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# TRAINING CURRICULUM ON MENOPAUSE NATIONAL GUIDELINES FOR PRIMARY HEALTH CARE PHYSICIANS IN IRAQ

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## DISCLAIMER

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## **Acronyms**

<b>PHC</b>	<b>Primary Health care</b>
<b>I-WISH</b>	<b>Iraqi Women socio and health indicators Survey</b>
<b>BMI</b>	<b>Body Mass Index</b>
<b>FDA</b>	<b>Food and Drug Administration</b>
<b>DEXA</b>	<b>dual energy X-ray absorptiometry</b>
<b>CHD</b>	<b>Coronary Heart Disease</b>
<b>LDL</b>	<b>Low Density Lipoprotein</b>
<b>HDL</b>	<b>High Density Lipoprotein</b>
<b>Lp</b>	<b>Lipid Profile</b>
<b>CVD</b>	<b>Cardiac Vascular Disease</b>
<b>HRT</b>	<b>Hormone Replacement Therapy</b>
<b>VT</b>	<b>Venous thrombosis</b>
<b>VTE</b>	<b>Venous Thrombosis Embolism</b>
<b>CA</b>	<b>Cancer</b>
<b>CU-IUD</b>	<b>Copper- Intra Uterine Device</b>
<b>BMD</b>	<b>Bone Mineral Density</b>

## **Introduction**

This training course was designed in compliance with the Integrated Menopause National Guidelines for Primary Health Care Providers Iraq, to ensure evidence based safe and qualified services to target population.

It focuses on providing the participants with opportunities to acquire, or/and improve the knowledge and skills necessary to facilitate, monitor and couch training to Primary Health Care Providers Iraq in order to maintain standardized, qualified services.

It also raises the concept of menopause as a physiological phenomenon in Iraqi women, as there is lack of knowledge in that aspect and lack of specialized centers which provide services for such women at the level of primary health care centers or hospitals.

# **Part I**

## **Trainer's Guide**

## Part I: Trainer's Guide

This training curriculum is a guide to assist trainers in improving health care by training health professionals in the Basics of Management and Administration of Primary Health Care Centers (PHCCs).

Materials in this document are designed for training service providers who work at a variety of health facilities in Iraq, but most importantly for those involved in the management of the PHCCs. The modules can be used to train health professionals, physicians, nurses, midwives and other health workers in group training or, with adaptation, as a basis of individualized or self-directed learning.

Trainers implementing this course should be thoroughly familiar with the policies, strategies, guidelines and procedures. Because the PHCCs' functions and procedures are based on this training course along with the skills in the practices described. The trainers need to have a positive attitude about the participants and their training work. Training may be implemented either off-site or on-site. In off-site training, a group of participants come together from several health facilities and then return home to apply what has been learned. Off-site training may be the most appropriate way to reach individuals from many small sites. On-site training refers to training held in a health facility team where the participants work. Both types of training can be very effective. When training is conducted off-site, it may be more difficult to observe actual clinical settings. On the other hand, when training takes place

On-site, there may be interruptions due to participants being called away for other responsibilities.

## How to Use the Manual

This manual is designed as a working instrument for trainers and facilitators. It can also be used as a planning tool for PHC and district health managers. The module schedule contains a condensed summary of the contents organized in units and is meant as a check list for the facilitator/s before and during the course. The time indicated for each unit is an average time span based on experience, and can vary according to the composition and dynamics of each respective group.

The manual is divided into two parts. The first part is an introduction to the training course giving an overview over the rationale, objectives, and target groups for the course. It includes the present section on recommendations on how to use the manual, introducing the structure, training methods and course schedule. It also contains information on how to organize a workshop / training course and concludes with some recommendations on the limitations of the document and how to deal with them.

The second part presents the actual training contents, methods, didactic materials and additional literature recommended for each content area, organized/compiled in the different modules of the program. Every training course starts with the introduction of participants and team presenting the course objectives, contents, methods and program and allowing participants to express their expectations and fears.

The course content is presented according to five broad content areas (modules), subdivided into different sessions:

**Overall learning objectives:** states the objectives to be achieved at the end of the module in terms of knowledge, skills and competence.

**Schedule:** gives an overview over the time span, methods, materials and recommended content for each session / topic and states the specific objectives of each session.

**Sessions:** are subdivisions/sessions of the module that follow a logical flow to develop the content of the module.

**Specific objectives** of the sessions: relate to the content and the expected level of competence to be achieved and can also be used as basis for the development of exam questions.

**Background information for the facilitator:** includes background information important for the facilitator to develop the content of the module, necessary and recommended definitions, concepts, theory and its applications.

**Exercises:** describe practical applications of the theory and are meant to facilitate the learning process through experiential approaches: role plays, games, etc. (see list of exercises).

**Handouts:** are the essential documentation for the participants about the content of the session / module stating the objectives, listing the key words, developing the concept / theory of the content, and giving recommendations for further reading.

**References:** additionally recommended literature, articles and books, which are related to the content of the module.

## Structure of the Training Course

The training course has been planned as a five days course. However, it is also possible to shorten the course due to limited time and / or to select modules according to learning objectives and needs. As well the time can be expanded in order to deal more in depth with the content and allow for more exercises, practical, field work.

The time frame of the training course consists of six working hours per day. These hours are divided into two morning and two afternoon sessions. Each session normally has duration of 2 hours. The number of course trainers/ facilitators can range from one to two per course according to the requirements. Also, for special topics, external resource persons should be asked to lecture and work with the group in their respective areas of expertise. The trainee - facilitator ratio should be 15 to one, a ratio of 20 or 25 to one still being acceptable. The total number of participants should not exceed 25.

The course structure and training methods not only allow for the development of knowledge, skills, competence and change of attitudes of the participants. The course concept is also designed to be put into practice by participants after the training during their supervisory work or by organizing their own training courses. Therefore this manual is not only a facilitator's manual, but also a supervisor's manual.

# Approaches to Training and Learning

The training course outlined in this document is based on adult learning principles, competency-based training and performance improvement. Selected elements of the strategies that guided the development of this material and should guide its implementation and use are listed below.

## How people learn best

People learn best when the following conditions are met:

- Participants are motivated and not anxious, know what is expected of them and treated with respect
- Information and skills are interesting, exciting, meaningful, and build on what participants already know, encourage problem-solving and reasoning
- Experiences are organized, logical, practical, include a variety of methods, and protocols and procedures are available
- New learning experiences are relevant to work and training needs of participants, and are applied immediately
- Training involves every participant in active practice and participants share responsibility for learning
- Training is a team activity, including trainers and co-trainers, providing participants with a variety of experiences and limiting trainer's biases
- The trainer acts as a facilitator of the learning process rather than a teacher who "spoon feeds" the learner
- The role and responsibilities of the trainers/facilitators and those of the participants/learners are clearly defined with:
  - The facilitators responsible for providing the learners with the necessary opportunities to acquire the knowledge and skills necessary to perform the tasks for which they are being trained
  - The facilitators responsible for providing the learners with the necessary opportunities to be exposed to the attitudes necessary to implement the acquired skills in a systematic manner and initiate the process of internalizing these attitudes
  - The learner remains responsible for her/his learning

The transactional relationships between the learners and the facilitators are at the level of adult to adult characterized by mutual respect and support

- Trainers are knowledgeable and competent in the subject matter and skills, use a variety of training methods, pay attention to individual participants' concerns, and provide motivation through feedback and reinforcement
- Participants must be selected according to specific criteria, such as the relevance of the training content to the job expectations/tasks
- Participants must have the necessary prerequisite level to enable them to benefit from the learning experience
- Feedback is immediate and focused on behavior that the participants can control
- Assessment of learning and skills is based on objectives that the participants understand

# Knowledge, skills and attitudes

This course aims to improve health care by changing health workers' knowledge, skills and attitudes.

- ✓ Knowledge includes the facts that the participants need to know to perform their jobs. Tips on increasing **knowledge** through training

- Start with what the participants already know or have experienced
- Use a variety of educational resources, including participatory activities that require participants to use their knowledge
- Use learning aids
- Review and summarize often
- Assess knowledge to verify learning

- ✓ Skills include the specific tasks that participants need to be able to perform.

## Tips on increasing **skills** through training

- *Describe the skill*
- *Provide protocols and procedures*
- *Demonstrate the skill*
- *Have participants demonstrate the skill*
- *Verify that each skill is practiced correctly*
- *Assess skill by observation using a checklist*

- ✓ Attitudes affect behaviors, such as whether learned skills are applied and interactions with clients.

Tips on changing **attitudes and behavior** through training

- *Provide information and examples*
- *Include direct experience*
- *Invite discussion of values, concerns and experience*
- *Use role plays and brainstorming*
- *Model positive attitudes*
- *Assess changes in attitude by observing behavior*

**Methods**

The training will use a participatory and “hands on” approach where the role of the trainers is to facilitate learning by the participants. The responsibility for learning remains with the participants.

Participants learn more and stay engaged in learning activities when they play an active role in their learning and a variety of training methods are used. The following methods are recommended in the curriculum/modules.

<u>Selected Training Methods</u>		
Brainstorming	Individual assignments	Return demonstration
Case study	Individual exercises	Role play
Clinical session	Interview	Self-directed activities
Demonstration	Mini-lecture	Small group discussion
Discussion	Observations	Simulation
Field visits	Pairs exercises	Small group exercises
Plenary group exercises	Presentation	Summary
Group assignments	Questions and answers	Survey
	Research	Team building exercises

In each module or session

This document contains an outline of a training plan for each of the key areas of content.

Each module contains the following sections:

- Front page with a module number, module objectives, module content by session and an estimated duration for the module.
- Session plans covering the various content areas.

Each session contains the following sections:

- **Trainer Preparation:** This section lists the specific preparations that trainers should make for the session. Preparations for every session include:
  - Making sure the room is properly arranged
  - Ensuring that markers and flip chart or a writing board with chalk or markers are available
  - Reviewing the training plan
  - Reviewing steps for the methods used in the training session
  - Ensuring that the resources needed to facilitate the learning process are available including copying materials that participants need
- **Methods and Activities:** This section lists the methods and activities that are used in the module. General instructions for methods that are frequently used are included in this introductory material. Instructions for participatory activities are included in the training plan.
- **Resources:** The relevant reference materials/handouts and other resources needed are listed here.
- **Evaluation/assessment:** Evaluation methods for the knowledge or skills included are listed. Questionnaires and skills checklists are included where needed.
- **Estimated Time:** The time that each session/module will require depends upon the particular group of participants, the amount of time available and other constraints. The module gives a general time range to allow for flexible scheduling.
- **Training Plan:** This section gives the specific learning objectives or purpose of a session, the key **”must know”** content, and the appropriate training methods and activities for each objective. All modules include one or more activities that give participants structured, participatory practice with the content of the module.
- **Handouts:** When specific activities require handouts, these are included after the training plan and should be copied before the session in which they will be used.
- **Questionnaires:** Each session/module includes a questionnaire that is tied to the learning objectives and a key with the correct answers. It is not appropriate to assign a pass or fail designation to the questionnaire. Instead, use the questionnaire as a learning tool. It must be used for **formative evaluation**. If participants are not certain of the answers, they should be encouraged to use the training resources to find the correct answer. Answer key must be given to the participants after finishing the processing of the responses.

- **Skills Checklists:** Each session that includes skills objectives includes a skills assessment checklist. The checklist is used by the trainer to evaluate the participant's skill based on observation of the specific steps included in the skill. The skills checklists are also used by each participant to assess their performance and take charge of their own learning. They can also be used by other participants for peer assessment. It is recommended that these checklists not only be used during training to assess the acquisition of skills, but also for post training evaluation and supervision.

**Note:** There are various possible formats for modules and sessions. Provided the necessary information is included for the trainer to use, the selection of format will depend on how comfortable the trainers are in using it.

## Methods frequently used in this curriculum

Instructions for methods used frequently in this training course are included here. Activities for specific methods are included with the sessions where they are used.

### Mini-lecture

Trainer makes a short (5 to 15minutes) presentation using the materials available. Mini-lectures are used to provide information and knowledge. They insure that all participants have an adequate level of information and insure standardization and uniformity of this information. Mini-lectures should be kept short and should be followed by questions and answers for clarification to enable participants to better understand the content of the session/module and clarify issues, and questions and answers for evaluation to ensure comprehension.

### Questions and Answers (Q&A)

Questions and answers sessions are used to recall information or elicit participants' knowledge (in introductory sessions in order to assess training needs), for clarification (to ensure that participants understand information/content), presentation of information (to elicit information that participants may already know) and evaluation (to assess acquisition of knowledge and fill gaps in participants' knowledge).

#### Steps for Questions and Answers for clarification

1. Trainer asks participants if they have questions
2. If a participant has a question, trainer asks another participant to answer
3. If the participant's answer is correct and complete, trainer reinforces
4. If the participant's answer is incorrect and/or incomplete, trainer may ask questions that lead the participant to a more correct answer or ask another participant to answer
5. If the answer is still incorrect and/or incomplete after two or three trials, trainer corrects and/or completes and informs the participants where to find the information
6. If there are no questions, trainer asks questions to verify knowledge and follows the same steps (3, 4, 5)

### Steps for Questions and Answers to elicit information from participant (s)

1. Trainer asks participants questions
2. If a participant's answer is correct and complete, trainer reinforces
3. If the participant's answer is incorrect and/or incomplete, trainer may ask questions that lead the participant to a more correct answer or ask another participant to answer
4. If the answer is still incorrect and/or incomplete after two or three trials, trainer corrects and/or completes and informs the participants where to find the information

### Steps for Questions and Answers for evaluation

1. Trainer asks participants questions
2. If a participant's answer is correct and complete, trainer reinforces
3. If the participant's answer is incorrect and/or incomplete, trainer may ask questions that lead the participant to a more correct answer or ask another participant to answer
4. If the answer is still incorrect and/or incomplete after two or three trials, trainer corrects and/or completes and informs the participants where to find the information

### **Brainstorming**

Brainstorming is an excellent way to find out what participants already know and gaps in their knowledge. Brainstorming brings participants experience into the classroom and lets the participants know that their experience is valuable.

Brainstorming is also a very effective way for problem solving.

A brainstorming session should always end with a summary.

### Steps for brainstorming

1. Trainer asks an open-ended question
2. Participants shout out their answers or ideas:
  - Until no more ideas are generated, or at least every participant has a chance to
  - contribute or time allocated has run out
  - No ideas are discarded criticized or analyzed, but clarifying questions can be
  - asked
3. Trainer records ideas on newsprint or in another format where all can see them
4. Trainer leads a discussion of each of the ideas generated
5. Trainer clearly marks ideas that are agreed upon
6. Trainer summarizes or asks participants to summarize points of agreement
7. Trainer moves to the next question only after finishing discussion of previous question

8. Ideas generated in brainstorming can be used for summarizing, as input to group exercises, and to relate content to participant experience

### **Case study**

A case study is method of training whereas data/information about a case, preferably a real one or based on one, is presented to the participants for review and analysis. It includes specific questions to be answered. Case studies are a very effective way to allow participants to practice using information to solve problem, the highest level of knowledge objective. They are also effective in providing participants opportunities to explore their attitudes and confront/compare them with other participants and trainers' attitudes. Moreover case studies allow for the identification of gaps in knowledge.

Participants, individually or in small groups are asked to study the case and prepare responses to the questions. The responses are then processed. During the processing the trainer must encourage and ensure that all participants get a chance to provide inputs. Processing can be done using questions and answers and/or discussion.

The questions must be answered in an orderly manner in the sense that each question must be answered fully and the inputs summarized before moving to the next question. Answer key must be given to the participants after the processing of the case study.

Case studies can be presented in different format. They can be based on the presentation of a real patient, the files of a patient, a written description of a case, an illustration such as a photograph or slides of a case, or a video.

This method is not used in this curriculum but trainers can develop case studies based on local conditions/data as additional exercises if time permits.

### **Discussion**

Discussion is indicated when the outcome is not predetermined in advance and is "still negotiable". Therefore using discussion to provide "scientific" knowledge/information or a decision that has already been made and not to be changed can lead to frustration.

Discussion in plenary or in small groups is recommended to explore attitudes, values and opinions. It is also indicated to confront/compare different options of "doing things" ensuring that the "why" is covered.

During the discussion the trainer's role is to facilitate the process, and ensure that the discussion remains "on track" and that every participant gets a chance to contribute.

When small groups do not have the same assignment/topic to discuss, each group presents their output(s) and discussion follows immediately after the presentation before moving to the next group. Time management is essential to ensure that no group gets "short changed" and has ample time for the presentation and discussion.

If all the groups have the same assignment, all groups present before discussion takes place. Only clarification questions are allowed during the presentation. Processing the output(s) must focus on the points of agreement before moving to the differences.

If time does not allow for all groups to present, one group can present and the other groups complete from their own group's output before discussion starts.

Every discussion must be followed by a summary.

### **Demonstration**

Demonstration is a very effective way to facilitate learning of a skill or initiation of the development of an attitude. The facilitator should use this method to show the skill(s) and/or the attitude(s) addressing more than one sense at a time. Often a demonstration can effectively replace a presentation provided the facilitator explains as s/he is doing.

A demonstration should always be followed by a Q/A for clarification session before the learners are required to do a return demonstration.

#### Steps for a demonstration

1. Trainer assembles resources needed for the demonstration
2. Trainer ensures that participants are ready, can hear and see
3. Trainer explains what s/he is going to do
4. Trainer instructs participants on what is expected of them (e.g. to observe closely, to take notes if appropriate, to use the skills checklist when appropriate etc.)
  - To prepare for the Q/A, and
  - Because they are required to do return demonstration(s) for practice
5. Trainer demonstrates while explaining the skill(s)/attitude necessary for each step of the procedure being demonstrated
6. Trainer conducts a Q/A for clarification at the end of the demonstration

### **Return demonstration**

Return demonstrations provide the learners with the opportunity to practice the skills necessary to perform the procedures they are being trained on. The trainer must ensure that each learner/participant has the opportunity to practice **enough times to reach a preset minimum acceptable level of performance.**

#### Steps for a return demonstration

1. Trainer reminds participants of what is expected of them:
  - To practice the procedure/skills
  - To observe when others are practicing to be able to ask for clarification
  - To observe when others are practicing to be able to provide feedback and peer evaluation
2. Trainer divides participants into small groups, if more than one workstation.  
(**Note:** each workstation requires at least one facilitator/trainer).

3. Participants take turns practicing the procedure/skills
4. Trainer ensures that all participants can hear and see
5. While each participant is practicing trainer can provide guidance as necessary provided it does not interfere with the process and confuse the participant
6. After each participant, trainer solicits feedback from other participants
7. After feedback from other participants, trainer reinforces what is correct and corrects and/or completes feedback
8. Each participant needs to practice more than once or until control of the skill, as time permits
9. If participant(s) need more than time permits, trainer arranges for additional practice opportunities

### **Simulation/simulated practice**

A simulated practice is a very effective method to allow participants to practice procedures/skills in an environment that recreates as closely as possible the “real world” without the stress involved in practicing procedures/skills that they do not control yet in the field. It is recommended to have participants practice on models before they do perform the procedure/ use the skill in the work place. During a simulation the participant practices tasks that are part of her/his actual role in the workplace or that s/he will perform in the job s/he is being trained for.

Use the same steps as for a demonstration/return demonstration practice.

### **Role play**

Role plays are a very effective method to practice procedures/skills in the training room. They are especially effective to practice procedures/skills that deal with human interactions such as health education and counseling sessions. They are also very effective when the learning objective deal with attitudes.

In a role play participants “play roles” that are not necessarily their roles in the “real world”. Often they are asked to play the role of someone they would be dealing with. In this case it is called “role reversal” or “reverse role play”. This allows the participants to explore and discover how other perceive/live the interaction.

A role play must always be processed to analyze the lessons learned.

### **Summary**

Every time a training method allows for inputs through exchanges between the trainer(s) and the participants and between the participants themselves, it must be followed by a summary session to “tie up the loose ends” and provide the participants with clear answers. If this does not happen there is the likelihood that the participants will forget the “correct” answers.

A summary can be done by the trainer to ensure that there are “no loose ends”. If time permits, it is recommended to use the summary for evaluation. In this case the trainer can use the Q/A method.

Steps for a summary for evaluation

1. Trainer asks a participant to summarize
2. Trainers reinforces if the summary is correct/complete
3. Trainer asks another participant to correct/complete if the summary is incorrect/incomplete
4. Trainer repeats steps 2 and 3
5. Trainer corrects/completes if after 2 or 3 trials the summary is still Incorrect/incomplete.

# Evaluation

## Evaluation of learning and training objectives

Evaluation or assessment of learning and of training objectives allows trainers, program managers and participants to know how successful a training program has been. On-going evaluation and assessment allows trainers to identify gaps in learning and to fill those gaps. Evaluation also assists in revising learning experiences for later trainings. Many strategies can be used to evaluate learning. Some of the most useful methods include:

- **Knowledge assessments:** Written or oral questions that require participants to recall, analyze, synthesize, organize or apply information to solve a problem. The knowledge component of a skill objective should be assessed prior to beginning skill practice in a training room or clinical session.
- **Questionnaires:** Written exercises that assist trainers and participants to identify and fill gaps in knowledge. Questionnaires can be administered as self-assessments. In some situations, it may be reasonable to have participants use course materials or to work together on questionnaires.
- **Skill checklists:** Observation of a participant performing a skill and assessment of the performance using a checklist. Simulated practice (using real items or models in a situation that is similar to actual practice) should ideally be assessed prior to beginning clinical practice with clients. Checklists should be used by the trainer and other participants to observe simulated (training room) performance and actual practice and provide feedback to help improve the performance. The checklists can also be used by the participant for self-assessment. During the training participants should be trained on how to use the checklists and encouraged to use them after the training to continue assessing their own performance and improving it.

Additional techniques for evaluation include: projects, reports, daily reflection, on-site observation, field performance, and discussion.

Each training module includes assessment of learning methods and tools:

- **Questions and Answers** should be used to frequently identify gaps in knowledge and fill them.
- **Questionnaires** are included with every module and can be used for self-assessment. To use them as self-assessment, participants fill out the questionnaire and then use any course materials to check their own answers. Trainers should work with participants filling out the questionnaires to make sure that all gaps in knowledge are filled before practicing and evaluating skills. When time permits, process responses in plenary to address any issues and fill the gaps in knowledge. At the end of this activity the answer key needs to be distributed to the participants.

- Skills Checklists are included for each of the skills that are included in this training curriculum. Participants can use the Skills Checklists as learning guides during practice sessions in training room or clinical sessions. To evaluate skills, trainers should generally observe participants three times with coaching as needed to ensure the skills are learned.

### **Evaluation of the participants**

The evaluation of the learning by participants will be done through questions and answers, synthesis of sessions done by selected participants, self-assessment following the micro-sessions, peer assessment through feedback provided by other participants following the micro-sessions and assessment of performance by facilitators.

Each participant will practice more than once, preferably three times” the use of the curriculum to plan, organize, conduct and evaluate the training through simulated micro-sessions. A checklist will be used both by participants for self and peer assessment, and by the facilitators.

Videotaping the micro sessions or at least significant segments of the micro sessions and reviewing the taped segments after each session will enable the participants to assess their own progress in terms of acquisition of training/facilitation skills. This approach to evaluation although time consuming is very effective in helping participants assess their own performance and stabilize feedback received from their peers and from the trainers/facilitators.

Post training evaluation of the learners must be conducted within three (3) to six (6) months after the end of the training. Further post training evaluation and follow-up can be integrated into routine supervision. It is highly recommended to use the skills checklists used during the training for post training evaluation and follow-up.

### **Evaluation of the training**

The “End of Training” evaluation can be done through a questionnaire (form 1) whereby the participants are asked to respond and express their opinions about various aspects of the workshop, such as organization, the process, the facilitation, and a general assessment.

The “End of module” evaluation can be done through a questionnaire (form 2) whereby the participants are asked to respond and express their opinions about various aspects of the module, such as the relevance of the module objective to the course ones, the relevance of the content to the objectives, the adequacy of the content, the presentation of the content, the effectiveness of the methodology, the facilitation and the sequencing of the content.

A confidence/satisfaction index can be calculated to determine how confident the learners feel that they acquired the knowledge and skills necessary to perform the tasks they have been trained for, and how committed they feel to using those skills to ensure the quality of the services they are to provide. The confidence index applies to the training objectives and acquisition of skills and knowledge and to the degree to which the participants feel that they able to apply what they have learned during the training. The satisfaction index applies to the organization and implementation of the training.

The items are labeled in the form of statements followed by a scale 5 (Strongly Agree), 4 (Agree), 2 (Disagree), and 1 (Strongly Disagree), where 5 represents the highest level of

satisfaction/confidence (agreement with the statement) and 1 represents the lowest. The participants are asked to select the level that expressed their opinion best. A space for comments is provided after each statement.

The confidence and satisfaction indices are calculated by multiplying the number of respondents by the correspondent coefficient in the scale, then adding the total. The total is multiplied by 100. The product is divided by the total number of respondents to the statement multiplied by 5. 60% represents the minimal acceptable level and 80% a very satisfactory level of performance.

For example, if the total number of respondents is 19 and 7 of them selected 5 on the scale, 6 selected 4, 4 selected 2, and 2 selected 1, then the index will be  $(5 \times 7) + (4 \times 6) + (2 \times 4) + (1 \times 2)$  multiplied by 100, divided by  $(5 \times 19)$ . A 100% index would be if the total number of respondents selected 5. In this case it would be 95. In this example the index is 72.63%.

The training content and process are evaluated on a continuing basis through daily evaluations using methods such as “things liked the best” and “things liked the least” and/or “quick feedback” forms. The facilitators will use the results of this evaluation during their daily meeting to integrate the feedback and adapt the training to the participants needs.

“Where Are We?” sessions will be conducted with the participants to assess the progress in content coverage and process towards reaching the training goals and learning objectives.

Comments are analyzed and categorized. Only significant comments, those mentioned more than once and/or by more than one participant, are retained. The facilitators need to use the results of this evaluation during their daily meeting to integrate the feedback and adapt the training to the participants needs. Feedback and assessment of training experiences allows trainers and program managers to adapt training to better meet participants’ needs. Trainers can also assess their own performance in facilitating the learning experience of participants using a standardized “facilitation skills” checklist (form 4).

# Form 1: END OF COURSE EVALUATION QUESTIONNAIRE

**TRAINING CENTER**  
**DATE**

**COURSE TITLE:**

## **INSTRUCTIONS**

This evaluation will help adapt the course to your needs and to those of future participants.

It is anonymous. Please respond freely and sincerely to each item. The items are labeled in the form of statements followed by a scale where:

- 5 = **strong** agree
- 4 = agree
  
- 2 = disagree
- 1 = **strongly** disagree

Please circle the number that expresses your opinion; the difference between **strongly** agree and agree, and between **strongly** disagree and disagree are a matter of intensity.

Add your comments in a specific and concise manner, in the space provided after each statement. If that is not sufficient feel free to use extra paper. If you select 2 or 1, make sure to suggest how to make the situation better, practical, and offer solutions.

**N.B:** Course goals objectives and duration will vary based on the type of training conducted.  
Adapt the form to each specific course by including in it the relevant course items.

## **COURSE GOALS**

The Course Achieved Its Goals

1. To provide the participants with the opportunities to acquire/update the knowledge and skills necessary to:

<b>1.1</b> Play an effective role as a member of the PHC Center team to improve the quality of care and services	5-4-2-1
Comments:	
<b>1.2</b> Use the team approach to solve problems at the PHC center level	5-4-2-1
Comments:	
<b>2.</b> Provide the participants with opportunities to be exposed to and initiate the development of attitudes favorable to the systematic use of the knowledge and skills acquired in team building and problem solving to improve the quality of care and services	5-4-2-1
Comments:	

## **COURSE OBJECTIVES**

1. The course helped me reach the stated objectives:

1.1 Apply the team approach principles to play an effective role as a member of the Model PHC Center service delivery team	5-4-2-1
Comments:	
1.2 Use the team approach to implement the problem solving cycle to solve service delivery and management problems at the PHC Center level	5-4-2-1
Comments:	
1.3 Explain the importance of being an effective team member of the Model PHC Center to improve the quality of care and services	5-4-2-1
Comments:	
1.4 Explain the importance of using the team approach to implement the problem solving cycle to solve service delivery and management problems at the Model PHC center	5-4-2-1
Comments:	

2. The course objectives are relevant to my job description / task I perform in my job	5-4-2-1
Comments:	
3. There is a logical sequence to the units that facilitates learning	5-4-2-1
Comments:	

**ORGANIZATION AND CONDUCT OF THE COURSE**

1. Time of notification was adequate to prepare for the course	5-4-2-1
Comments:	
2. Information provided about the course before arriving was adequate	5-4-2-1
Comments:	
3. Transportation arrangements during the course were adequate (if applicable)	5-4-2-1
Comments:	
4. Training site (Training Center) was adequate	5-4-2-1
Comments:	
5. The educational materials (including reference material) used were adequate both in terms and quantity and quality in relation to the training objectives and content	5-4-2-1
Comments:	

6. The methodology and technique used to conduct the training	5-4-2-1
Comments:	
7. Clinic/ practice site, as applicable, was adequate	5-4-2-1
Comments:	
8. Relationships between participants and course managers and support staff were satisfactory	5-4-2-1
Comments:	
9. Relationships between participants and trainers were satisfactory and beneficial to learning	5-4-2-1
Comments:	
10. Relationships between participants were satisfactory	5-4-2-1
Comments:	
11. The organization of the course was adequate (Time, breaks, supplies, resource materials)	5-4-2-1
Comments:	

**Additional comments:**

## **GENERAL ASSESSMENT**

1. I can replicate this training in my future work	5-4-2-1
Comments:	
2. I would recommend this training course to others	5-4-2-1
Why or Why Not?	
3. The duration of the course (10 days) was adequate to reach all objectives and cover all necessary topics	5-4-2-1
Comments:	
General comments and suggestions to improve the course (Please be specific)	

# Form 2: END OF MODULE EVALUATION QUESTIONNAIRE

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**COURSE: DATE:**

**MODULE NUMBER & TITLE:**

## **INSTRUCTIONS**

This evaluation is intended to solicit your opinions about the modules. Your feedback will help adapt the course to your needs and to those of future participants.

It is anonymous. Please respond freely and sincerely to each item. The items are labeled in the form of statements followed by a scale where:

- 5 = **strongly** agree
- 4 = agree
  
- 2 = disagree
- 1 = **strongly** disagree

Please circle the number that best expresses your opinion; the differences between **strongly** agree and agree, and between **strongly** disagree and disagree are a matter of intensity.

Add your comments in a specific and concise manner in the space provided after each statement. If that space is not sufficient feel to use extra paper. If you select 2 or 1, make sure to write specific comments on how to improve the module.

## **EVALUATION ITEMS**

1. The module objectives are relevant to the course objectives  Comments:	5- 4- 2- 1
2. The content / topics covered in the unit are relevant to the objectives	5- 4- 2- 1

Comments:	
3. The content / topics were adequate to help me achieve the objectives Comments:	5- 4- 2- 1
4. The content / topics were clear and well-presented Comments:	5- 4- 2- 1
5. The training methods and activities were effective in facilitating learning Comments:	5- 4- 2- 1
6. The training methods and activities were conducted adequately to facilitate learning Comments:	5- 4- 2- 1
7. These are important topics that will enable me to better perform my job Comments: (specify these points)	5- 4- 2- 1

8. There is a logical sequence to the sessions and topics that facilitates learning  Comments:	5-4- 2- 1
9. There are certain topics that need further clarification  Comments: (specify these points)	5- 4- 2- 1
10.The training materials and resources provided were adequate  Comments:	5- 4- 2- 1
11. Training materials and resources were provided on time to facilitate learning Comments:	5- 4- 2- 1
1. The training materials and resources used were adequate to facilitate my learning Comments:	5-4-2-1

14. The training site was adequate Comments:	5- 4- 2- 1
5. The clinic/ practice site was adequate (if applicable) Comments:	5- 4- 2- 1

**General comments** (if any not covered):

# Form 3: QUICK FEEDBACK FORM

**TRAINING COURSE: DATE:**  
**LOCATION:**

**MODULE NUMBER AND TITLE:**  
**SESSION NUMBER AND TITLE:**

## **INSTRUCTIONS**

This evaluation is anonymous. Please respond freely and sincerely to each item. The items are labeled in the form of statements followed by a scale where:

5 = **strongly** agree  
4 = agree

2 = disagree  
1 = **strongly** disagree

Please circle the description that expresses your opinion best; the difference between strongly agree and agree, and between strongly disagree and disagree are a matter of intensity.

Add your comments in a specific and concise manner, if you have any, in the space provided after each statement. If that space is not sufficient feel free to use extra Paper. If you selected 2 or 1 please make sure to give comments (e.g. why? Solutions?)

1. The session objectives are relevant to the tasks in the job description	5-4-2-1
Comments:	
2. The methods/learning activities were adapted to the objectives	5-4-2-1
Comments:	
3. The materials provided were adequate to cover all of the content	5-4-2-1
Comments:	

4. The time allocated to the session was adequate to cover all the topics	5-4-2-1
Comments:	
5. The facilitation (conduct of the session) helped reach the session objectives	5-4-2-1
Comments:	
6. The content of the training was clearly presented	5-4-2-1
Comments:	
7. The materials/resources were used in a way that helped me learn	5-4-2-1
Comments:	
8. There are points of content that need further clarifications (Specify what specific content areas)	5-4-2-1
Comments:	

**Other comments:**

## Form 4: TRAINING SKILLS CHECKLIST

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This checklist is used with the relevant curriculum to give feedback on the trainer's performance.

The checklist contains a list of items to be observed:

- If they are observed a check mark (√) is entered in the column observed under **adequate** or **inadequate** depending on the performance.
- Comments are entered in the appropriate column to clarify/specify what is observed or not observed.
- Is not observed a check mark (√) and comments are entered in the appropriate columns.

The finding and comments are analyzed and discussed with the trainers supervised. Any immediate corrective action(s) taken and further action(s) needed must be entered in the spaces provided.

The trainers supervised must be given an opportunity to comment and the comments must be entered in the appropriate space. The form must be dated and signed by the trainer and the supervisor. It is then filed in the trainer's file for future follow-up and reference.

Legend: A = Adequate      NA = NOT adequate      NO = NOT observed

Items	Observed		NO	Comments
	A	NA		
<b>1. <u>Planning of the session</u></b> <ul style="list-style-type: none"> <li>• Relevant sessions plan selected from curriculum</li> <li>• Organization conduct and evaluation of training in conformity with curriculum (based on observation during the session)</li> </ul>				
<b>2. <u>Organizing the session</u></b> <ul style="list-style-type: none"> <li>• Arrive before beginning of session</li> <li>• Ensure that all training resources are in place</li> <li>• Ensure that equipment is in working condition</li> <li>• Ensure that training site is set up in</li> </ul>				

Items	Observed		NO	Comments
	A	NA		
<p>accordance with the requirements of the training objective (s) and methodology</p> <ul style="list-style-type: none"> <li>• Prepared/rehearsed for the training (based on observation of mastery in conducting activities and using resources during training)</li> </ul>				
Items	Observed		NO	Comments
	A	NA		
<p><b><u>3. Conducting the session</u></b></p> <p><b><u>3.1 Introduction</u></b></p> <ul style="list-style-type: none"> <li>• Introduce oneself <ul style="list-style-type: none"> <li>-Name</li> <li>-Job</li> <li>-Experience relevant to topic</li> </ul> </li> <li>• Introduce/let team members introduce themselves</li> <li>• Module: <ul style="list-style-type: none"> <li>-Introduce topic</li> <li>-Present objective</li> <li>-Clarify topic and objectives <ul style="list-style-type: none"> <li>- List sessions</li> <li>- Establish linkage with job/task</li> </ul> </li> </ul> </li> <li>• Session <ul style="list-style-type: none"> <li>- Introduce topic</li> <li>- Present objectives</li> <li>- Clarify topics and objectives</li> <li>- Establish linkage with module</li> <li>- Establish linkage with preceding session(s)</li> <li>- Explain methodology</li> </ul> </li> <li>• Present evaluation methodology</li> <li>• State estimated duration</li> </ul> <p><b><u>3.2 Facilitation skills</u></b></p> <p><input type="checkbox"/> <b><u>Clarifying</u></b></p> <ul style="list-style-type: none"> <li>• Make sure participants are ready before starting on any content item</li> <li>• Make sure participants can hear: <ul style="list-style-type: none"> <li>- Trainer</li> <li>- Other participants</li> </ul> </li> </ul>				

Items	Observed		NO	Comments
	A	NA		
<ul style="list-style-type: none"> <li>• Make sure participants can see: <ul style="list-style-type: none"> <li>- Writing</li> <li>- Illustrations/ educational aids</li> <li>- Trainer</li> <li>- Each other</li> </ul> </li> <li>• Make sure s/he look at participants</li> <li>• Make sure s/he can hear participants</li> <li>• Use appropriate educational material</li> <li>• Summarize after each content topic item before moving to next topic</li> <li>• Use examples relevant to objectives, content, and participants learning</li> </ul>				
Items	Observed		NO	Comments
	A	NA		
<p><input type="checkbox"/> <b><u>Ensuring Active Participation</u></b></p> <ul style="list-style-type: none"> <li>• Ask participants questions</li> <li>• Allow participants to ask questions</li> <li>• Allow participants to question/discuss/make contributions</li> <li>• Ensure that all participants contribute</li> <li>• Provide participants with opportunities to practice</li> <li>• Adapt to participants' learning capability (speed, learning activities, use of educational material)</li> <li>• Encourage participants through: <ul style="list-style-type: none"> <li>- Listening</li> <li>- Letting participants complete their interventions</li> <li>- Not being judgmental</li> <li>- Maintaining cordial relationships with participants</li> </ul> </li> </ul> <p><input type="checkbox"/> <b><u>Mastering Training</u></b></p> <ul style="list-style-type: none"> <li>• Conduct the learning activities as per session plan</li> <li>• Use the training resources/ materials as per plan</li> <li>• Cover content adequately (relevant, clear, concise, complete, concrete, credible, consistent and correct)</li> <li>• Follow curriculum for learning/training activities</li> </ul>				

Items	Observed		NO	Comments
	A	NA		
<ul style="list-style-type: none"> <li>• Use content as per curriculum</li> </ul> <p><b>1. <u>Evaluating learning/training process</u></b></p> <ul style="list-style-type: none"> <li>• Check that participants understand</li> <li>• Check that participants learn skills</li> <li>• Provide supportive feedback by: <ul style="list-style-type: none"> <li>-Reinforcing the positive learning</li> <li>-Correcting any errors</li> <li>-Correcting any incomplete learning</li> </ul> </li> <li>• Listen to participants comment about one's performance (without making it personal)</li> <li>• Adapt one's performance based on feedback from participants</li> <li>• Allow participants to answer questions asked by the group</li> </ul>				

**Additional comments or observations**

**Analysis of findings**

**Action (s) taken**

**Further action (s) needed**

**Trainer's comments**

**Date:**

**Trainer's name & signature**

**Supervisor's name & signature**

## **Evaluation of the participants**

The evaluation of the learning by participants will be done through questions and answers, summaries of sessions done by selected participants, self-assessment following the practice sessions, peer assessment through feedback provided by other participants following the practice sessions and assessment of performance by facilitators.

Each participant will practice the various skills, preferably more than once.

## **Limitations of this manual**

Although the authors have put substantial effort in making the manual simple and practical, we are well aware that for those limited to only reading the text, exercises, and explanations, it will be rather difficult to conduct the course without previously having experienced the training development process. We have therefore tried to give special attention to the description of the procedure of every module. This is done in order to give in this part of the modules practical hints, examples and a detailed guideline for their development. Experienced trainers and facilitators will find it much easier to use the manual, than those having their first training experience.

It is often thought that participatory teaching and learning methods are more relaxing for the trainers when participants themselves are expected to develop the contents in small working groups. This is definitely not the case. A lecture is a continuous presentation, given in a predetermined time span and participants are not expected to interrupt the presenter. Participants listen and may be only required to put forward questions in the end. The lecturer does not need more than technical competence on the topic and some presentation skills.

Participatory training and learning methods are much more open and flexible. Often they present a challenge to the facilitators by raising new topics, which may not adhere to the readily retrievable knowledge of the facilitator:

- In terms of the necessary continuous monitoring of the learning process to keep participants on track while allowing some space for related topics important to the participants;
- In terms of analytical and systematic competence to be able to summarize important learning results or to guide participants themselves to summarize their learning;
- In terms of monitoring group dynamics and intervening in conflict situations.

Organizers of the training course should be aware of these training style differences and might decide on a more traditional course setting if the above mentioned competences are not well developed in the trainers' team. It is recommended to consider these reflections in the planning of the workshop/training course.

## **Part II. Training Modules**

## **Module 1: Basic principles of menopause management**

### **Module Objectives:**

By the end of this module the participants will be able to:

1. Explain the importance of basic principles of menopause management
2. Demonstrate understanding of menopause epidemiology, early menopause.

**Session 1:** Basics of menopause assessment

**Session 2:** Early menopause and epidemiology of menopause

### **Evaluation/ Assessment**

Questions and answers, participants' summaries, trainer's evaluation

### **Estimated Training Time**

2 hours, 15 Min

## **Session 1.1: Basics of menopause assessment**

### **Specific objectives of the session**

At the end of the session the participants will be able to:

- Define menopause.
- Explain changes in ovarian function.
- Demonstrate understanding of basic definitions.

### **Trainer preparation**

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

### **Methods and activities**

Questions and answers, mini lecture, brain storming.

### **Resources**

- Reference material/handouts: Menopause National Guidelines for primary health care providers.
- Other: newsprint on easel, markers, masking tape, LCD projector

### **Evaluation/assessment**

Questions and answers, trainer's observation and participant's summaries

### **Trainer**

Experienced with Menopause National Guidelines for primary health care

### **Estimated training time**

1 hour

## Session 1.1: Basics of menopause assessment

### Session Plan

<b>Objective</b>	<b>Content</b>	<b>Methods/ Activities</b>
<b>1.1.1</b> Define menopause. (15 Min.)	<ul style="list-style-type: none"><li>- When no menstrual periods for 12 consecutive months and no other biological, physiological causes.</li><li>-A natural event in women age 45 - 55.</li></ul>	Question and answers
<b>1.1.2</b> Explain changes in ovarian function. (15min.)	<ul style="list-style-type: none"><li>-Number of ovarian follicles decreases, in response the follicle-stimulating hormone (FSH) increases.</li><li>-Ovaries become increasingly resistant to FSH stimulation.</li><li>-Ovarian hormones or estrogens- are being produced in small amounts.</li></ul>	Brain storming

<p><b>1.1.3</b> Demonstrate understanding of basic menopausal definitions (30 min.)</p>	<p><u>Menopause</u> – Permanent cessation of menstruation, after 12 consecutive months of amenorrhoea.</p> <p><u>Perimenopause</u> – from the first features of menopause and ending 12 months after the last menstrual period.</p> <p><u>Postmenopause</u> –from the final menstrual period, <b>after 12 months spontaneous amenorrhoea of.</b></p> <p><u>Climacteric</u> – Transition from reproductive to non-reproductive state.</p> <p><u>Premature menopause</u> – Menopause occurring before the age of <b>40 years while early menopause if it occurs before 45 years</b>(stated .in the guide : <b>We consider a menopause premature when occurs in women younger of 40 years of age and an early menopause when it occurs before the age of 45)</b></p>	<p>Mini Lecture</p>
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### 1.1.1 Definition.

Menopause is defined as the time when there have been no menstrual periods for 12 consecutive months and there is no other biological or physiological cause identified. <sup>1</sup> This is a natural event that normally occurs in women age 45 - 55. It is a retrospective diagnosis, where the woman has a permanent cessation of the primary functions of the ovaries. This transition is progressive occurring over a period of years, due to the fluctuation of hormonal levels produced by the aging ovaries. However, for some women, the accompanying signs and effects that can occur during the menopause transition years can significantly disrupt their daily activities and sense of well-being.

### 1.1.2 Changes in ovarian function

During the menopause transitional period, the age related number of ovarian follicles decrease and in response the follicle-stimulating hormone (FSH) increases. Levels of the gonadotropin hormone FSH will continue to be elevated in intent to stimulate the ovarian function but due to physiological changes in the ovary, this becomes increasingly resistant to stimulation by gonadotropins. It has been postulated that the FSH receptors become absent on the ovarian cells. As a consequence the ovarian hormones or estrogens such as Estradiol and Estrone are being produced in small amounts. Nevertheless, other parts of the ovarian tissue are still capable to produce other hormones such as androgens for a longer period of time even after the menopause had occurred. Once the menopause is established and the menstrual periods disappear, the woman is not able to conceive children any longer. 1, 2

### 1.1.3 Demonstrate understanding of basic menopausal definitions

**Menopause** – Permanent cessation of menstruation. Retrospective diagnosis after 12 consecutive months of amenorrhoea.

**Perimenopause** – Starting from the first features of the approaching menopause (vasomotor symptoms, menstrual irregularity) and ending 12 months after the last menstrual period.

**Postmenopause** – Dating from the final menstrual period, but can only be defined after 12 months of spontaneous amenorrhoea.

**Climacteric** – Transition from reproductive to non-reproductive state. The menopause itself is a specific event during the climacteric.

**Premature menopause** – Menopause occurring before the age of 40 years. (We consider a menopause premature when occurs in women younger of 40 years of age and an early menopause when it occurs before the age of 45 years')

## **Session 1.2: Early menopause and epidemiology of menopause.**

### **Specific objectives of the session**

At the end of the session the participants will be able to:

- Explain premature ovarian failure and early menopause
- List primary causes of premature menopause.
- List secondary causes of premature menopause.
- Demonstrate understanding of menopause epidemiology.

### **.Trainer preparation**

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

### **Methods and activities**

Questions and answers, mini lecture, brain storming.

### **Resources**

- Reference material/handouts: National Guidelines for Primary Health Care Providers.
- Other: newsprint on easel, markers, masking tape, LCD projector

### **Evaluation/assessment**

Questions and answers, trainer's observation and participant's summaries

### **Trainer**

Experienced with Menopause National Guidelines for primary health care providers.

### **Estimated training time**

1 hours, 15 Min

## Session plan

Objective	Content	Methods/ Activities
1.2.1 Explain premature ovarian failure and early menopause ( 15 Min.)	<p><u>Premature menopause</u> women younger of 40 years of age.</p> <p><u>Early menopause</u> before the age of 45 years</p>	Questions and Answers
1.2.2 List primary causes of premature menopause (20Min.)	<p>Chromosome abnormalities.</p> <p>Follicle-stimulating hormone receptor gene polymorphism and inhibin B mutation.</p> <p>Enzyme deficiencies.</p> <p>Autoimmune diseases.</p> <p>Idiopathic.</p>	Brain Storming
1.2.3. List secondary causes of premature menopause (20Min.)	<p>Chemotherapy and radiotherapy.</p> <p>Bilateral oophorectomy or surgical menopause.</p> <p>Hysterectomy without oophorectomy/uterine embolization.</p> <p>Infection – HIV, mumps, TB.</p>	Brain Storming
1.2.4. Demonstrate understanding of menopause epidemiology (20Min.)	<p>The average age of spontaneous natural menopause is 51 years, (range 45-55 years).</p> <p>The Iraqi Women Integrated Social and Health survey (I-WISH) conducted in 2011.</p>	Mini Lecture

## Session 1.2: Early menopause and epidemiology of menopause

### 1.2.1. Premature ovarian failure and early menopause.

We consider a menopause premature when occurs in women younger of 40 years of age and an early menopause when it occurs before the age of 45 years. Premature menopause (premature ovarian failure) occurs in 0.9-1.2% of women; while early menopause affects approximately 5% -10% of women. Observational studies have identified a number of risk factors for early / premature menopause such as: smoking, ethnicity and positive family history. <sup>3</sup> It has been observed that genetic causes such as the Turner's syndrome and the fragile X chromosome syndrome can be associated with premature menopause. Premature menopause can also occur after the treatment of cancer such as leukemia's, lymphomas and gynecological cancers; in these cases we consider it as a side effect of the treatment or iatrogenic or secondary menopause. <sup>4, 5</sup>

We can consider that premature menopause is due to genetic or unknown causes (idiopathic) or could be secondary to treatments or other diseases. We present some of these causes in the table below: <sup>6</sup>

### 1.2.2. List primary causes of premature menopause.

<b>Primary</b>
Chromosome abnormalities
Follicle-stimulating hormone receptor gene polymorphism and inhibin B mutation
Enzyme deficiencies
Autoimmune diseases
Idiopathic

### 1.2.3. List secondary causes of premature menopause

<b>Secondary</b>
Chemotherapy and radiotherapy
Bilateral oophorectomy or surgical menopause
Hysterectomy without oophorectomy/uterine embolization
Infection – HIV, mumps, TB

#### **1.2.4. Demonstrate understanding of menopause epidemiology**

Thanks to the advances of medicine, the life expectancy is improving. As a consequence more women will live many years (30-40% of her lifespan approximately) in a postmenopausal period with a decreased estrogen production 7, 8

The average age of spontaneous natural menopause is 51 years (range 45-55 years). Observational studies indicate that African, African–American and Hispanic ethnicity and current smoking are factors associated with an earlier age of menopause. 3

In Iraq, life expectancy for female reaches 61 years (Reference: Iraqi Ministry of Planning/ Central Statistics Organization, 2011). The Iraqi Women Integrated Social and Health survey (I-WISH) conducted in 2011, revealed that more than one million women over 55 years are living in Iraq ( 6.8% of the Iraqi female population), and 72.4% of those are expected to be illiterate. A baseline assessment in Iraq revealed that elderly women are going through tremendous pressure as they are expected to take care of other family members with special needs such as disabled or sick while they themselves due to age and disease need health and social assistance. 35% of those women reported that their health status is poor or very poor and 31.1% need assistance for feeding, getting dressed, using the bathroom and for moving around, 11% reported feeling unhappy with their life in general (6.4% in Kurdistan and 11.4% in other areas). Another study conducted by the Nursing College, Baghdad University, in the year 2000 including 410 women aged between 40-60 years, investigating the factors affecting the age of natural menopause, concluded that the mean age for menopause was 49.4 + 3.2 years and the significant predictors for that age were; gradual menstrual cessation, hormonal contraception use for long duration and negative history of abortion.

## **Module 2: Approach to menopausal women**

Module Objectives:

At the end of this module the participants will be able to:

- Demonstrate understanding of immediate and mid-term effects of estrogen deficiency.
- Describe late effect of estrogen deficiency (osteopenia/osteoporosis-diagnosis, management).
- Describe late effect of estrogen deficiency (cardiovascular, cancers).

Session 1: Immediate and Medium-term effects of estrogen deficiency.

Session 2: Late effect of estrogen deficiency (osteopenia/osteoporosis-diagnosis, management).

Session 3: Late effect of estrogen deficiency (cardiovascular, cancers).

### **Evaluation/ Assessment**

Questions and answers, participants' summaries, trainer's evaluation

### **Estimated Training Time**

9 hours, 40 min

## Session 2.1: Immediate and Medium-term effects of estrogen deficiency

### Specific objectives of the session

At the end of the session the participants will be able to:

- Describe general symptoms of menopause
- Explain changes in menstrual pattern as one of leading menopause symptoms.
- Identify vasomotor changes as one of immediate oestrogen deficiency effects.
- Describe urogenital symptoms as one of medium oestrogen deficiency effects.
- Explain generalized connective tissue atrophy as another medium-term effects of oestrogen deficiency.

### Trainer preparation

- **Review** the reading material and the session plan.
- **Prepare** the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- **Prepare** copies of the reference materials/handouts and exercises.
- **Arrange** the training room.

### Methods and activities

Role play, questions and answers, discussion in plenary.

### Resources

- Reference material/handouts: Menopause National Guidelines for primary health care providers
- Other: newsprint on easel, markers, masking tape, LCD projector

### Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

### Trainer

Experienced with Menopause National Guidelines for primary health care providers

### Estimated training time

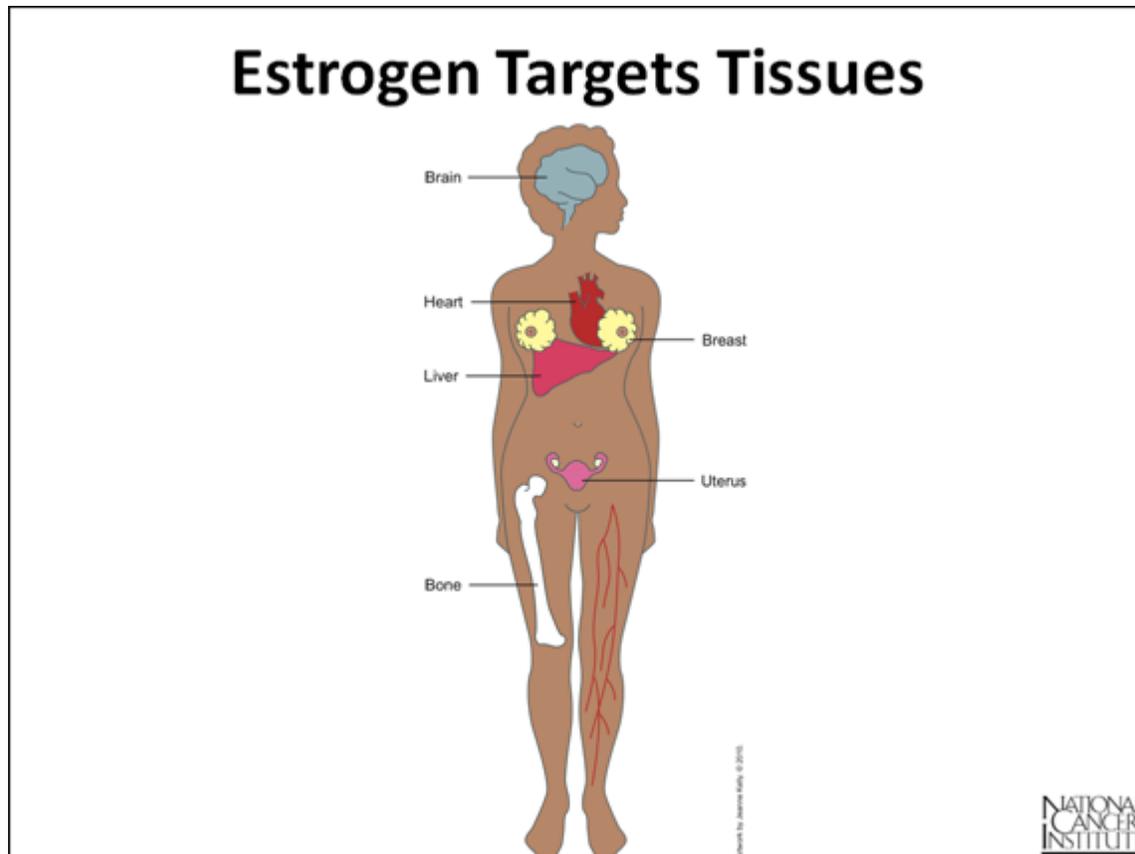
1 hours, 20 min

## Session Plan

<b>Objective</b>	<b>Content</b>	<b>Methods/ Activities</b>
2.1.1 Describe general symptoms of menopause. (20min.)	Immediate effect of estrogen deficiency. Medium-term effect. Late effect.	Questions and answers
2.1.2 Explain changes in menstrual pattern as one of leading menopause symptoms. (30min.)	Variable length of the menstrual cycle. Big gaps of menstrual cycles. Most cycles become lighter. Some are more frequent, heavier. Pregnancy is possible until permanent cessation of menstruation-12 consecutive months.	Discussion.
2.1.3 Identify vasomotor changes as one of immediate oestrogen deficiency effects. (30min.)	Hot flushes Night sweats Palpitations Headaches	Role Play
2.1.4 Describe urogenital symptoms as one of medium oestrogen deficiency effects.	Vaginal problems: - Vaginitis - Dyspareunia  Urinary problems: - Frequency - Urgency	=
2.1.5. Explain generalized connective tissue atrophy as another medium-term effects of oestrogen deficiency.	Brittle nails, hair loss, muscular aches, bone and joint pain. Vaginal prolapse, stress incontinence-dysuria	=

## 2.1.1 Describe general symptoms of menopause

The fall in oestrogen levels that occurs at the menopause can cause a variety of symptoms. Although the list seems alarming, few women experience all of these symptoms and some women are fortunate enough to have no obvious problems. From a medical perspective, the immediate symptoms are mostly harmless, and it is the longer-term consequences of oestrogen deficiency on the skeletal system that cause greater concern.



## 2.1.2 Explain changes in menstrual pattern as one of leading menopause symptoms

As ovulatory cycles begin to predominate, the length of the menstrual cycle begins to vary and gaps of several weeks or months may occur between menstrual periods. Most women find their periods become lighter during the peri-menopause, but some experience more frequent and heavier bleeding before their periods eventually stop. Because of the possibility of renewed follicular activity, women can become pregnant even at this stage of life. They should be advised to continue with contraception for two years after their last period if it occurred before the age of 50 and for one year if it occurred after the age of 50.

### **2.1.3 Identify vasomotor changes as one of immediate Oestrogen deficiency effects.**

#### **Vasomotor:**

It is estimated that about 70% of women experience vasomotor symptoms. These symptoms are:

- Hot flushes
- Night sweats
- Palpitations
- Headaches

Vasomotor symptoms are commonly more intense in the previous two or three years before the periods end, but they may continue for many years afterwards.

A study conducted in Baghdad city, looking for the prevalence of vasomotor symptoms found that the prevalence of hot flushes among pre-menopausal women is (21.9%) and this proportion rises to (64.9%) and (87.6%) respectively among pre-menopause and post-menopause women. The study attributed such high prevalence of vasomotor symptoms in comparison with women from other countries to the prior poor health status, premenstrual and menstrual symptoms (e.g. dysmenorrhea,...etc), low socioeconomic level, unavailability of hormonal replacement therapy, and that uninformed or misinformed women regarding menopause may have its impact on women's perception of climacteric complains. (Reference: Abdul Amir F. Assessment of the natural climacteric complaints among middle age Iraqi women in Baghdad city. *Al-Taqani J* 2006; 19(1): 106-16. ).

## **2.1.4 Describe urogenital symptoms as one of medium oestrogen deficiency effects.**

### **Urogenital symptoms:**

The vagina and distal urethra are estrogen dependent tissues. The falling estrogen levels in post-menopausal women lead to a marked drop in vaginal and vulvar capillary blood supply causing the skin to appear red and dry. Additionally there is a loss of collagen from the underlying tissues. These two factors cause the vaginal epithelium to become thinner and less elastic and the vagina narrower and shorter causing atrophic vaginitis. As secretions lessen, there is a higher risk of vaginal infections. At least 50% of women will suffer from one of the following symptoms:

- \* Vaginal problems
  - Dyspareunia
  - Vaginitis
  
- \* Urinary problems:
  - Frequency
  - Urgency

## **2.1.5. Explain generalized connective tissue atrophy as another medium-term effects of oestrogen deficiency**

### Generalized Connective tissue atrophy

Oestrogen helps maintain the epidermis, so changes in the skin, nails and hair are common when oestrogen levels fall. Women may find their skin becomes dry, inelastic and is easily broken or bruised. The loss of thickness and elasticity is largely due to a decline in collagen levels. Other symptoms of connective tissue atrophy are brittle nails, hair loss, muscular aches, bone and joint pain. These changes in the connective tissue canal promote vaginal prolapse and the subsequent development of stress incontinence-dysuria and these represent an additional effect of Oestrogen deficiency on the urogenital system after menopause

## **Session 2.2: Late effect of oestrogen deficiency (osteopenia/osteoporosis-diagnosis, management).**

Specific objectives of the session

At the end of the session the participants will be able to:

- Define osteopenia.
- Explain-definition, diagnosis of osteoporosis.
- Demonstrate understanding of several osteoporosis risk factors.
- Explain pharmacological therapy of osteopenia/osteoporosis.
- Describe non pharmacological therapy of osteopenia/osteoporosis.
- Explain SERMs as one of other therapeutic options to treat osteoporosis.
- Describe parathyroid hormone, combination therapy as another therapeutic option to treat osteoporosis.

### **Trainer preparation**

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

### **Methods and activities**

Mini Lecture, questions and answers, discussion in plenary, brain storming, role play.

### **Resources**

- Reference material/handouts: Menopause National Guidelines for primary health care providers
- Other: newsprint on easel, markers, masking tape, LCD projector

### **Evaluation/assessment**

Questions and answers, trainer's observation and participant's summaries

### **Estimated training time:**

3 hours 30min

Session plan

<b>Objective</b>	<b>Contents</b>	<b>Methods\ Activities</b>
2.2.1 Define osteopenia (15 min.)	<p><u>Osteopenia</u> means that your bone mineral density is somewhat lower than "normal" but not low enough to be osteoporosis</p>	Questions and answers,
2.2.2 Explain-definition, diagnosis of osteoporosis. (30min.)	<p><u>Osteoporosis</u> A skeletal disease marked by low bone mass and micro architectural deterioration that leads to an increased susceptibility to fracture.</p>	Minini lecture,
2.2.3. Demonstrate understanding of several osteoporosis risk factors. (30min.)	<ul style="list-style-type: none"> <li>-Getting older</li> <li>-Ethnicity</li> <li>-Low body weight, or under (56.7 kilograms) with average height</li> <li>- Personal history of fractures after age 40</li> <li>-Parental history of osteoporosis or hip fractures</li> <li>- certain medications, especially steroids</li> <li>-Eating disorders or metabolism problems</li> <li>-Chemotherapy</li> <li>-Exposure to radiation</li> <li>- Other factors</li> </ul>	Discussion

<b>Objective</b>	<b>Contents</b>	<b>Methods\ Activities</b>
2.2.4. Describe non pharmacological therapy of osteopenia/osteoporosis. (30min.)	-Lifestyle modification. -Main sources of calcium in our food.	Quick Quiz followed by Questions for Clarification and evaluation.
2.2.5. Explain pharmacological therapy of osteoporosis. (30min.)	<ul style="list-style-type: none"> <li>• Bisphosphonates:               <ul style="list-style-type: none"> <li>-Aldronate.</li> <li>-Risedronate.</li> </ul> </li> <li>• Calcitonin.</li> <li>• Estrogen/Hormone Therapy</li> </ul>	Mini Lecture
2.2.6. Explain SERMs as one of other therapeutic options to treat osteoporosis. (30min.)	SERMs-(Selective estrogen receptor modulators) : <ul style="list-style-type: none"> <li>-tamoxifen citrate</li> <li>-Evista</li> <li>-Fareston</li> </ul>	Discussion
2.2.7. Describe Parathyroid hormone, combination therapy as another therapeutic option to treat osteoporosis. Combined therapy. (15min.)	<ul style="list-style-type: none"> <li>• Teriparatide- (Forteo):               <ul style="list-style-type: none"> <li>- Contraindicated for patients with increased risk of bone malignancy.</li> <li>• Combined therapy:                   <ul style="list-style-type: none"> <li>-Biphosphonate and non biphosphonate.</li> </ul> </li> </ul> </li> </ul>	Questions and Answers
2.2.8. Demonstrate understanding of osteoporosis and or fractures prevention. (30min.)	<ul style="list-style-type: none"> <li>• Counsel on the risk of osteoporosis and related fractures.</li> <li>• Check for secondary causes.</li> <li>• Adequate amounts of calcium, vitamin D, supplements if necessary.</li> <li>• Regular weight-bearing and muscle-strengthening exercise.</li> <li>• Avoidance of tobacco smoking, excessive caffeine, alcohol intake.</li> <li>• BMD testing as indicated.</li> <li>• Prophylactic treatment as indicated.</li> </ul>	Role Play.

## 2.2.1 Define osteopenia

**Osteopenia** means that your bone mineral density is somewhat lower than "normal" but not low enough to be osteoporosis. Bone mineral density is a measurement of the level of minerals in the bones, which shows how dense they are. Bone mineral density is found using a bone density test. Osteopenia is defined as a bone mineral density T-score between -1.0 and -2.5.

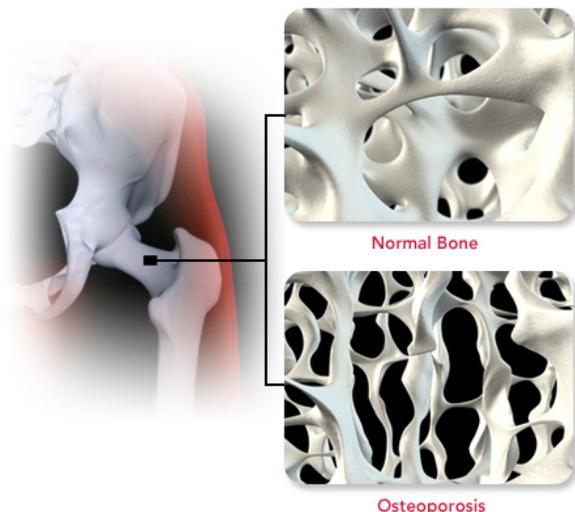
## 2.2.2 Explain- definition, diagnosis of osteoporosis.

### Osteopenia/Osteoporosis

**Osteopenia** It is important to note that having osteopenia is not the same as having osteoporosis, and that technically, osteopenia is not in and of itself a disease, as osteoporosis is. Instead, osteopenia is an indication that your BMD is below the statistical norm and that you could eventually develop osteoporosis or be at risk of a future fracture.

**Osteoporosis** is a skeletal disease marked by low bone mass and micro architectural deterioration that leads to an increased susceptibility to fracture .

It is preventable and treatable disease, but due to the absence of warning signs prior to a fracture, many people is not diagnosed in time to receive effective therapy during the early phase of the disease .



The most common fractures are those of the vertebrae (spine), proximal femur (hip) and distal forearm (wrist). The process of bone remodeling that maintains a healthy skeleton may be considered a preventive maintenance program (continually removing older bone and replacing it with new bone). Bone loss occurs when this balance is altered, resulting in greater bone removal than replacement. The imbalance occurs with menopause and advancing age. With the onset of menopause, the rate of

bone remodeling increases, magnifying the impact of the remodeling imbalance. The loss of bone tissue leads to disordered skeletal architecture and an increase in fracture risk.

### **2.2.3. Demonstrate understanding of several osteoporosis risk factors.**

**Listed below are several osteoporosis risk factors:**

- Getting older, which increases your risk of osteoporosis because bones become weaker as you age?
- Ethnicity — for instance, women who are white or of Southeast Asian descent have the greatest risk of osteoporosis, and African-American and Hispanic men and women have a lower, but still significant, risk of the disease
- Low body weight, or under 125 pounds (56.7 kilograms) if you're of average height
- A personal history of fractures after age 40
- A parental history of osteoporosis or hip fractures
- Using certain medications that can cause bone loss, especially steroids
- Eating disorders or metabolism problems that do not allow the body to take in and use enough vitamins and minerals
- Chemotherapy, or medicines such as steroids used to treat a number of conditions, including asthma
- Exposure to radiation

In addition, having a family history of osteoporosis, getting limited physical activity, smoking, regularly drinking soda, and drinking excessive amounts of alcohol also increase the risk of osteopenia and, eventually, osteoporosis.

## 2.2.4. Describe non pharmacological therapy of osteopenia/osteoporosis.

### 1. Non Pharmacologic Therapy:

Lifestyle modification includes:

- Adequate intake of calcium and vitamin D. The recommended intake of calcium is 1200 mg/day from dietary intake and supplement, and for Vitamin D are 400- 800 IU/ day in addition to sun exposure for 10-15 minutes of the face, hands arms 2-3 times a week.
- An active lifestyle including regular weight-bearing and muscle-strengthening exercise to reduce the risk of falls and fractures.
- Avoidance of cigarette smoking, high intake of caffeine or alcohol.

Your body doesn't produce calcium on its own, so you must obtain it through other sources. Calcium can be found in a variety of foods, including:

- Dairy products, such as cheese, milk and yogurt
- Dark green leafy vegetables, such as broccoli and kale
- Fish with soft bones that you can eat, such as sardines and canned salmon
- Calcium-fortified foods and beverages, such as soy products, cereal and fruit juices

## 2.2.5. Explain pharmacological therapy of osteoporosis.

### - Pharmacologic Therapy:

A number of pharmacological agents are approved by FDA for the treatment of osteoporosis. All increase bone mineral density and reduce the risk of fractures:

#### 1.1. Bisphosphonates:

They have been shown to slow bone loss, increase bone density, and reduce the risk of spine and non-spine fractures. They may be considered in postmenopausal women who are at risk of developing osteoporosis and for whom the desired clinical outcome is to maintain bone mass and to reduce the risk of fracture

- **Alendronate** (Fosamax or Fosamax Plus D) (10 mg daily tablet, 70 mg weekly tablet or liquid formulation, and 70 mg weekly tablet with 2,800 IU or 5,600 IU of vitamin D3) to increase bone mass. It is proved to reduce fracture by 50% over three years of treatment.
- **Risedronate sodium**.: Actonel® or Actonel® with Calcium , Atelvia) (5 mg daily tablet; 35 mg weekly tablet; 35 mg weekly tablet packaged with 6 tablets of 500 mg calcium carbonate; 75 mg tablets on two consecutive days every month; and 150

mg monthly tablet). It increases bone mass and reduces the incidence of vertebral fractures.

Bisphosphonates need to be taken on an empty stomach early in the morning with no food for at least 30 minutes afterwards. Main side effects include stomach upset and heartburn, if severe, IV formulations can be used. Treatment is usually maintained for 5 years.

### **1.2.Calcitonin: (Miacalcin or Fortical)**

It is delivered as a single daily intranasal spray that provides 200 IU of the drug. Subcutaneous administration by injection also is available. It is used for women who are at least five years postmenopausal.

### **1.3.Estrogen/Hormone Therapy (ET/HT)**

Estrogen Therapy (ET) and Hormone Therapy (HT) include:

- ET : Climara, Estrace, Estraderm, Estratab, Ogen, Ortho-Est, Premarin, Vivelle.
- HT: Activella, Femhrt, Premphase, Prempro.

It is effective for the prevention of osteoporosis, relief of vasomotor symptoms and vulvo-vaginal atrophy associated with menopause. Nevertheless, the risk associated with the ET outweighs the benefits in women older than 60 years and shouldn't be used.

HT prescription will differ depending on:

- If the woman has uterus, she can be prescribed a combination of estrogen plus progestin.
- If the woman doesn't have a uterus, then only one hormone, estrogen (ET) is prescribed.

The administration of the HT could be done by:

- a pill taken by mouth
- a patch, cream, gel, or spray that can be applied to the skin
- a cream, suppository or ring that can be used with in the vagina

The Woman's Health Initiative (WHI) found that five years of HT (Prempro®) reduced the risk of clinical vertebral fractures and hip fractures by 34 percent. Because of the risks of cardiovascular diseases and breast cancer, ET/HT should be used in the lowest effective doses for the shortest duration to meet treatment goals. It is no longer regarded as a front line option for the prevention or the treatment of osteoporosis in postmenopausal women. Their use is limited to:

1. Women who have both osteoporosis and menopausal symptoms which is severe enough to affect life quality.
2. Premature menopause (at age <40) until they are 50 years old, if this is not associated with any increasing health risk.

## 2.2.6. Explain SERMs as one of other therapeutic options to treat osteoporosis.

- **Estrogen Agonist/Antagonist (formerly known as SERMs-Selective estrogen receptor modulators) :**

There are three SERMs:

tamoxifen (also called tamoxifen citrate; brand name: Nolvadex)

Evista (chemical name: raloxifene)

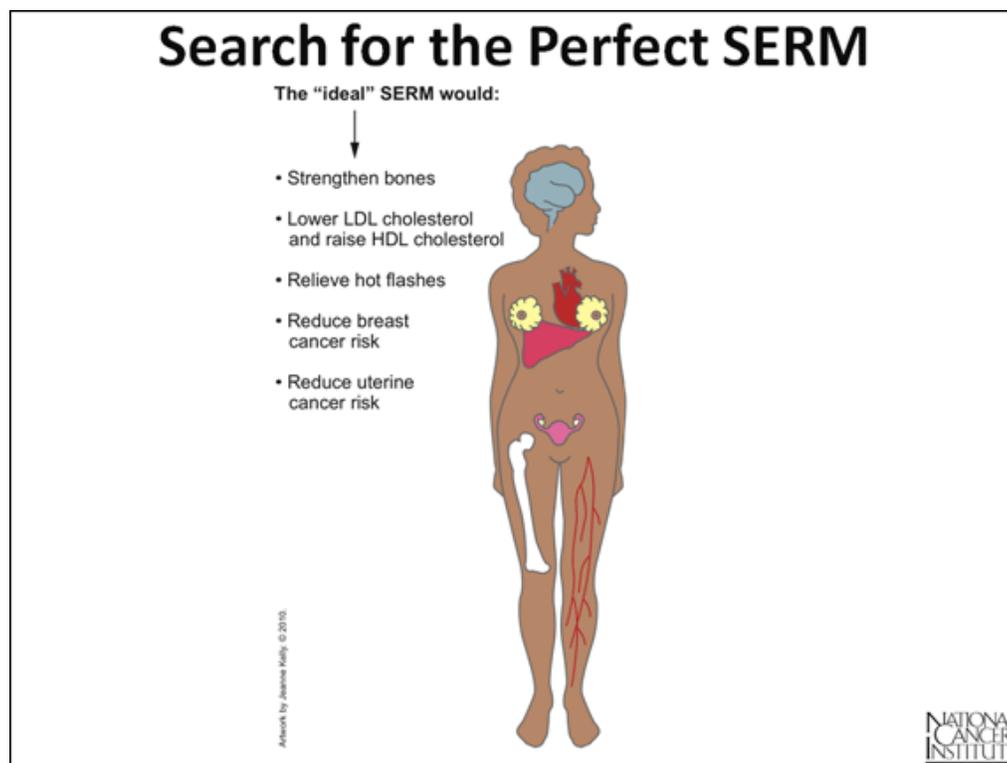
Fareston (chemical name: toremifene)

Each is a pill, usually taken once a day. Tamoxifen is the oldest, most well-known, and most-prescribed SERM.

SERMs can be used to treat women both before and after menopause.

### **Raloxifen (Evista):**

Is indicated for reducing the risk of invasive breast cancer in postmenopausal women with osteoporosis. It does not reduce the risk of coronary heart disease. Similar to estrogen, Raloxifene may increase the risk of deep vein thrombosis. It also increases hot flashes and make it worse (which is the main symptom of menopause worsen). It reduces the risk of spinal fracture but not those of the hip or the wrist.



### **2.2.7. Describe Parathyroid hormone, combination therapy as another therapeutic option to treat osteoporosis. Combined therapy.**

- **Parathyroid hormone**

Teriparatide: PTH (1-34) (Forteo) is anabolic agent administered by daily subcutaneous injection. It is recommended for treatment of osteoporosis associated with glucocorticoid therapy. Because it has been associated with osteosarcoma in animal experimental studies, patients with increased risk of bone malignancy should not use it.

- **Combination therapy**

Combination therapy with bisphosphonate and non bisphosphonate can provide additional increase in BMD as compared to monotherapy. However, the cost and potential side effects should be weighed against potential gains.

### **2.2.8. Demonstrate understanding of osteoporosis and or fractures prevention**

#### **Prevention of Osteoporosis and/or Fracture**

Health workers should provide the following services to menopausal women:

- Counsel on the risk of osteoporosis and related fractures.
- Check for secondary causes.
- Advise intake of adequate amounts of calcium and vitamin D including supplements if necessary.
- Recommend regular weight-bearing and muscle-strengthening exercise to reduce the risk of falls and fractures.
- Advise avoidance of tobacco smoking and excessive caffeine and alcohol intake.
- Recommend BMD testing as indicated.
- Initiate prophylactic treatment as indicated.

## Quick quiz.

Question #1 The best sources of calcium come from food.

Calcium is essential to the health of your bones—in fact, about 99% of your body’s calcium is stored in your bones and teeth.<sup>1</sup> Unfortunately, most Americans don’t get enough calcium. Though calcium supplements are helpful if you can’t get enough calcium from your diet, the best source of calcium comes from food. Dairy products, such as milk, cheese, and yogurt, provide the most calcium.

Question #2 Vitamin D is present in many foods.

Vitamin D is naturally found in only a few foods, and these include fatty fish, egg yolks, and liver. Because it’s not easily found in food, it’s very difficult to get your daily recommended vitamin D solely from food. A more reliable source of vitamin D is the sun. Soaking up just 15 minutes of natural sunlight each day will boost your body’s ability to produce vitamin D. You can also take vitamin D supplements to ensure you’re getting enough.

Question #3 An 8-oz cup of plain, low fat yogurt has more calcium than an 8-oz cup of low fat milk.

While both yogurt and milk are excellent sources of calcium, yogurt contains more calcium per serving than milk. An 8-oz cup of plain, low-fat yogurt boasts about 415 mg of calcium, while low-fat milk contains about 300 mg of calcium.<sup>2</sup>

Question #4 Eating foods made with 100% wheat bran promotes calcium absorption.

Foods made with 100% wheat bran can fit into a healthy diet. But if you’re at risk for bone loss, eat them in moderation. Some cereals and baked goods contain 100% wheat bran, and these foods can actually lower your body’s ability to absorb the calcium found in other foods, when they’re eaten at the same time. If you’re taking a calcium supplement, for instance, simply take it a few hours before or after eating 100% wheat bran to prevent any interference.

Question #5 Spinach is a better source of calcium than turnip greens.

Spinach and turnip greens are both excellent sources of healthful nutrients, but spinach is not a good source of calcium. Spinach also contains a chemical called oxalate, which lowers your body's ability to absorb calcium. If you're looking to boost your calcium intake, opt for turnip greens instead—they contain about 200 mg of calcium in every 8 oz.<sup>2</sup> Of course, don't feel like you need to eliminate spinach from your diet. When eaten in moderation, spinach won't increase your risk for osteoporosis.

Question #6 The better bone-friendly jolt of caffeine is a latte—not a can of diet cola.

When consumed in high amounts (more than 4 cups of coffee a day), caffeine can interfere with your body's ability to absorb calcium. But if you can't get through your day without a caffeine kick—choose a latte. That way, you'll at least get calcium from the milk. Cola, on the other hand, provides no nutritional value and contains high amounts of caffeine. Plus, cola-based soft drinks contain high amounts of phosphates. Your body gets rid of phosphates by taking calcium from your bones and releasing it, along with the phosphates, through your urine. In other words, your body has to give up calcium to rid itself of the phosphates.<sup>3</sup>

1. Distribute these questions for all participants.
2. Give them 5min. to answer.
3. Ask them to keep their answers, begin giving correct answers and ask them to correct theirs accordingly.
4. Put correct answers on the flip chart.

## Session 2.3: Late effect of estrogen deficiency (cardiovascular, cancers)

### Specific objectives of the session

At the end of the session the participants will be able to:

- Describe menopause and cardiovascular diseases.
- Explain management of cardiovascular diseases through menopause.
- Demonstrate understanding of available evidences for the use of HRT in such cases.
- Describe cancer risk through menopause.
- Explain how cancer treatment can affect menopause.
- Describe the effect of menopausal symptoms treatment and the risk of cancer.
- Explain breast and ovarian cancers as one of late effects of estrogen deficiency.
- Explain endometrial, cervical, vaginal, vulvar cancers as another estrogen deficiency sate effect.

### Trainer preparation

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

### Methods and activities

Exercises, questions and answers, discussion in plenary, brain storming and simulation.

### Resources

- Reference material/handouts: Menopause National Guidelines for primary health care providers
- Other: newsprint on easel, markers, masking tape, LCD projector

### Evaluation/assessment

Questions and answers, trainer's observation and participant's summaries

**Estimated training time:** 4 hours

## Session plan

Objective	Contents	Methods\ Activities
<p>2.3.1 Describe menopause and cardiovascular diseases. (30 min.)</p>	<ul style="list-style-type: none"> <li>• Cardiovascular disease is the leading cause of death and an important contributor to morbidity in women after 60 years.</li> <li>• Due to the withdrawal of the protective effect of oestrogen around the time of the menopause.</li> </ul>	<p>Questions and answers,</p>
<p>2.3.2 Explain management of cardiovascular diseases through menopause. (30min.)</p>	<ul style="list-style-type: none"> <li>• Efforts should focus on reducing the risk of CVD among women.</li> <li>• Counseling about lifestyle modification.</li> <li>• Pharmacotherapy of hypertension, dyslipidemias, when indicated.</li> </ul>	<p>Mini lecture,</p>
<p>2.3.3. Demonstrate understanding of available evidences for the use of HRT in such cases. (30min.)</p>	<ul style="list-style-type: none"> <li>• Do not initiate or continue HRT for the sole purpose of preventing CVD (CAD and stroke).</li> <li>• Abstain from prescribing HR in women at high risk for venous thrombosis embolism (VTE).</li> <li>• 3. Consider other evidence based therapies, interventions to effectively reduce the risk of CVD events in women with or without vascular disease.</li> </ul>	<p>Discussion</p>

<p>2.3.4 Describe cancer risk through menopause. (30min.)</p>	<ul style="list-style-type: none"> <li>• A woman who began menopause after age 55 has an increased risk of ovarian, breast, and uterine cancer.</li> </ul>	<p>Questions and Answers</p>
<p>2.3.5. Explain how cancer treatment can affect menopause. (30min.)</p>	<ul style="list-style-type: none"> <li>• Some cancer treatments may cause menopause or menopausal symptoms.</li> <li>• Oophorectomy</li> <li>• Radiation therapy, chemotherapy.</li> <li>• Hormonal therapy.</li> <li>• SERMs- to reduce the risk of breast cancer in high risk women.</li> </ul>	<p>Discussion</p>
<p>2.3.6. Describe the effect of menopausal symptoms treatment and the risk of cancer. (30min.)</p>	<ul style="list-style-type: none"> <li>• Combined hormone replacement therapy may have increased risk of breast cancer.</li> <li>• Estrogen alone-only for hysterectomised women, it increases the risk of uterine cancer.</li> <li>• WHI- found that combined hormone therapy decreases risk of colorectal cancer</li> <li>• risk of dying from lung cancer was higher for women with NSCLC who smoke and take combined hormone therapy</li> </ul>	<p>Discussion</p>
<p>2.3.7. Explain breast and ovarian cancers as one of late effects of estrogen deficiency. (30min.)</p>	<ul style="list-style-type: none"> <li>• The incidence of breast cancer increases in women above 50 years.</li> <li>• Ovarian cancer risk factors: -family history -having never been pregnant -over the age 50 years.</li> </ul>	<p>Case study.</p>

<p>2.3.8. Explain endometrial, cervical, vaginal, vulvar cancers as another estrogen deficiency late effect. (30min.)</p>	<ul style="list-style-type: none"> <li>• <u>Endometrial cancer:</u> At menopause is characterized by being of high grade and poorer prognosis.</li> <li>• <u>Cervical cancer:</u> -Second common cancer after breast cancer in females. - linked to sexual activity especially age at first intercourse.</li> <li>• <u>Vaginal cancer:</u> -Accounts only 1-2% of all gynecological cancers.</li> <li>• <u>Vulvar cancer:</u> -The rarest cancer, less than 1%. -peak incidence at age of 65 and more. -HPV is the commonest cause.</li> </ul>	<p>Case study</p>
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### **2.3.1 Describe menopause and cardiovascular diseases.**

After menopause, women are more likely to have heart disease and stroke. By the time a woman reaches the age of 60, the gap in incidence of coronary heart disease (CHD) between men and women is greatly reduced. Cardiovascular disease is the leading cause of death and an important contributor to morbidity and disability in women. Stroke, in particular, is especially prevalent in older postmenopausal woman.

The risk is thought to be due to the withdrawal of the protective effect of oestrogen around the time of the menopause.

The effect of hormones on cardiovascular function may be attributed to the changes encountered on lipids, homeostasis, and carbohydrate metabolism, in addition to other direct effects of estrogen including modulation of blood vessel reactivity in the short term and vascular structural remodeling in the long term.

However, it might also be due to the fact that around menopause, a clustering of obesity, hypertension and dyslipidemia is often seen. Similarly polycystic ovary syndrome is also linked with cardiovascular risk factors and more adverse CHD events post-menopause. Premature loss of ovarian function and estrogen deficiency is associated with increased risk of calcified plaque in coronary arteries.

### **2.3.2 Explain management of cardiovascular diseases through menopause.**

There are persisting data showing that Cardiovascular Disease is undertreated in women or that women do not recognize the importance of CVD. Efforts should focus on reducing the risk of CVD among women in effective ways.

Cardiovascular risk factors in particular should be addressed and treated as per guidelines. Women should receive counseling about lifestyle modifications (smoking cessation, maintenance of a normal body weight, regular moderate to vigorous physical activity, and consumption of a heart-healthy diet). In addition, pharmacotherapy of hypertension and dyslipidemias should be used when indicated for women who already have established heart disease or who have been identified as high risk according to risk calculations.

Control of hypertension and diabetes assume heightened importance because of their greater mortality associated with acute coronary events, such as myocardial infarction and worse outcomes from stroke.

Therapy with anti-platelet agents (such as acetylsalicylic acid), beta blockers, angiotensin-converting enzyme inhibitors, and lipid-lowering medications is recommended when indicated and is amply supported by evidence of benefit.

Women on HRT who experience a cardiovascular event such as myocardial infarction, stroke, or

venous thromboembolism should be advised to discontinue such therapy. Should significant vasomotor symptoms require continuation of HRT, then the lowest dose for the shortest time should be considered.

In light of available alternative for enhancing cardiac health in menopausal women, HRT should not be used for primary or secondary prevention and the role of HRT in the prevention of such disorders remains controversial.

### **2.3.3. Demonstrate understanding of available evidences for the use of HRT in such cases.**

**Available evidences for the use of HRT in such cases are as follow:**

1. Health care providers should not initiate or continue HRT for the sole purpose of preventing CVD (CAD and stroke).
2. Health care providers should abstain from prescribing HRT in women at high risk for venous thrombosis embolism (VTE).
3. Health care providers should consider other evidence based therapies and interventions to effectively reduce the risk of CVD events in women with or without vascular disease.

### **2.3.4 Describe cancer risk through menopause.**

#### **Menopause and cancer risk**

A woman who began menopause after age 55 has an increased risk of ovarian, breast, and uterine cancer. This risk is greater if a woman also began menstruating before the age of 12. A woman who menstruates longer than normal during her life is exposed to more estrogen. Excess exposure to estrogen increases a woman's risk of uterine and breast cancers.

#### **Does cancer treatment cause menopause or menopausal symptoms?**

Some cancer treatments may cause menopause or menopausal symptoms. Menopause caused by medical treatment is called medical (or surgical) menopause. The symptoms of medical menopause may be worse because the decrease in hormones happens quickly. Even if cancer treatment does not cause menopause immediately, it may cause menopause to start sooner.

### 2.3.5. Explain how cancer treatment can affect menopause.

The following cancer treatments may cause menopause:

- a. **Oophorectomy (surgical removal of the ovaries).** This type of surgery is used to treat or prevent ovarian, uterine, and vaginal cancers. It causes menopause immediately because the source of estrogen and progesterone is removed.
- b. **Radiation therapy or chemotherapy.** Radiation therapy to the pelvis and chemotherapy that damages the ovaries can cause early menopause. Menstrual periods may return for some younger woman after treatment, but women older than age 40 are less likely to have their menstrual periods return.
- c. **Hormonal therapy.** Hormonal therapy is used to treat breast cancer that is estrogen receptor- and/or progesterone receptor-positive. Hormonal or anti-estrogen therapies include the aromatase inhibitors including anastrozole (Arimidex), letrozole (Femara), exemestane (Aromasin) and tamoxifen.

The drugs tamoxifen (Nolvadex) and raloxifene (Evista) are used to reduce the risk of breast cancer for women who have been treated for breast cancer or who have a higher risk of breast cancer. The side effects of these drugs are similar to the symptoms of menopause.

### **2.3.6. Describe the effect of menopausal symptoms treatment and the risk of cancer.**

#### **Can the treatment of menopausal symptoms increase the risk of cancer?**

- Women taking combined hormone replacement therapy to manage menopausal symptoms may have increased risk of breast cancer.
- Hormone therapy with estrogen alone is only given to women who have had a hysterectomy because estrogen increases the risk of uterine cancer.
- The Women's Health Initiative also found that women taking combined hormone therapy had a decreased risk of colorectal cancer
- Recent research also showed that women who received combined HRT have a higher risk of dying from non-small cell lung cancer (NSCLC) if they develop the disease. However, woman in the study taking combined HRT therapy were not more likely to develop NSCLC than women who were not taking combined hormone therapy. The study also showed that the risk of dying from lung cancer was higher for women with NSCLC who smoke and take combined hormone therapy.

Research on combined hormone therapy is controversial and ongoing. The risks and benefits of the treatment are different for each woman.

### **2.3.7. Explain breast and ovarian cancers as one of late effects of estrogen deficiency**

#### **Breast Cancer**

Breast cancer is the most common cancer among women. Hormonal replacement therapy (HRT; estrogen plus progesterone) increases the risk of breast cancer slightly after 5 years of therapy

#### **Ovarian cancer**

Ovarian cancer is the fourth leading cause of cancer deaths among women. It most often occurs in women who are older than 50; according to the American Cancer Society, over half of those diagnosed with ovarian cancer are age 60 or older. Risk factors for ovarian cancer include:

- Having a family history of ovarian cancer.
- Having never been pregnant.
- Are over the age of 50 old.

Menopause itself does not cause ovarian cancer. But studies have linked long-term estrogen replacement therapy (more than 10 years) to an increased risk of ovarian cancer. Women should discuss the risks and benefits of this type of hormone therapy with their doctor.

## **CASE STUDY 1: the relation of CANCER ( CA Breast) prevention with age and type of advise given need to be more clarified for both cases**

### **Premenopausal With a Family History of Breast Cancer**

#### **Presentation**

A 45-year-old white premenopausal female arrives for a routine visit without any complaints or significant health problems. She is concerned about her risk for developing breast cancer (BC) and is interested in ways she may decrease her risk.

#### **Personal History**

- Menarche at age 11 years
- Parity at age 32 years
- No history of breast biopsies
- History of hysterectomy for fibroids, ovaries left intact
- No menopausal symptoms
- Nonsmoker

#### **Family History**

- Mother diagnosed with invasive BC at age 56 years
- No other family history of any other type of cancer

#### **Gail Risk Assessment**

- 5-year risk: 1.8%
- Lifetime risk: 11.9%

Clinical Decision Point

What type of BC risk reduction should this patient be advised to pursue?

- No risk reduction needed—yearly mammograms and lifestyle changes where applicable (weight reduction, moderate alcohol consumption, etc) are sufficient
- Chemoprevention with tamoxifen
- Chemoprevention with raloxifene
- Prophylactic surgery

## **Clinical Decision Point**

What type of BC risk reduction should this patient be advised to pursue?

- No risk reduction needed—yearly mammograms and lifestyle changes where applicable (weight reduction, moderate alcohol consumption, etc) are sufficient
- Chemoprevention with tamoxifen
- Chemoprevention with raloxifene
- Prophylactic surgery

## **CASE STUDY 1: Premenopausal With a Family History of Breast Cancer**

### **Comment**

This patient has a 5-year BC risk of 1.8% according to the Gail model. The Gail model is a risk assessment tool that identifies the risk for breast cancer in women who are not carriers of the BRCA mutation. This is a modest increase in risk over the general population, but the cutoff used in the Study of Tamoxifen and Raloxifene (STAR) trial showing a benefit in using raloxifene or tamoxifen for the prevention of BC was a 1.66% 5-year risk.<sup>1</sup> The National Surgical Adjuvant Breast and Bowel Project (NSABP) P-1 trial using tamoxifen for prevention used a cutoff of a 1.7% 5-year risk.<sup>2</sup> Therefore, this patient does meet the criteria for chemoprevention. A discussion of the data explaining the risks and benefits of chemoprevention is appropriate for this patient. Because the patient is premenopausal, raloxifene is not indicated as it has not been studied in premenopausal women. Tamoxifen 20 mg a day for 5 years would be appropriate to reduce the risk of invasive and noninvasive cancer.

### **Decision: Chemoprevention With Tamoxifen**

The patient is 45 years of age. When she is 50, she will have completed the recommended 5-year treatment course and will need to re-evaluate her options. Currently, data on chemoprevention and BC risk are available only for a 5-year course of treatment.<sup>1,2</sup> In the future, new data may modify this 5-year chemoprevention recommendation, but current treatment plans should stay in line with available data.

The patient is a nonsmoker and has no history of thrombosis. Although the risk of deep venous thrombosis (DVT) or pulmonary embolism (PE) is elevated with tamoxifen, she has no blood clotting history that would contraindicate its use. Additionally, her prior hysterectomy removes the increased risk of uterine hyperplasia.

Like all women concerned about lowering their risk for BC, the patient should be counseled to increase her physical activity to at least 45 minutes a day 5 days a week, increase her fruit and vegetable intake, have no more than an average of 1 alcoholic drink a day, and keep her body mass index below 25 kg/m<sup>2</sup>.<sup>3</sup>

These lifestyle changes alone are appropriate measures if the patient does not feel the risks are worth the benefit she would gain from tamoxifen, but she should understand her options.

## **Case Study.2**

### **Postmenopausal With a History of Atypical Hyperplasia of the Breast**

#### **Presentation**

A postmenopausal 50-year-old white female presents without any major medical problems. She feels well, but had a breast biopsy in the past and wants to do all she can to reduce her risk of BC.

#### **Personal History**

- Menarche at age 12 years
- Parity at age 28 years
- History of 1 breast biopsy that showed atypical hyperplasia
- History of osteopenia
- No menopausal symptoms
- Nonsmoker

#### **Family History**

- No family history of BC or ovarian cancer

#### **Gail Risk Assessment**

- 5-year risk: 2.5%
- Lifetime risk: 21.3%

#### **Clinical Decision Point**

What type of BC risk reduction should she be advised to pursue?

- No risk reduction needed—yearly mammograms and lifestyle changes where applicable (weight reduction, moderate alcohol consumption, etc) are sufficient
- Chemoprevention with tamoxifen
- Chemoprevention with raloxifene
- Prophylactic surgery

## **CASE STUDY 2:**

### **Postmenopausal With a Family History of Atypical Hyperplasia of the Breast**

#### **Comment**

The patient has a 2.5% risk of developing BC during the next 5 years. She must be counseled about lifestyle changes that can reduce her risk of BC and have a thorough discussion about the benefits and risks of chemoprevention with tamoxifen or raloxifene. She is postmenopausal, has not had a hysterectomy, and has a history of osteopenia.

#### **Decision: Chemoprevention With Raloxifene**

Based on her profile, she chooses to take raloxifene. This reduces her risk of BC and osteoporosis, with less of a risk for uterine adverse events.<sup>1</sup> Tamoxifen also would be effective for this patient, but the patient felt the risk/benefit ratio favored raloxifene.

Raloxifene has a 30% lower risk of DVT and PE than tamoxifen, but the incidence of stroke was not statistically different between tamoxifen and raloxifene in the STAR trial.<sup>1</sup> This patient has no history of blood clotting abnormalities. If she did have such a history, even a DVT with an identifiable cause, it would be prudent to get a hematology evaluation as this type of patient was not enrolled in the STAR trial.

Chemoprevention does not replace routine BC screening, and this patient should ( missing statement ??)

#### **Notes on Case studies**

1. Final answer about the suggested best method for risk reduction
2. More clarification about the use of drug and relation to age group in both cases (peri-menopause or menopause) \_\_\_\_\_

### **2.3.8. Explain endometrial, cervical, vaginal, vulvar cancers as another estrogen deficiency late effect.**

#### **Endometrial Cancer:**

It is becoming the most common gynecological malignancy by recent years in developed countries; mainly because of increase life expectancy, obesity & reduction in death from other malignancies. Several observers have suggested that a positive relationship may exist between the occurrence of menopause at an advanced age (>55 years old) and the development of cancer in the tissues of the female reproductive organs. The incidence of late menopause in cases of adenocarcinoma of the fundus uteri is about four times as high as it is in normal cases. Thus a woman starting to menstruate at the age of twelve and stopping at fifty-four, with a consequent cycle of forty two years, may naturally show a quite different biological reaction of the tissues to estrogenic activity from that of the woman starting at sixteen and ending at forty eight or earlier, with a cycle of estrogenic activity of thirty-two years or less.

Recently, researches reveal that Endometrial Ca at menopause is characterized by being of high grade and poorer prognosis

#### **Cervical cancer:**

The second common cancer after breast cancer in females worldwide it's linked to sexual activity especially age at first intercourse.

#### **Vaginal Cancer:**

Its account for only 1-2% of all gynecological cancers, with a peak incidence the sixth decade of life and mean age of 60-65 years.

#### **Vulvar cancer:**

The rarest cancer, account for less than 1% with peak incidence at age of 65 and more. The reactivation risk for human papillomavirus (HPV) infections may increase around age 50 years. Around the world, HPV prevalence spikes among younger women about the time they first have sex, but in Central and South America and Western Africa, a second spike also occurs when women reach menopause, a factor that can increase risk of cervical, vulvar, and vaginal cancers.

## **Module 3: Assessment of menopausal women.**

By the end of this module the participants will be able to:

1. Describe clinical examination for menopausal women.
2. Recognize care plan for menopausal women.
3. Apply treatment for women going through menopause.
4. Demonstrate understanding of contraception at peri-menopause, referral to higher level of care.

**Session 1:** Clinical examination of menopausal women.

**Session 2:** Care plan for menopausal women.

**Session 3:** Treatment of women going through menopause.

**Session 4:** Contraception at peri-menopause, referral to a higher level of care.

### **Evaluation/ Assessment**

Questions and answers, participants' summaries, trainer's evaluation

### **Estimated Training Time**

6 hours,45 min

## **Session 3.1: Clinical examination of menopausal women.**

### **Specific objectives of the session**

At the end of the session the participants will be able to:

- 1- Explain general physical examination of menopausal women..
- 2- List examinations needed for menopausal women.
- 3- Describe laboratory examination tests recommended during menopause
- 4- Describe laboratory examination tests recommended during menopause

### **Trainer preparation**

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

### **Methods and activities**

Exercises, questions and answers, discussion in plenary, brain storming and mini lecture

Resources

- Reference material/handouts: Menopause National Guidelines for primary health care providers. •
- Other: newsprint on easel, markers, masking tape, LCD projector •

### **Evaluation/assessment**

Questions and answers, trainer's observation and participant's summaries

Trainer

Experienced with Menopause National Guidelines for primary health care providers.

### **Estimated training time**

1 hour , 45min

Objective	Contents	Methods\ Activities
3.1.1 Explain general physical examination of menopausal women.  (30min.)	Holistic approach: <ul style="list-style-type: none"> <li>• Anthropometrics measures, body mass index (BMI), vital signs, mainly Blood pressure (BP).</li> <li>• Breast examination.</li> <li>• Pelvic examination.</li> </ul>	Brain storming
3.1.2 List examinations needed for menopausal women.  (15min.)	1- Confirmation of menopause. 2- FSH estimation. 3- Laboratory assessment tests.	Questions and Answers.
3.1.3 Describe laboratory examination tests recommended during menopause.  (30min.)	<ul style="list-style-type: none"> <li>• Lipid profile, Fasting glucose.</li> <li>• TSH levels.</li> <li>• Coagulation studies.</li> <li>• Full blood examination, iron study.</li> </ul>	Brain storming.
3.1.4 Explain laboratory procedures recommended during menopause.  (30min.)	<ul style="list-style-type: none"> <li>• Vaginal ultrasound.</li> <li>• Mammogram with/without breast ultrasound.</li> <li>• Bone assessment.</li> <li>• Pap smear.</li> <li>• Cardiovascular screening.</li> </ul>	Role play.

### **3.1.1 Explain general physical examination of menopausal women.**

#### **General physical examination:**

- Including anthropometrics measures, body mass index (BMI) and vital signs mainly Blood pressure (BP).
- Breast examination.
- Pelvic examination.

A holistic approach to health status should be taken, rather than simply looking for features of menopause in isolation. A thorough assessment of the cardiovascular system, respiratory system and musculoskeletal system may detect common age-related health problems, and help to create a management plan. In addition, clinical examination also looks for physical features of menopause such as dry hair and skin, and evaluation of thyroid status, Specific system examination, depending on the symptom presentation.

Breast examination needs to be carried out regularly due to an increased risk of breast cancer as women get older. (Annex: Risk Factor for breast cancer)

Pelvic examination is carried out to assess for the presences of complications of menopause such as urogenital atrophy. A bimanual examination should be performed to exclude pelvic pathology such as ovarian cysts or fibroids, especially following hysterectomy where the ovaries have been conserved. Gynecological examination, including a Pap smear according to national guideline for testing or, if there is abnormal vaginal bleeding or a previous abnormal smear.

### **3.1.2 List examinations needed for menopausal women.**

#### **Confirmation of menopause**

The diagnosis of the menopause can usually be ascertained from a characteristic history of the vasomotor symptoms of hot flushes and night sweats and prolonged episodes of amenorrhea. Measurement of plasma hormone levels in patients with classical symptoms are unnecessary, expensive, time consuming and of little clinical significance. So history is considered more relevant than hormone levels, as a wide variation of levels around the menopause.

#### **Follicle-stimulating hormone (FSH):**

FSH estimation is helpful in cases of premature menopause. Two levels of FSH  $> 30$  IU six weeks apart is consistent with ovarian failure.

#### **Laboratory assessment tests:**

### 3.1.3 Describe laboratory examination tests recommended during menopause.

1. **Lipid profile & fasting glucose:** may be useful in women with risk factors not only from a general screening point, but also if the patient is contemplating starting HRT. If abnormal lipids are detected, it should be corrected by diet and statins, if appropriate on an individual basis, before HRT is commenced.
2. **Thyroid Stimulating Hormone (TSH) levels:** indicated where there are symptoms of thyroid dysfunction or palpable thyroid, which may manifest around the time of the menopause.
3. **Coagulation studies:** Where past history of thrombo-embolism (particularly if spontaneous) or pulmonary embolism, and/or if less than 40 years old (Where family history or known familial disorder could be detected).
4. **Full blood examination, iron studies:** When abnormal bleeding, especially menorrhagia exists.
5. **Urodynamic Assessment:** Where there is a history of stress and/or urge incontinence, to determine the severity of the incontinence. The result will aid in planning and managing the symptoms.

### 3.1.4 Explain laboratory procedures recommended during menopause.

#### 1. Vaginal ultrasound:

- To assess endometrial thickness where there is abnormal vaginal bleeding, >4mm thickness in the post-menopausal woman requires endometrial sampling either by endometrial biopsy or hysteroscopy and curettage.
- To exclude endometrial pathology such as polyps or submucous fibroids.
- To exclude pelvic pathology such as ovarian cysts or fibroids.

Consider the following:

- Referral to a gynecologist is appropriate for further investigations such as hysteroscopy and endometrial biopsy/D&C, where the ultrasound shows an increased endometrial thickening greater than 4mm in the post menopause, pelvic pathology or with any postmenopausal bleeding.
- Endometrial biopsy is not a necessary prerequisite to treatment with HRT unless there are symptoms of postmenopausal bleeding or irregular perimenopausal bleeding.

2. **Mammogram with/without breast ultrasound:** If any breast abnormality is found on examination.

**3. Bone assessment: Bone density: There are different techniques for establishing bone density.** The most reproducible form is the DEXA (dual energy X-ray absorptiometry), which scans both the lumbar spine and the femoral neck. The Royal College of Physicians has issued guidelines as to which high-risk patients should be targeted for DEXA screening and that DEXAs are performed no more frequently for screening than every 2 years.

#### **4. Pap smear:**

The pap smear indications for women at any age in Iraq should be consistent with the National Program for cervical screening approved in Iraq in 2010 by MOH .

The National screening program recommends that:

- All women should have three times smear per life time with a 10-year interval between each smear commencing at an age not less than 25 years ( 25-45 years ) or at least one smear for all women who had previous sexual contact and they are between of 35-45 years old .
- A woman should be screened if she had previous abnormal smear (dysplasia or HPV changes) within the last two years.
- A smear every two years following hysterectomy for women who ever had an abnormal pap smear or cancer of the cervix or uterus.
- A smear should be performed for any woman presenting with abnormal vaginal bleeding.

#### **5. Mammogram with/ without breast ultrasound**

- Mammography should be performed as part of the national screening programme for breast cancer yearly for women with risk factor for CA breast and every 3 years for women above 50 years if they do not have any risk factor unless more frequent examinations are clinically indicated. (See Annex for risk factors).
- In women over 45 years of age it is best to arrange screening before starting estrogen therapy to identify patients with sub-clinical disease.

#### **6. Cardiovascular screening**

Menopause brings changes in the level of fats in a woman's blood. These fats, LDL cholesterol appears to increase while HDL decreases in postmenopausal women as a direct result of estrogen deficiency.

Elevated LDL and total cholesterol levels peak in women at 55-65; about 10 years later than the peak in men which can lead to stroke, heart attack, and death.

## **Session 3.2: Care plan for menopausal women.**

### **Specific objectives of the session**

At the end of the session the participants:

- List subjects of care plan for menopausal women
- Explain health education and psychological support at menopause transitional years.
- Demonstrate understanding of counseling menopausal women.
- Explain messages recommended to women going through menopause.
- Design an approach for menopause counseling.

### **Trainer preparation**

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

### **Methods and activities**

Role play, questions and answers, discussion in plenary, brain storming.

### **Resources**

- Reference material/handouts: Menopause National Guidelines for primary health care providers.
- Other: newsprint on easel, markers, masking tape, LCD projector

### **Evaluation/assessment**

Questions and answers, trainer's observation and participant's summaries

### **Trainer**

Experienced with Menopause National Guidelines for primary health care providers.

### **Estimated training time**

2 hours, 5 min.

## Session 3.2: Care plan for menopausal women.

### Session Plan

Objective	Content	Methods \ Activities
3.2.1. List subjects of care plan for menopausal women. (15min.)	1- Health education. 2- Psychological support. 3- Counseling. 4- Treatment.	Question and answers.
3.2.2 Explain health education and psychological support at menopause transitional years. (30min.)	<u>Health education:</u> What women might expect, when or how the process might happen, how long it might take. <u>Psychological support:</u> -positive attitude makes women look healthier. -negative attitudes increase hot flashes, fatigue, night sweats, sleeping disorders and aches).	Role play.
3.2.3 Demonstrate understanding of counseling menopausal women. (30min.)	-Addressing women's questions, concerns, enhancing the patient's confidence. - A mutual respect and trust enhances counseling. -Agree whether the treatment is short term or long-term or both. -Counseling on troublesome side effects, fail to experience the results.	Role play.
3.2.4 Explain massages recommended to women going through menopause. (25min.)	<ul style="list-style-type: none"> <li>• Keep cool.</li> <li>• Try to relax.</li> <li>• Sleep well.</li> <li>• Get some exercise.</li> </ul>	Discussion.

<p>3.2.5 Design an approach for menopause counseling.</p> <p>(25min.)</p>	<ul style="list-style-type: none"> <li>- Treat women always with respect.</li> <li>- Educate them about relevant health conditions.</li> <li>- Discuss risks, benefits.</li> <li>- Personalize the discussions According to woman's need.</li> <li>- Consider the patient's preferences, values, key concerns, and practical</li> </ul>	<p>Brain storming.</p>
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### **3.2.1. List subjects of care plan for menopausal women.**

### **3.2.2 Explain health education and psychological support at menopause transitional years.**

#### **Health education**

Many women arrive at their menopause transition years without knowing anything about what they might expect, or when or how the process might happen, and how long it might take. As a result, a woman who happens to undergo a strong perimenopause may become confused and anxious, fearing that something abnormal is happening to her. Hence, there is a strong need for information and more education on this subject.

#### **Psychological support**

The increased depression rate encountered during menopause suggests that it is not actually the hormonal changes, but the psychological impact associated with this stage that causes the problems.

While everyone agrees that dealing with all the physical changes that occur during menopause is not easy, most psychologists feel that depression during this stage is more a matter of attitude. The changes associated with menopause can be viewed from a different angle. During this stage, women can explore their creativity and social potential and expand their contribution to society. Women that have a positive attitude on the changes that happen in their body look healthier. Other studies have proved that negative attitudes on menopause also increase the unpleasant symptoms associated with it, such as hot flashes, fatigue, night sweats, sleeping disorders and aches.

### **3.2.3 Demonstrate understanding of counseling menopausal women.**

Individual counseling can be helpful to handle sad, depressed, anxious or confused feelings women may be having as they pass through this challenging transition time.

**Counseling Women about Menopause: Consider the following:**

- Face-to-face contact between a patient and clinician is most effective. However, there are many methods of providing information to patients, such as educational sessions, printed materials, audio and videotape.
- The objectives of counseling include addressing women's questions and concerns and enhancing the patient's confidence in the decision made to modify her life style. A partnership between clinician and patient characterized by mutual respect and trust enhances counseling.
- If Drug therapy is chosen, the patient and clinician should agree on the goals, whether they are short term (menopause symptom relief), long-term (primary or secondary prevention of diseases associated with aging), or both.
- The woman may experience troublesome side effects from pharmacologic agents, or fail to experience the expected or desired results. If the treatment decision was one made in partnership with her clinician, a woman is more likely to consult with the clinician before changing or discontinuing her treatment plan.

### **3.2.4 Explain massages recommended to women going through menopause.**

**The messages that are recommended to communicate to women going through menopause:**

#### Keep cool

Hot flushes and night sweats are the most common symptoms of the menopause. They're caused by a malfunction in the body's normal methods of temperature control. They can occur even before the periods have stopped but are most common in the first year after the last period.

To ease hot flushes and night sweats:

- Wear lighter clothing.
- Keep your bedroom cool at night.
- Try to reduce your stress levels.
- Avoid potential triggers, such as spicy food, caffeine, smoking and alcohol.

#### Try to relax

Psychological symptoms can include feeling down, anxiety, irritability, mood swings, tiredness and lack of energy. Because of the stress associated with menopause, it can be difficult to confirm if the psychological symptoms are a direct result of the menopause.

The following tactics can help improve the menopausal woman's mood:

- Getting plenty of rest.
- Regular exercise.
- Relaxation exercises such as yoga.

#### Sleep well

Restful sleep will help you cope with night sweats and other menopausal symptoms. Improve your sleep by:

- Avoiding exercise within two hours of bedtime.
- Going to bed at the same time every night.

#### Get some exercise

There's evidence that women who are more active tend to suffer less from the symptoms of the menopause. Exercise is important not only for the relief of short-term symptoms but also to protect the body from heart disease and osteoporosis. The benefits of exercise in preventing bone loss and fractures are well known. Brisk walking about three times a week is a cheap, easy and great way to start exercising.

#### Stop smoking

Women who smoke have an earlier menopause than non-smokers, have worse flushes and often don't respond as well to tablet forms of HRT. It is never too late to stop smoking.

### **3.2.5 Design an approach for menopause counseling.**

- Make an effort to address all of the Women's questions, Treat the woman's questions respectfully, even if her facts or sources are not ones you endorse.
- Educate the woman about relevant health conditions (such as heart disease and osteoporosis) so she appreciates how these diseases could affect her quality of life in the future.
- Discuss the known risks and benefits associated with each management option, and present in lay terminology information about the strength of the existing evidence and what remains unknown.
- Personalize the discussions based on the woman's need, health, social history, and family history.
- Consider the patient's preferences, values, and key concerns (e.g., family members' experiences, concern about breast cancer, etc.).
- Tailor the use of educational materials to the needs and wants of the woman and that briefly summarize relevant information.
- Consider with the woman practical issues that she may face if medication will be part of her management plan, such as cost, convenience, and side effects that might affect her desire to continue therapy.
- Ensure that follow-up is routinely done with all women who start a treatment with HRT regimen or any other pharmacological therapy. The interval for follow-up depends on the patient's needs and concerns.

## **Session 3.3: Treatment of women going through menopause.**

### **Specific objectives of the session**

At the end of the session the participants:

- 1- Describe-6 life style measures recommended for women going through menopause.
- 2- Define hormone replacement therapy (HRT).
- 3- Explain estrogen as one of preparations available globally.
- 4- Describe risks of HRT.
- 5- Explain estrogene/progesterones, androgens as one of preparations available globally.
- 6- Explain contraindications to HRT.
- 7- Describe complementary approach for symptomatic treatment.

### **Trainer preparation**

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

### **Methods and activities**

Role play, questions and answers, discussion in plenary, brain storming.

### **Resources**

- Reference material/handouts: Menopause National Guidelines for primary health providers.
- Other: newsprint on easel, markers, masking tape, LCD projector

### **Evaluation/assessment**

Questions and answers, trainer's observation and participant's summaries

### **Trainer**

Experienced with Menopause National Guidelines for primary health providers.

### **Estimated training time**

2 hours, 50 minutes

### 3.3.Session Plan

Objectives	Contents	Methods\ Activities
3.3.1 Describe-6 life style measures recommended for women going through menopause.  (30min.)	<ul style="list-style-type: none"> <li>• Getting enough calcium</li> <li>• Getting enough fiber.</li> <li>• Increase iron intake.</li> <li>• Eating fruits, vegetables.</li> <li>• Drink plenty of water.</li> <li>• Maintain a healthy weight.</li> <li>• Exercise.</li> </ul>	Brain storming
3.3.2 Define hormone replacement therapy (HRT). (20min.)	<ul style="list-style-type: none"> <li>• Estrogen Therapy: Estrogen is taken alone.</li> <li>• Progesterone/Progestin-Estrogen Therapy:</li> </ul>	Questions and answers
3.3.3 Explain estrogen as one of preparations available globally.  (30min.)	<ul style="list-style-type: none"> <li>• Minimum effective dose of oestradiol</li> <li>• To get the most physiological state possible with 2:1 oestradiol: oestrone ratio.</li> <li>• Larger dose may be needed in those with premature ovarian failure •</li> </ul>	Mini Lecture.
3.3.4. Explain progesterone/progestogens, androgens as one of preparations available globally. (30min.)	<p>1-A combination therapy estrogens and progestagens regimen should be used.</p> <ul style="list-style-type: none"> <li>-Bleeding problems.</li> <li>- <u>The recommendation</u> is to: take the lowest dose of hormone therapy for the shortest time possible.</li> </ul> <p>2-Androgens: For women with distressing sexual desire.</p>	Mini Lecture.

<p>3.3.5. Describe risks of HRT.  (15min.)</p>	<ul style="list-style-type: none"> <li>- CV risks.</li> <li>- Breast cancer risks.</li> </ul>	<p>Questions and Answers</p>
<p>3.3.6. Explain contraindications to HRT. (30min.)</p>	<ul style="list-style-type: none"> <li>-Breast cancer.</li> <li>-History of CVD, stroke.</li> <li>-Recurrent, active blood clots.</li> <li>-Known, suspected pregnancy.</li> <li>-Smoking.</li> <li>-Treatment of endometriosis is controversial.</li> </ul>	<p>Discussion.</p>
<p>3.3.7. Describe complementary approach for symptomatic treatment. (15min.)</p>	<ul style="list-style-type: none"> <li>- Life style changes.</li> <li>- Non pharmacological alternatives.</li> <li>-Pharmacological alternatives.</li> <li>-Other complementary therapies.</li> </ul>	<p>Brain Storming.</p>

### 3.3.1 Describe-6 life style measures recommended for women going through menopause.

#### Diet

Some risk factors associated with aging and menopause cannot be changed. However, healthy eating and regular physical exercise can prevent or reduce certain conditions that may develop during and after menopause. The following dietary advice is recommended:

- Getting enough calcium: Eating and drinking 2 to 4 servings of dairy products and calcium-rich foods. Calcium is found in dairy products and fish.
- Increase iron intake: Eating at least 3 servings of iron-rich foods a day. Iron is found in lean red meat, poultry, fish, eggs, leafy green vegetables, nuts and enriched grain products.
- Getting enough fiber: Food high in fiber include whole-grain breads, cereals, pasta, rice, fresh fruits and vegetables.
- Eating fruits and vegetables: Include at least 2 to 4 servings of fruits and 3 to 5 servings of vegetables daily.
- Drink plenty of water: Drink at least eight 8-ounce glasses of water a day.
- Maintain a healthy weight: Lose weight (if overweight) by cutting down on portion sizes and reducing foods high in fat, not by skipping meals.
- Reduce foods high in fat: Fat should provide 30 percent or less of the total daily calories. Also, limit saturated fat to less than 10 percent of the total daily calories. Saturated fat raises cholesterol and increases the risk of heart disease. Saturated fat is found in fatty meats, whole milk, ice cream and cheese. Limit cholesterol intake to 300 milligrams (mg) or less per day.
- Use sugar and salt in moderation: Too much sodium in the diet is linked to high blood pressure. Also, reduce smoked, salt-cured and charbroiled foods – these foods contain high levels of nitrates, which have been linked to cancer.
- Avoid smoking.
- Exercise: Exercise is the most beneficial activity for women in their menopausal years. Postmenopausal women who exercise regularly are about half as likely to develop diabetes as their more sedentary counterparts. Women who exercised more than four times per week had half the risk of diabetes compared with women who never or rarely exercised (moderately or vigorously).

### 3.3.2 Define hormone replacement therapy (HRT).

As mentioned before under Cardiovascular Diseases (CVD), HRT is one of the options for the treatment of Osteoporosis. Choosing whether or not to use postmenopausal hormone therapy is an important health decision. There are two main types of hormone replacement therapy:

- **Estrogen Therapy:** Estrogen is taken alone.
- **Progesterone/Progestin-Estrogen Hormone Therapy:** Also called combination therapy, this form of HRT combines doses of estrogen and progesterone (progestin is a synthetic form of progesterone).

### 3.3.3 Explain estrogen as one of preparations available globally.

Minimum effective dose of oestradiol should be used and increase accordingly, (there is a dose-response effects with venous thromboembolism and stroke). With lower dose of estrogen, there is less likely for woman to have breast tenderness, endometrial stimulation and associated bleeding problem.

The goal of treatment is to get the most physiological state possible with 2:1 oestradiol: oestrone ratio. It is better to avoid the oral route, since the oral preparation are partially metabolized in the liver by hepatic first-pass metabolism and the thromboembolic risk is also neutralized by avoidance of first pass stimulation of coagulation factors, even in woman who are obese and thrombophilic.

Doses: twice weekly or once weekly transdermal systems containing both estrogen and progestogen as combined HRT. Oestradiol is also available as low volume daily transdermal gel.

Local (vaginal) estrogen, as cream, tablets and ring containing oestradiol and oestradiol will not cause endometrial hyperplasia according and can be used safely without adding progestogens. Oestradiol vaginal tab (25ug) is effective in relieving menopausal symptoms and urogenital symptoms without causing endometrial hyperplasia. The conjugated equine estrogen cream will cause endometrial hyperplasia and should include a progestogen added to the formulation to prevent this adverse effect.

Recommended starting dose of currently available systemic estrogen:

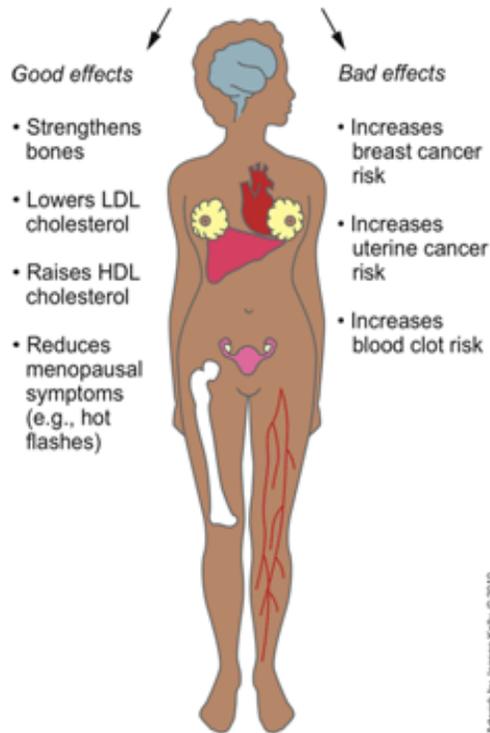
- 0.3 mg oral conjugated equine estrogens.
- 1 mg oral micronized oestradiol or oestradiol valerate.
- 25-50 mcg transdermal oestradiol.
- Two (0.5) metered doses of oestradiol gel.
- 25-50 mg of implanted oestradiol.

Note: Larger dose may be needed in those with premature ovarian failure

- There are twice weekly or once weekly transdermal systems containing both estrogen and progestogen as combined HRT. Oestradiol also available as low volume daily transdermal gel.
- Local (vaginal) estrogen, as cream, tablets and ring containing oestradiol and oestradiol. They are not producing endometrial hyperplasia according to the available evidence and can be used without progestogenic opposition in low dose preparation. 25ug oestradiol vaginal tab. is effective in relieving menopausal symptoms, and a continuous year of use is very effective in relieving urogenital symptoms with no endometrial effects. The conjugated equine estrogen cream that causes endometrial hyperplasia requires progestogenic opposition after 3 months.

# Estrogen Replacement in Menopause

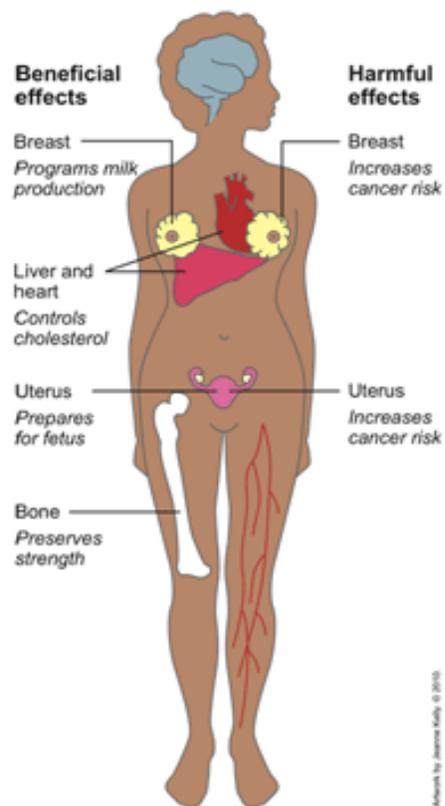
Estrogen effects associated with hormone replacement therapy during menopause



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# Estrogen and Cancer



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### 3.3.4. Explain progesterone/progestogens, androgens as one of preparations available globally.

A combination therapy with estrogens and progestagens regimen should be used (continuous estrogen + progesterone for 12-14 days / month) when the HRT is initiated within the first year after the last menstrual period occurred. If the woman had a previous subtotal hysterectomy done, progesterone should be given after 3-6 months of estrogen therapy initiation in case of any residual endometrium left.

Minimum dose of progesterone given orally in HRT in the sequential combined daily dose ( in continuous dose use less, mostly around half the dose) are:

- Testosterone derivative (Norethisterone; 5 mg, levonorgestrel; 75 mg ) or
- Progesterone- derived progestogens (Cyproterone; 2mg, Medroxyprogesterone; 5mg, cyclogest pessaries; 400 mg, crinone gel; alternate days/ 12 days per cycle) and Spironolactone-derived progestogens (Drospirenone; not active as sequential and use as continuous treatment in 2 mg).

Bleeding problems: if heavy or erratic, the dose of progestogen could be doubled or the duration increased to 21 days. Persistent bleeding beyond 6 months needs investigations.

Side effect of Progesterone include: fluid retention, androgenic side effect in testosterone derivative and mood swing. Natural progesterone has fewer side effects. Drospirenone derivatives recently formulated with low dose estrogen in continuous combined preparation, which progesterone receptors specific, anti-androgenic and anti-meniralo corticoid properties and may have lowering effect on blood pressure.

Estrogen and a lower dose of progesterone also may be given continuously to prevent the regular, monthly bleeding that can occur when combination HRT is used. If the bleeding persisted, the progesterone dose could be doubled or the duration increased to 21 days. Persistent bleeding beyond 6 months needs further investigations.

The current recommendation is to take the lowest dose of hormone therapy for the shortest time possible. Like all prescription medications, HRT should be re-evaluated each year. The combination therapy may be continuous (ie, daily administration of estrogen and progestogen) or continuous sequential (ie, daily administration of estrogen, with progestogen added on certain days).

The following charts list the names of some, postmenopausal hormones.

<b>Estrogen Types:</b>	<b>Brand Names:</b>
Pills	Cenestin, Estinyl, Estrace, Menest, Ogen, Premarin
Cream	Estrace, Ogen, Ortho Dienestrol, Premarin
Vaginal ring	Estring, Femring

Vaginal tablet	Vagifem
Patch	Alora, Climara, Esclim, Estraderm, Vivelle-Dot
<b>Progestin Types:</b>	<b>Brand Names:</b>
Pills/Capsules	Amen, Aygestin, Curretab, Cycrin, Megace, Prometrium, Provera
Vaginal Gel	Prochieve progesterone gel 4%, 8%

<b>Combination Types:</b>	<b>Brand Names:</b>
Pills	Activella, FemHRT, Ortho-Prefest, Premphase, Prempro, low-dose Prempro
Patch	CombiPatch, Climara-Pro

Note: The main drugs which are available in Iraq are Premarine tablet and cream, medroxyprogesterone acetate (provera). Other drugs are not available or available in the private sector on a limited scale .

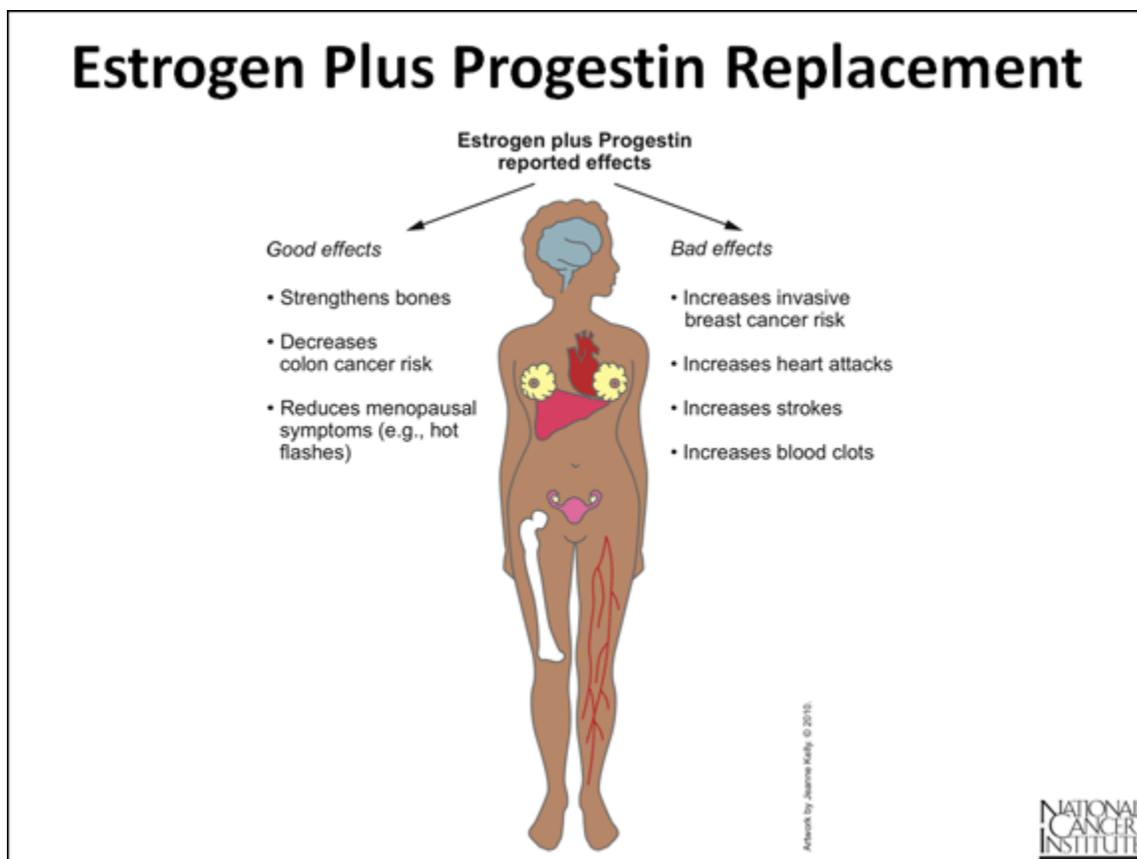
### **Androgens:**

Women with distressing sexual desire and tiredness should be provided with androgen supplementation. The dose, duration and indication depends on whether the menopause was surgically induced or spontaneous menopause but usually 300mcg of Testosterone patch twice a week could be used.

### 3.3.5. Describe risks of HRT.

#### Risks of HRT:

- Recent analysis of the women's health initiative (WHI) researches shows that: CV risks were confined to the oldest age group, while younger age women show a trend towards improvement of CV risk and significant reduction in all causes of mortality.
- Those studies in addition to the guidance issued by the International Menopause Society, showed that the Risk of breast cancer did not become significant until 7 years after usage (around 1 extra case per 1000 women per annum), and for a woman in a normal menopause, the benefit of HRT far outweigh the risk.



### 3.3.6. Explain contraindications to HRT.

- Breast cancer should be regarded as the principle contraindication to estrogen treatment.
- Women with a history of Cardiovascular disorder (CVD) & stroke.
- Recurrent or active blood clots. Venous thromboembolic disease, although transdermal preparations are safer by avoiding first hepatic pass metabolism.
- Natural estrogen when given to normotensive, or hypertensive women, don't cause an elevation in blood pressure and if combined with oral natural progesterone or drospirenone may actually lower blood pressure, so there is little justification from holding HRT in controlled hypertensive women.
- For women seeking HRT with sever endometriosis should be given continuous combined therapy even after hysterectomy to prevent recurrence.
- Known or suspected pregnancy
- Cigarette smokers should consider stopping tobacco use before taking HRT.
- Treatment of patients with endometrial carcinoma is controversial, but there are reports of estrogen use without any detrimental effects in stage I-III disease. Squamous cervical carcinoma is not estrogen sensitive. There are no adverse data in ovarian cancer survivors, although there may be very small risk of ovarian cancer with long term unopposed eostrogen use in healthy women. There are no data for adenocarcinoma of the cervix, vaginal or vulvar cancer.

#### Duration of therapy:

It is recognized that symptoms often return when HRT is ceased, even after many years of use.

- If the main cause of its use is to improve quality of life, then no dead line could be stated to stop treatment.
- Duration of treatments needs careful judgments of benefits and risks and if therapy needs to be discontinued then that must be done gradually.

#### Practical prescription advice:

- Still recommended that HRT use mainly for symptoms relieve in short term at a lowest effective dose.
- Considered in long term for prevention of osteoporosis with annual reassessment of risk and advantage.

### 3.3.7. Describe complementary approach for symptomatic treatment

- Life style changes.
- Non pharmacological alternatives.
- Pharmacological alternatives.
- Other complementary therapies.

## **Session 3.4: Contraception at peri-menopause, referral to a higher level of care.**

### **Specific objectives of the session**

At the end of the session the participants will be able to:

- Explain contraception Medical Illegibility Criteria (MEC) for women over 40
- Describe health benefits associated with CHC use for women above 40.
- Explain indications for referral to a higher level of care.

### **Trainer preparation**

- Review the reading material and the session plan.
- Prepare the presentation as appropriate and as recommended in the method column of the session plan, or write the information on a flipchart or board where all participants can see it.
- Prepare copies of the reference materials/handouts and exercises.
- Arrange the training room.

### **Methods and activities**

Exercises, questions and answers, discussion in plenary, brain storming and simulation.

### **Resources**

- Reference material/handouts: Menopause National Guidelines for Primary Health Providers.
- Other: newsprint on easel, markers, masking tape, LCD projector

### **Evaluation/assessment**

Questions and answers, trainer's observation and participant's summaries

### **Trainer**

Experienced with Menopause National Guidelines for Primary Health Providers.

### **Estimated training time**

1 hour, 15 min.

## Session Plan

Objective	Content	Methods/ Activities
3.4.1 Explain contraception Medical Illegibility Criteria (MEC) for women over 40. (30min.)	A clinical history will enable practitioners to assess the risk of contraceptives as well as the medical and social factors that may influence this use.	Discussion.
3.4.2 Describe health benefits associated with CHC use for women above 40. (15min.)	<ul style="list-style-type: none"> <li>• Bone health.</li> <li>• Menopausal symptoms.</li> </ul>	Questions and Answers.
3.4.3 Explain indications for referral to a higher level of care. (30min.)	<ul style="list-style-type: none"> <li>• Abnormal bleeding.</li> <li>• Multiple treatment failure.</li> <li>• Suspected venous thrombosis embolism.</li> <li>• Premature menopause. Referral for US, mammography, BDM. Osteoporosis. Previous or high risk of malignancy.</li> </ul>	Brain Storming.

### **3.4.1 Explain contraception Medical Illegibility Criteria (MEC) for women over 40.**

#### **Contraception: Medical Eligibility Criteria (MEC) for women over 40**

There are wide ranges of contraceptive methods available, none of which are contraindicated based on age alone. However as individuals get older, age may become a more significant risk factor for developing incidental medical conditions that could impact on contraceptive choice.

A clinical history (medical, sexual, reproductive and social) will enable practitioners to assess the risk of contraceptives as well as the medical and social factors that may influence this use such as frequency of intercourse, menstrual dysfunction and lifestyle factors such as smoking and concurrent medical conditions.

The guidance in the box below provides evidence-based recommendations to clinicians in making decisions about contraceptive choices, including stopping contraception.

#### **Special Considerations for the Contraceptive Method Choice**

- Women age 35 and older who smoke—regardless of how much—should not use COCs, the patch, or the vaginal ring.
- Women age 35 and older who smoke 15 or more cigarettes a day should not use monthly injectables.
- Women age 35 or older should not use COCs, monthly injectables, the patch, or the vaginal ring if they have migraine headaches (whether with migraine aura or not).

-

### **3.4.2 Describe health benefits associated with CHC use for women above 40.**

#### **Bone health**

It is not possible to say, from the evidence that currently exists, whether use of hormonal Contraception influences fracture risk but Women can be advised that combined contraceptives (COC) use in the perimenopause may help to maintain bone density.

#### **Menopausal symptoms**

There is a small amount of data that suggests COC may help to improve some of the symptoms associated with menopause. There may be some theoretical benefit from an extended regimen such as taking three pill packets continuously (tricycling).

In clinical practice CHC may reduce menopausal symptoms and practitioners who are prescribing COC to women aged over 40 years may consider a pill with 30 µg Ethinyl Estradiol as a suitable first choice.

### 3.4.3 Explain indications for referral to a higher level of care.

The majority of women can be managed in primary care, but in the following situations referral may be necessary for investigation and specialist advice especially about the use of HRT. Referral is indicated in the following conditions:

1. Abnormal Bleeding:
  - Non-HRT users: a sudden change in menstrual pattern, intermenstrual bleeding, post coital bleeding, or post-menopausal bleeding.
  - HRT-users:
    - Sequential HRT: a change in pattern of withdrawal bleeds or breakthrough bleeding.
    - Continuous combined or long cycle regimens:
      - Breakthrough bleeding persisting for more than 4-6 months after starting or which is not lessening.
      - A bleed after amenorrhea on a continuous combined regimen.
      - Ultrasound scan – ideally transvaginal – reporting endometrial thickness/cervical smear report.
2. Multiple Treatment Failure: Three or more regimens tried. List types of HRT and detail problems.
3. Venous Thrombo-embolism, suspected by Personal history, family history of unprovoked event in a first degree relative age <50 or confirmed cases for investigation and follow up.
4. Premature menopause / Premature Ovarian Failure (Menopause <40).
5. Referral for Ultrasound, Mammogram and Dexa scans when indicated and as previously mentioned in the guide.
6. Osteoporosis: referral for screening and treatment.
7. Previous or High Risk of Malignancy: e.g. breast± ovarian/ endometrial cancer.

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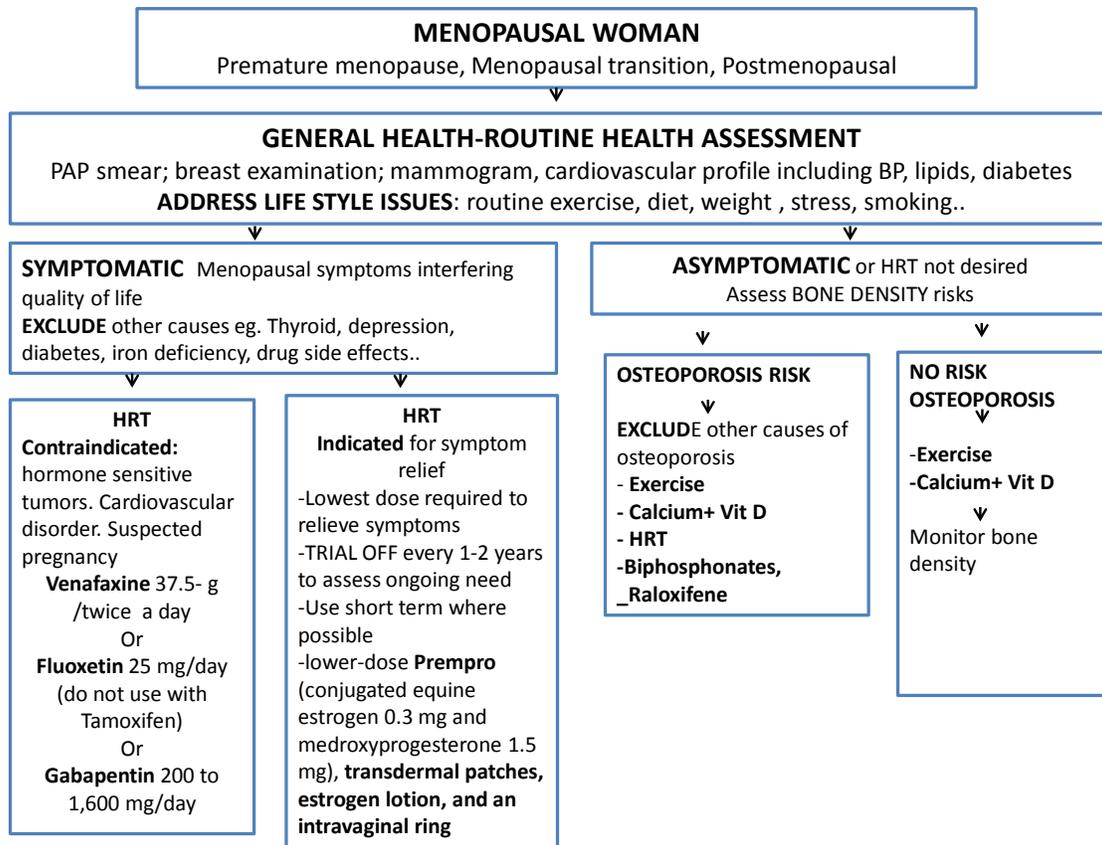
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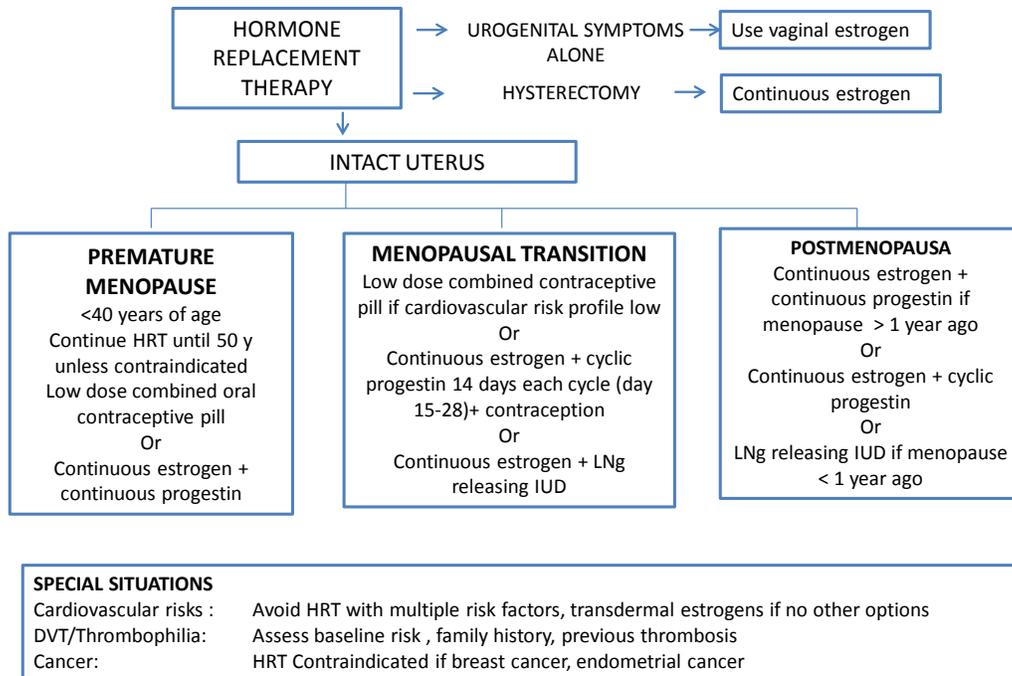
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## Annex 1: Algorithm for menopause management



## Annex 2: Algorithm for HRT



### Annex 3: Performance checklist

- Assess the menopausal symptoms presentation. Normal in woman between 45-55 years. Premature menopause if symptoms appear in younger of 40 years of age. Identification of causes of premature menopause
- Clinical history and determination of risk factors for cardiovascular disorder, smoking and other possible disorders.
- Physical Assessment: weight and determination of BMI, Blood pressure, breast examination.
- Laboratory test: PAP smear, mammogram, cholesterol and lipids, blood glucose.
- Counseling on: changes expected during the menopause and coping mechanisms, nutrition, exercise, weight management.
- Treatment options:
  - Intense menopausal symptoms that interfere with daily activities.
  - Consider Hormonal Replacement Therapy (HRT)
    - lower-dose Prempro (conjugated equine estrogen 0.3 mg and medroxyprogesterone 1.5 mg)
  - Consider alternatives to HRT:
    - Venafaxine 37.5- g /twice a day, or
    - Fluoxetine 25 mg/day (do not use with Tamoxifen), or
    - Gabapentin 200 to 1,600 mg/day
- Osteoporosis prevention:
  - No osteoporosis risk: recommend exercise, Vit D and Calcium
  - Osteoporosis risk: in addition to vit D and Calcium
    - HRT
    - Biphosphonates, \_Raloxifene
- Pregnancy prevention. HRT doesn't provide contraception, there is the need to use other methods until at least 12 month since the last menstrual period (Figure 2)
- Follow up every 6 months or earlier if bleeding or other symptoms appeared

#### **Annex 4: General fitness and flexibility exercises for menopause**

Gentle exercise that promotes mobility, flexibility and relaxation and at the same time decrease stiffness and soreness often helps the menopausal woman is recommended. Vigor and energy are usually enhanced with regular exercise. Using stairs whenever possible and increasing daily walking time are two of the very best exercises

##### **Deep Abdominal Breathing**

This breathing will promote deep relaxation, abundant energy, and stress control: tell the woman to Lie flat on the back with your knees pulled up, keeping your feet slightly apart. Inhale deeply through the nose, allowing your stomach to relax. The stomach should balloon out as you breathe in. Imagine that your body is filling with energy on each inhalation. As you exhale, imagine the air being pushed out from the bottom of your lungs to the top **Joint Flexibility**

Improving range of motion and flexibility in all joints will remedy stiffness and soreness that are so common as we reach menopause.

With the exception of the last one, the following exercises are done in sequence sitting on the floor, legs stretched out in front.

- Toes - Place your hands at your sides and flex your toes 10 times.
- Ankles - Rotate your ankles in each direction 10 times, keeping heels on the floor.
- Knees - Bend the right leg and bring the heel near your buttock. Then lift the right leg off the floor and straighten the right knee, repeating 10 times. Then the left leg and knee 10 times. Next, holding your thigh near your body, rotate your lower leg as you did your ankle, 10 times clockwise and 10 times counterclockwise.
- Hips – Bend the left leg and place your left foot on your right thigh. Hold the left knee with the left hand, and the left ankle with the right hand. Gently move the knee up and down with the left hand; then repeat with the right leg. Now rotate the left knee clockwise 10 times then counterclockwise 10 times. This improves hip flexibility. Repeat with the right knee. Also for hip flexibility, bring the soles of the feet together, bringing the heels close to the body. Using your hands, press your knees to the floor and let them come up again. Repeat 10 times.
- Fingers – Lift your arms to shoulder height. Keeping your arms straight open the hands wide. Flex your fingers, closing over your thumbs. Repeat 10 times.
- Wrists – Flex and extend the wrists, repeating 10 times. Rotate your wrists clockwise and counterclockwise 10 times each. Now hold the hand in extension and move it from side to side at the wrist. Repeat 10 times.

- Elbows – Stretch out the arms at shoulder height with palms facing upward. Bend the arms at the elbow and touch the shoulders with your fingers; then straighten out the arms again. Repeat 10 times with arms front, then with arms extended sideways.
- Shoulders – With arms bent and fingertips touching the shoulders, make circular motions with the elbows. Repeat 10 times clockwise and 10 times counterclockwise.
- Spine – With legs straight out in front, reach over and touch your legs without bending your knees. Repeat 20 times.
- Waist – Stand up and slowly reach over and touch your toes, bending from the waist. Try to keep your knees straight. Repeat 10 times. Remain standing, and spread your legs about 2 feet apart. Bend to the side at the waist first to the left, reaching your right arm over your head, repeating 5 times. Then repeat, bending to the right with your left arm over your head.

### **Muscle Tension Release, Energy Level Increase**

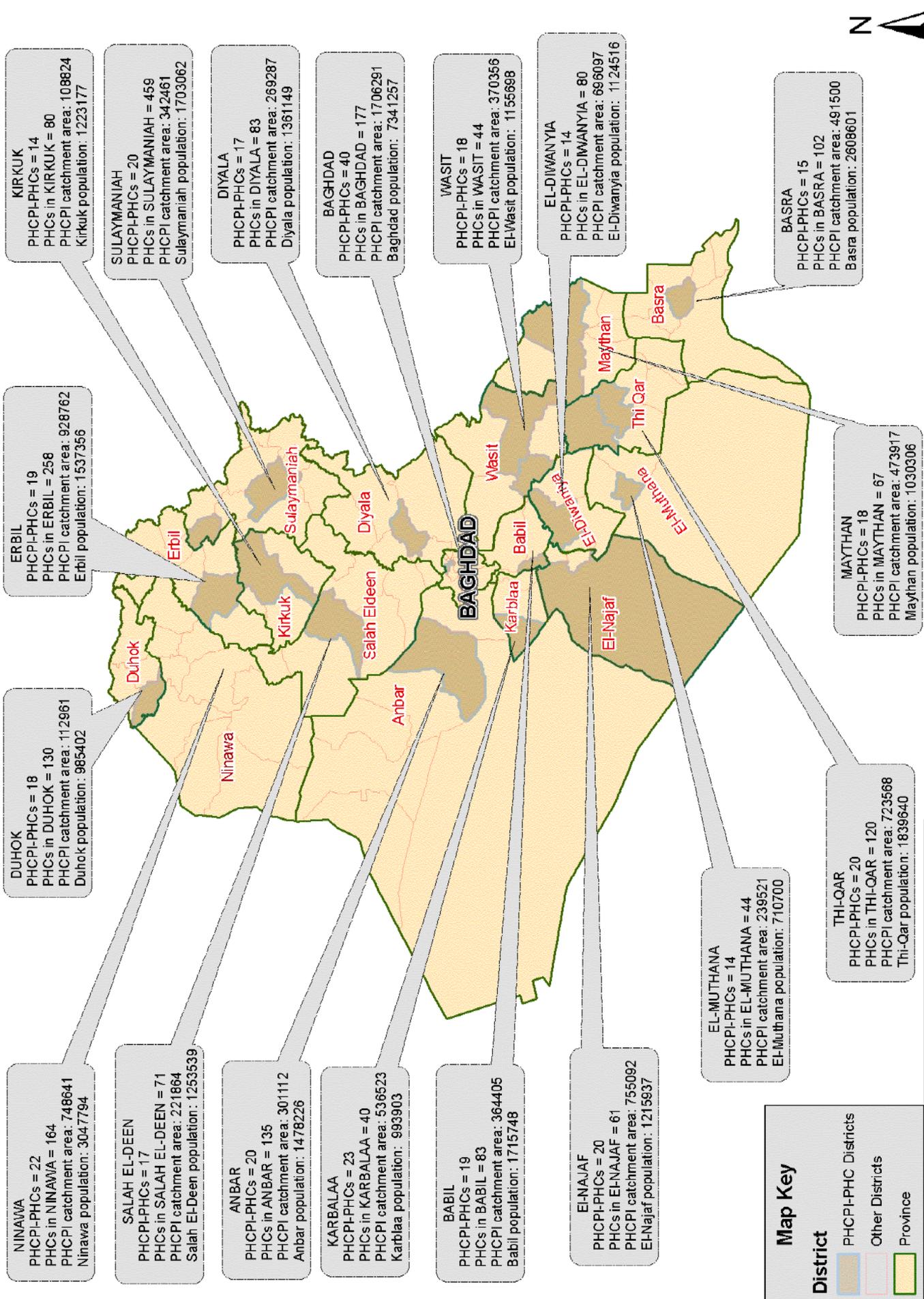
- Legs and pelvis – Stand with legs 2 feet apart and point your feet out at a comfortable angle. Bend your knees slowly and lower your buttocks. Eventually they should be able to go as low as your knees. Move up and down 10 times.
- Legs and pelvis – Stand with legs 2 feet apart and feet facing forward. Rock your pelvis back and forth. Repeat 10 times.
- Legs and pelvis – In the same position, move your hips and pelvis from side to side. Let your torso and arms sway in the opposite direction, as if dancing.
- Entire body – Jump up and down in place for several minutes. Allow your arms to move freely. Shake out your wrists, and raise your arms over your head, while jumping to release tension in the shoulders and arms.
- Shoulders, neck, torso – Sit down with legs out in front. Raise your arms to shoulder level, bending at the elbow. Place your hands on your shoulders with your fingers in front and thumb in back. Turn your elbows, head, and neck to the left and then to the right. Repeat 10 times. Be sure to let your entire torso move with your shoulders and arms. Then move your shoulders in circles in a forward direction 10 times. Repeat in circles in a backward direction 10 times, allowing your torso to follow your shoulders so the movement is fluid.
- Neck and head – Still in a sitting position, flex your neck backward, so that your face looks at the ceiling. Repeat slowly 10 times. Then turn your head from side to side (left to right). Repeat 10 times.
- Eyes – From a sitting position, look straight ahead. Then slowly raise your eyes up and down, then side to side. Repeat 10 times.

## **Annex 5: Risk factors for breast cancer**

Certain risk factors exist, that increase a woman's chance of developing breast cancer

- Age - it's more common in women over 50.
- Family history - if a woman's mother or sister had the disease before menopause, this is occasionally associated with one of two genes linked to breast cancer.
- Previous breast cancer.
- Family history of ovarian cancer.
- Age of pregnancy - women who haven't had children, or whose first child was born after age 30.
- Age of menstruation - starting periods at a young age (under 12 years old).
- Entering menopause later (over age 55) increases breast cancer risks.
- Recent research suggests that women who start smoking regularly within 5 years of the onset of their menstrual periods are 70% more likely to develop breast cancer before the age of 50 than non-smokers.
- Having dense breast tissue.
- Radiation treatment to the chest, especially before 30 years of age.
- Oral contraceptives increase risks slightly, if used over many years.
- Obesity with excess caloric and fat intake.
- Alcohol consumption contributes to the risk of breast cancer.

# PHCPI-PHCs population mapped to IRAQ population



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