. Your body will burn less glucose and more stored fat as fuel thereby working more efficiently. This zone is also effective for increasing overall muscle strength.

Zone 4 (80 - 90% of MHR)(85-90%= Anaerobic Threshold) - this level is where you cross over from aerobic training to anaerobic training which is called the anaerobic threshold or AT. This is the point where the body cannot effectively remove lactic Acid from the working muscles quickly enough. Lactic Acid is a by product of glycogen consumption by the working muscles. This zone is primarily for people who want to increase their performance levels. You would characterize this zone as hard. During this zone your muscles are tired, your breathing is heavy and your fatigued. The benefit of training in this zone is you can increase your bodies ability to tolerate and deal with lactic acid for a longer period of time as the enzymes in your muscles responsible for anaerobic metabolism are increased. For competitors it is good to know your anaerobic threshold as many fit athletes can compete at or about their anaerobic threshold.

Zone 5 (90 - 100% of MHR)(VO2 Max) - You will only be able to train in this zone for short periods of time. You should not train at this level unless you are very fit. In this zone lactic acid develops very quickly as you are operating with oxygen debt to the muscles The value of training in this zone is you can increase your fast twitch muscle fibers which increase speed. You will not be able to stay at this level very long and should be used in intervals or sprinting work at the track.AC

Deciding Where to Start and How

If you are a beginner with the goal of improving overall fitness, losing weight or reducing stress, exercise at 50-60 percent of your maximum heart rate.

1. If you already exercise regularly but are aiming to lose body fat, exercise at 60-70 percent of maximum heart rate. Build up to a work out of an hours continuous exercise.
2. If your goal is to improve aerobic capacity or athletic performance, exercise at 70-80 percent of your maximum heart rate.
3. Competitive athletes may need to add interval training sessions during the week by training at 80-90 percent of maximum heart rate. This high intensity exercise helps train muscles to handle lactic acid.

Train sparingly at higher heart rates. Exercising regularly at a heart rate intensity that is too high does not produce additional aerobic benefits and increases the possibility of an athletic injury. Interval training and anaerobic threshold workouts require a high degree of fitness, and is not necessary for general fitness training.

Once you determine your individual training zones, you can easily program them into your heart rate monitor. Your monitor will notify you with a beep if you are exercising above or below the pre-programmed zones. Many heart monitor models record time spent in your heart rate target zone. You can then evaluate your exercise after each session and adjust your intensity if needed. Recording heart rate also allows you to monitor your fitness improvements over time.

Tips on Effective Training

Warm up & cool down. Always do a slow warm up of 5-10 minutes, followed by some gentle stretching. Then gradually climb into the target range you have set. End every workout with a 5-10 minute cool down, again followed by some gentle stretching. The importance of this can not be over emphasized. Studies have shown that people who warm up and cool down adequately have fewer athletic injuries.

Type of Exercise. Choose activities that use large muscle groups and which are continuous in nature. Some good examples are walking, swimming, running, aerobic dance, stair climbing machines, ski machines, treadmills, cycling or exercise bikes. Feel free to include more than one activity - cycle one day, swim the next, and do aerobics on the third. This is called Cross Training and helps exercise all muscle groups, reduces boredom and keeps motivation high.

Frequency of exercise. Exercise in the target range that you have set at least 3-5 times per week, with no more than 48 hours between sessions. Even on 'rest days' gentle exercise such as a leisurely walk can be beneficial.

Intensity of exercise. Select an exercise intensity zone that is both within your capability and in which you can achieve consistency. Studies show that people who exercise at too high an intensity, especially in the initial stages of their program, drop out sooner, have more injuries, and tend to develop a negative impression towards exercise in general. If necessary start in a low exercise intensity zone and build up.

Time exercising. Aim for 20-60 minutes of continuous exercise in your target zone each session. If you are unable to exercise for 20 minutes initially, slow down and gradually build up to this.

Before you begin your exercise program, get an assessment of your overall fitness level. You must get clearance from your doctor that it is safe for you to exercise.

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Smoking Cessation Document

Patient:
Sex: M
DOB: 04/12/1961

The patient currently smokes.

The provider has taken the following measures to educate the patient about smoking cessation.

Ask
At every visit, ask all patients about tobacco use, and document their response.
Patients who have never used tobacco or who stopped using it years ago do not need repeated assessments.

Advise
Advise

Assess
Find out whether patients are willing to quit now or at least within the next 30 days.

Assist
Help patients plan to quit by...
Prescribe pharmacotherapy.
Provide educational materials on smoking cessation.

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Smoking - General Information

It is no surprise to physicians that the Surgeon General's latest report states that smoking affects every organ system. The tobacco cessation guideline from the USPHS that recommends nicotine replacement therapy or bupropion for nearly all patients who smoke remains an effective strategy.

Forty years after the first report on smoking and health, in May 2004, the US Surgeon General released a new report, revealing for the first time that cigarette smoking causes diseases in nearly every organ of the body and is conclusively linked to diseases such as leukemia, cataracts, pneumonia, and cancers of the cervix, kidney, pancreas, and stomach. According to the Surgeon General, smoking kills an estimated 440,000 Americans prematurely each year. On average:

Men who smoke cut their lives short by 13.2 years, and
female smokers lose 14.5 years (see "Women and smoking").

The economic toll exceeds $157 billion each year in the United States$75 billion in direct medical costs and $82 billion in lost productivity.

A number of smoking cessation programs have been found to be effective, particularly those that combine pharmacological treatment and behavioral interventions, such as counseling. According to a review of 123 trials in the Cochrane Tobacco Addiction Group, all of the commercially available forms of nicotine replacement therapy are effective as part of a strategy to promote smoking cessation. They increase the odds of quitting approximately 1.5- to 2-fold regardless of setting.

Incorporating screening and treatment for tobacco use is a sensible, cost-effective way to reduce this mortality and the morbidity that precedes it. While repeated physician interventions may be required to help patients achieve permanent abstinence from smoking, effective treatments are now available that can be offered as part of standard medical care.

The guideline from the US Public Health Service (PHS), Treating Tobacco Use and Dependence: A Clinical Practice Guideline, emphasizes the critical role that primary care physicians play in helping patients quit. It offers practical tips and evidence-based treatment recommendations that are easy to implement (http://www.surgeongeneral.gov/tobacco/).

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The Process of Quitting Smoking

Every year, three million smokers give up cigarettes. With the right attitude, preparation, and knowledge, you can be one of them. The main step in the process of quitting is deciding to start.

Why Smoke?

Smokers give several general reasons for smoking. They smoke for:

1. stimulation
2. handling the cigarette
3. relaxation
4. help for tension
5. craving
6. habit

What are your main reasons for smoking? If you smoke for reasons I through 3, then you use cigarettes when you feel good. You will need to find substitutes for cigarettes. Smokers who use cigarettes for reasons 4 through 6 smoke for negative reasons. They are likely to use cigarettes when stressed, angry, or tired. It is important to find new ways to cope with these problem times.

Decide To Quit

Smokers tell us that 50% of the job of quitting smoking is the decision to quit smoking. Think about reasons to smoke, reasons to quit, then write them out. Add to the list for a week. Spend half an hour thinking about whether you want to smoke for the rest of your life or whether you want to quit. If you decide to quit someday in the future, pick a date and stick with it.

Make Changes

In preparation for a quit, begin to change your smoking pattern. Change brands of cigarettes. It is best if you can change to a lower nicotine brand. Change how much you smoke, where, and when you smoke. Scramble your smoking routine-this makes smoking less pleasant.

Keep A Diary

A week before quitting, do a daily diary of your smoking. Record where, when, and why you are smoking. Begin to think of substitutes you will use as a nonsmoker. Imagine yourself not smoking in that situation in the future.

Think Positive

Project a positive attitude. Tell yourself you can do it this time.

Convince yourself that you will succeed. Studies show that smokers who use this mental preparation are more likely to be nonsmokers a year later.

Plan Your Deadline

Prepare for quitting by picking your day. Decide what you will do that day to handle urges to smoke. Wake up a nonsmoker. It's easier than quitting in the middle of the day. Say nice things to yourself. Give yourself a pep talk as needed. Take the day in short spurts. Don't think that you are going to give up something--that's negative thinking. Plan to spend lunch and coffee breaks with nonsmoking friends.

Coping Techniques

Things that help smokers overcome urges for cigarettes are self-talk and activities. Self-talk is telling yourself you are great for making the effort or telling yourself that smoking is not an option, then switching to other thoughts. Activities are related to doing something different. Getting up, walking around, and taking deep breaths are all activities.

Nicotine Replacement

Do you need nicotine gum? It's a good question to ask. Today we can identify smokers who are addicted. They often smoke a pack or more a day, prefer cigarettes with a higher nicotine content, smoke within 30 minutes of arising, smoke a cigarette at least every two hours while awake, and have withdrawal symptoms when smoking is delayed. They also smoke when they have a medical condition that is made worse by continued smoking. Addicted smokers may find nicotine replacement therapy eases their withdrawal symptoms, making it easier to quit cigarettes. Ask your doctor if it might help you.

Learning Process

Quitting smoking is a process. It took a while to learn to smoke; it takes a while to learn not to smoke. Some smokers need to make repeated attempts to quit. Don't ever give up--just persist in cessation efforts until you are successful.

Where Are You In The Six-Step Process Of Quitting?

1. Precontemplation--Not even thinking about quitting. People in this step have never really considered trying to quit. This is a hard group to motivate to quit.

2. Contemplation--These smokers are considering quitting someday. They are waiting for a motivating event to help them find the reasons to quit.

3. Action--In the act of quitting. These smokers have prepared to stop. They have reduced the amount smoked, changed brands, or restricted their smoking. They have considered what to do on the day of quitting and planned for coping strategies to deal with urges to smoke.

4. Maintenance--In this stage, a person has quit smoking but is in the first year of staying quit. After one year off cigarettes, a smoker can claim success at cessation.

5. Relapse--A return to daily smoking after a period of not smoking. First-time quitters are successful 25% of the time; others need to make another attempt. In fact, most smokers need to try to quit at least three times before it works. Said another way, "Practice makes perfect."

6. Renewed Action--Please note that 75% of smokers will have to pass through this step to become a nonsmoker. The good news is that repeated attempts to quit are worth it because you can learn from past mistakes.

Some Benefits To Quitting

* Within 20 minutes of the last cigarette--blood pressure drops to normal, pulse rate drops to a normal rate, body temperature of the hands and feet increases to normal.

* In 8 to 24 hours--carbon monoxide level in blood drops to normal, oxygen level in blood increases to normal, chance of heart attack decreases.

* In 48 hours--nerve endings start regrowing, and the ability to taste and smell things is enhanced.

It's Better For You

The Surgeon General's Report on Smoking and Health in 1964 concluded that smoking was harmful to one's health. In 1990, the Surgeon General's Report concluded that stopping smoking was beneficial to all smokers, no matter what age or condition of health.

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Environmental Tobacco Smoke

Environmental tobacco smoke (ETS) is a mix of more than 4,000 compounds, over fifty of which are known to cause cancer.

ETS consists of two different kinds of smoke: Approximately 85 percent is sidestream smoke, the smoke emitted from the burning cigarette, cigar, or pipe between puffs. The remainder is the mainstream smoke exhaled by the smoker.

Although mainstream and sidestream smoke are chemically very similar, undiluted sidestream smoke burns at a lower temperature and, therefore, contains higher concentrations of many of the toxic elements in tobacco smoke, including nicotine, carbon monoxide, benzene, ammonia, 4-aminobiphenyl, and benzo[a]pyrene.

In 1992, the U.S. Environmental Protection Agency (EPA) classified environmental tobacco smoke as a "Group A" carcinogen a substance that produces cancer in humans

ETS from parental smoking can cause children to suffer the following health effects:

* Pregnant women who smoke and nonsmoking pregnant women exposed daily to tobacco smoke are more likely to have low birth weight babies at risk for death and disease in infancy and early childhood.

* Nursing mothers who smoke can pass along harmful chemicals from cigarettes to their babies in breast milk.

* It is estimated that more than one-third (35 percent) of all deaths from Sudden Infant Death Syndrome (SIDS) are due to maternal tobacco use. U.S. Children are three times more likely to die from SIDS caused by maternal smoking than die from homicide or child abuse.

* Children of parents who smoke have a higher prevalence of symptoms of respiratory irritation such as cough, phlegm, and wheeze.

* An estimated 1.67 million physician visits for cough each year in the United States are due to involuntary smoking.

* Exposure to ETS substantially increases the risk of lower respiratory tract infections, and is responsible for an estimated 350,000 cases of bronchitis and 152,000 cases of pneumonia annually or 16 percent of all lung infections in U.S. children under the age of five.

* Involuntary exposure to tobacco smoke is responsible for an estimated 1.2 million ear infections each year in the United States, or approximately 7 percent of the total.

* Children exposed to household smoking are at greater risk of requiring surgery for recurrent ear infections or tonsillitis; an estimated 86,000 tube insertions (14 percent of the total) and 18,000

tonsillectomies/adenoidectomies (removal of the tonsils or adenoids 20 percent of the total) each year in the United States are attributable to ETS.

* ETS exposure is associated with higher risk of developing asthma and more frequent and severe asthma attacks in children who already have the disease.3 Each year in the United States, an estimated 11 percent of all asthma cases and more than half a million physician visits for asthma are due to smoking in the home.

* Exposure to the smoking of one or both parents has also been shown to be a highly important predictor of smoking among adolescents.

* It is difficult to quantify the exposure of nonsmokers to ETS. Smoking in confined spaces, such as in a small enclosed room or a car, can greatly increase concentrations of environmental tobacco smoke.

* It takes more than three hours to remove 95 percent of the smoke from one cigarette from the room once smoking has ended.

* In general terms, most adults (87 percent) believe people have a right to be free from breathing other people's second-hand smoke.

* Parents who restrict smoking to the outdoors are more likely to be highly educated, older, come from nonsmoking households, and have higher incomes.

* Courts in Canada, the United States, and Australia have begun to consider parental smoking as one of the factors that must be weighed in assessing “the best interest” of the child in custody and access proceedings.

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Nicotine Withdrawal

Withdrawal from nicotine, an addictive drug found in tobacco, is characterized by symptoms that include headache, anxiety, nausea and a craving for more tobacco.

Nicotine creates a chemical dependency, so that the body develops a need for a certain level of nicotine at all times. Unless that level is maintained, the body will begin to go through withdrawal.

For tobacco users trying to quit, symptoms of withdrawal from nicotine are unpleasant and stressful, but temporary.

Most withdrawal symptoms peak 48 hours after you quit and are completely gone in six months. But even after that you may still have to deal with the fact that you are probably eating more than you did as a smoker and may need to lose some weight.

SYMPTOMS...

In active tobacco users, a lack of nicotine produces a wide range of withdrawal symptoms, including any or all of the following:

Headache.
Nausea.
Constipation or diarrhea.
Falling heart rate and blood pressure.
Fatigue, drowsiness and insomnia.
Irritability.
Difficulty concentrating.
Anxiety.
Depression.
Increased hunger and caloric intake.
Increased pleasantness of the taste of sweets.
Tobacco cravings.