Diabetes Self-Management Education

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Reviews in the Literature


Knowledge and Behavior Change

Successful behavior change means that the individual is doing the following:

- taking new positive actions (e.g., taking individual medications)
- increasing the frequency or intensity of positive actions (walking more)
- ceasing destructive actions (e.g., smoking)
- continuing to maintain positive actions at an acceptable level

Behavioral versus Clinical

**Behavioral goals**
1. I will walk every evening for ½ hour.
2. I will trim the fat off meat when I dine out.
3. I will take my blood pressure medication every day.

**Clinical outcomes**
1. I will lose 10 lbs.
2. I will lower my cholesterol level.
3. I will lower my blood pressure.
Goals should be:

• Clear and specific
• Reasonable and realistic
• Achievable
• Tied to clear and specific actions
• Measurable and time-limited
• Minimal in scope
• Agreed upon

Challenges/Barriers

• Finances
• Lack of knowledge
• Limited support
• Depression
• Stress
• Inaccurate health beliefs
• Social problems
• Competing priorities
• Changes in medical status/disease progression

Monitor and Measure Goals

• Re-evaluate
• Discuss challenges
• Re-work original goal
• If successful, move to the next goal
• Reward

Recommended Reading

• Siminerio L (Ed.) McLaughlin S and Polonsky W (Contributing Ed.) American Diabetes Association Diabetes Education Goals 3rd Edition.

Theory of Adult Education

Knowles, M.

• Adult learners
  – are self-directed
  – are task– or problem–oriented learners
  – bring experience to the learning situation
  – are more likely to learn when learning has meaning for who they are

Child Learners:

• are other-directed
• have few past experiences
• are subject-centered
• have a delayed application of learning
### Life Stages

- Infant/Preschool
- School-age
- Adolescence
- Young adult
- Adult
- Older adult

### Infant/Preschool

**Issues to consider:**
- Parents are primary caretakers
- Guilt, fears, frustration
- Shared family responsibility
- Specialist care
- Networking and support systems

### Infant/Preschool cont.

- Fear of injections and finger pricks
- Use creative strategies through play
- Avoid hypoglycemia
- Glycemic target range is usually higher

### School-aged Child

**Issues to consider:**
- Moving toward independence
- School
- Self-care
- Sharing responsibilities
- Sports/parties/peer relationships
- Camp

### Adolescent

**Issues to consider:**
- Hormonal changes
  - Insulin resistance
  - Variable blood glucose results
- Psychosocial challenges
  - Peer pressures (dating, conflicting priorities, alcohol, career path….)

### Young Adult

**Issues to consider:**
- Transition to adult responsibilities
- Psychosocial adjustment
- Ongoing medical care
## Adult

Issues to consider:
- Marriage
- Parenting
- Costs
- Employment
- Insurance

## Older Adult

Issues to consider:
- Changes in physiological and sensory perception
- Co-morbidities
  - Dietary restrictions
  - Increase in prescribed drugs

## Additional Considerations

- Finances
- Social changes
  - Loneliness, worry, frustration, helplessness
- Poor knowledge/lack of education
  - Readiness, cognition
- Physical limitations
- Support systems

## Recommended Reading


## Survival Skills

Consider teaching survival skills to those who:
- are overwhelmed at diagnosis
- are emotionally troubled with
  - Fear
  - Depression
  - Frustration
- have metabolic disarray
- have conflicting priorities
- have learning challenges
  - Limited intelligence, co-morbidities that affect cognition
- have limited access to education

## AADE 7 Self-Care Behaviors

1. Healthy eating
2. Being active
3. Monitoring
4. Taking medications
5. Problem-solving
6. Healthy coping
7. Reducing risks
### Eating Healthy

The person with diabetes will be able to state that:

- Dietary management is a critical component of management.
- Eating meals and snacks at consistent times is important.
- Food is important in the control of blood glucose and lipid levels.
- Eating consistent amounts of carbohydrate at meals and snacks is important.

### Eating Healthy cont.

- Carbohydrate, protein, and fat affect blood glucose levels differently.
- During periods of illness, modifications in food will be necessary.
- Additional food may be needed before, during, or after physical activity.
- Types and amounts of food to use to prevent hypoglycemia during and after exercise are important.

### Being Active

The person with diabetes will be able to state that:

- Physical activity is recommended for overall general health and for specific diabetes management.
- Exercise usually lowers blood glucose levels.
- There are best times to exercise.
- Hypoglycemia can occur during or after exercise.
- It is necessary to carry a high carbohydrate snack and list examples and amounts.

### Being Active cont.

- Keeping blood glucose records related to exercise is important.
- In certain situations one should not exercise.
- There are situations when exercise is not appropriate.
- It is important to inform friends and others of the possibility of hypoglycemia related to exercise, with instructions on how to prevent, recognize, and treat it.
- It is necessary to consult with the healthcare team before beginning an exercise program.

### Monitoring

The person with diabetes will be able to describe:

- Methods of monitoring blood glucose levels.
- Timing of glucose monitoring.
- Proper disposal of lancets.
- How to contact healthcare providers if blood glucose tests are consistently higher or lower than the guidelines given.
- The relationship of food and meals to insulin, activity, and blood glucose levels.
- Monitoring tests needed.

### Monitoring cont.

The person with diabetes will be able to demonstrate:

- How to perform blood glucose tests with appropriate testing material.
- How to record the results of blood glucose tests.
- How to record urine ketone tests.
Taking Medication
The person with diabetes will be able to state:

- what action oral medication has on blood glucose level.
- the name of oral medication (if used), its correct dosage, and when it is to be taken.
- the possible side effects of oral medication.
- the possible interactions of oral medication with other medications taken.
- that insulin may be needed temporarily (e.g., with surgery or stressful illness), or may be needed in addition to oral medications, possibly at bedtime.

Taking Medication cont.
- that most people with type 2 diabetes eventually need insulin.
- that insulin must be taken daily as prescribed and indicate at what times it must be taken.
- what action insulin has on the blood glucose level.
- the type, brand, and amount of insulin to be taken.
- the time of onset, peak, and duration of the insulin prescribed.

Taking Medication cont.
The person with diabetes will be able to demonstrate:

- how to draw up and mix the correct amount of insulin.
- how to inject insulin correctly.
- where insulin is to be injected and at what times.

Taking Medication cont.
The person with diabetes will be able to describe:

- the type of insulin syringe he or she uses.
- the care and storage of insulin, needles, and syringes.
- the proper disposal of syringes.

Problem Solving
The person with diabetes will be able to:

- Describe a behavioral goal.
- Set initial goals to begin such change.
- State that the responsibility for carrying out the plan belongs to the patient, but resources and supports are always necessary.
- State the need for a planned system of medical care, including follow-up and continuing education.
- Name the members of the healthcare team.
- Describe when and how to obtain emergency medical care.

Problem Solving cont.

- List telephone numbers to access help with daily problem-solving questions.
- List expected schedule for follow-up medical appointments for the first year.
- List the community resources available for diabetes care and education.
- List the community resources available for help with other social and economic problems.
- State how to connect with other people in the community who have diabetes.
Coping

The person with diabetes will be able to:

• Verbalize that he or she has diabetes.
• Verbalize and vent his or her feelings about diabetes.
• State that there are normal feelings of denial, anger, and sadness that will become less intense as diabetes becomes more a part of everyday life.
• Acknowledge that discussing diabetes complications may be scary.
• State that stressful conditions may cause problems with blood glucose control.

Coping cont.

• Acknowledge that a mental health counselor may be able to help him or her prevent or cope with stress.
• Enlist the help of family and friends.
• Acknowledge diabetes to family members and close associates.
• Involve at least one family member or support person in an education session so that they learn to give medication (if used), learn to recognize and treat hypoglycemia, can carry out sick-day rules, and know emergency phone numbers.

Reducing Risks Acute Complications

The person with diabetes will be able to state:

• that hypoglycemia, especially nocturnal hypoglycemia, can occur without symptoms.
• how to treat hypoglycemia.
• the importance of always carrying a concentrated, quickly absorbed source of carbohydrate.
• the importance of the need to wear and carry diabetes identification.
• that drinking alcohol is a risk factor for hypoglycemia.
• how to prevent hyperglycemia.

Reducing Risks Acute Complications cont.

• how to treat hyperglycemia.
• when and how to contact healthcare providers or emergency facilities in case of severe or persistent hypoglycemia or hyperglycemia.
• when to check for ketonuria and state sick-day guidelines.
• the importance of the need for continuing insulin during illness.
• how and when to contact his or her healthcare provider or emergency facility in case of illness.

Reducing Risks

The person with diabetes will be able to list:

• Causes of hypoglycemia
• Symptoms of hypoglycemia
• Causes of hyperglycemia
• Symptoms of hyperglycemia

Reducing Risks Chronic Complications

The person with diabetes will be able to state that:

• good glucose control lessens the chance of developing chronic complications.
• attitude toward diabetes is related to long-term glucose control.
• there may be serious chronic complications associated with diabetes.
• near-normal blood glucose control may prevent or delay chronic complications.
Reducing Risks Chronic Complications cont.

- smoking is dangerous for someone with diabetes.
- the need for an eye exams is important.
- the need for daily foot inspection and an annual foot exam is important.
- the need for good personal hygiene and skin care is important.
- the need for daily dental and mouth care is important.

Recommended Reading


Education for the Visually Impaired

Assess:
- visual
- non-visual abilities, and
- readiness to learn

Adaptive Equipment

- Blood glucose meters with large print, bold, high-contrast display
- Plug-in voice adapters for standard meters
- Blood–glucose meters with a built-in voice
- Blood-drop devices to apply blood to the test strip
- Syringe magnifiers, for people with low vision
- Non-visual insulin measurement devices: preset gauges, variable insulin dosage devices, insulin pens, needle-less injector, insulin pumps
- Talking blood pressure meters, scales and thermometers
- Pillboxes labeled in large print or Braille

Useful Tips

- be sure that the person has been referred to your local blindness rehabilitation and low-vision services
- describe all options to encourage patient choice
- tool or technique must be usable when the vision is at its lowest
- use colors with high contrast and low glare
- tape record important information

Recommended Reading