

MULTIPLE SCLEROSIS

Multiple sclerosis (MS) is the most common of the demyelinating disorders and the predominant CNS disease among young adults. It is a chronic disorder in which irregular demyelination of the CNS (brain and spinal cord) results in emotional changes and varying degree of cognitive, motor, and sensory dysfunction at the central and peripheral level. It is a perivascular inflammatory response, possibly to chronic viral infection in genetically susceptible individuals, producing a limited disruption in the blood-brain barrier, allowing [beta]-lymphocyte clones to colonize the CNS. Research suggests that in addition to destruction of myelin sheaths (which facilitate the movement of nerve impulses), some underlying nerve fibers are also damaged or severed, which may account for the permanent neurological impairment.

MS is grouped into the following four types:

Relapsing-remitting: Periods of neurological dysfunction followed by partial or full recovery.

Primary-progressive: Steady decline with periods of minimal recovery (fairly uncommon).

Secondary-progressive: Initial pattern of relapse and recovery, which becomes steadily progressive over time.

Progressive-relapsing: Progressive from onset with clear exacerbations (rare).

MS is characterized by periods of exacerbations and remissions and is progressive in approximately 60% of patients. Individual prognosis is variable and unpredictable, presenting complex physical, psychosocial, and rehabilitative issues.

CARE SETTING

Community or long-term care with intermittent hospitalization for disease-related complications.

RELATED CONCERNS

Extended care

Pneumonia: microbial

Psychosocial aspects of care

Sepsis/Septicemia

Patient Assessment Database

Degree of symptomatology depends on the stage and extent of disease, areas of neuronal involvement.

ACTIVITY/REST

May report: Extreme fatigue/weakness, exaggerated intolerance to activity, needing to rest after even simple activities such as shaving/showering; increased weakness/intolerance to temperature extremes, especially heat (e.g., summer weather, hot tubs)

Limitation in usual activities, employment, hobbies

Numbness, tingling in the extremities

Sleep disturbances, may awaken early or frequently for multiple reasons (e.g., nocturia, nocturnal spasticity, pain, worry, depression)

May exhibit: Absence of predictable pattern of symptoms

Generalized weakness, decreased muscle tone/mass (disuse), spasticity, tremors

Staggering, dragging of feet, ataxia

Intention tremors, decreased fine motor skills

CIRCULATION

May report: Dependent edema (steroid therapy or inactivity)

May exhibit: Blue/mottled, puffy extremities (inactivity)

Capillary fragility (especially on face)

EGO INTEGRITY

May report: Statements of reflecting loss of self-esteem/body image

Expressions of grief

Anxiety/fear of exacerbations/progression of symptoms, pain, disability, rejection, pity

Keeping illness confidential

Feelings of helplessness, hopelessness, powerlessness (loss of control)
Personal tragedies (divorce, abandonment by SO/friends)
May exhibit: Denial, rejection
Mood changes, irritability, restlessness, lethargy, euphoria, depression, anger

ELIMINATION

May report: Nocturia
Incomplete bladder emptying, retention with overflow
Urinary/bowel hesitancy or urgency, incontinence of varying severity
Irregular bowel habits, constipation
Recurrent UTIs

May exhibit: Loss of sphincter control
Kidney stone formation, kidney damage

FOOD/FLUID

May report: Difficulty chewing, swallowing (weak throat muscles), sense of food sticking in throat,
coughing after swallowing
Problems getting food to mouth (related to intentional tremors of upper extremities)
Hiccups, possibly lasting extended periods

May exhibit: Difficulty feeding self
Weight loss
Decreased bowel sounds (slowed peristalsis)
Abdominal bloating

HYGIENE

May report: Difficulty with/dependence in some/all ADLs
Use of assistive devices/individual caregiver

May exhibit: Poor personal habits, disheveled appearance, signs of incontinence

NEUROSENSORY

May report: Weakness, nonsymmetrical paralysis of muscles (may affect one, two, or three limbs,
usually worse in lower extremities or may be unilateral), numbness, tingling
(prickling sensations in parts of the body)
Change in visual acuity (diplopia), scotomas (holes in vision), eye pain (optic neuritis)
Moving head back and forth while watching television, difficulty driving (distorted visual
field), blurred vision (difficulty focusing)
Cognitive changes, i.e., attention, comprehension, use of speech, problem solving,
difficulty retrieving/recalling, sorting out information (cerebral involvement)
Difficulty making decisions
Communication difficulties, such as coining words
Seizures

May exhibit: Mental status: Mood swings, depression, euphoria, irritability, apathy; lack of judgment;
impairment of short-term memory; disorientation/confusion.
Scanning speech, slow hesitant speech, poor articulation
Partial/total loss of vision in one eye; vision disturbances
Positional/vibratory sense impaired or absent
Impaired touch/pain sensation
Facial/trigeminal nerve involvement, nystagmus, diplopia (brainstem involvement)
Loss of motor skills (major/fine), changes in muscle tone, spastic paresis/total immobility
(advanced stages)
Ataxia, decreased coordination, tremors (may be originally misinterpreted as intoxication),
intention tremor
Hyperreflexia, positive Babinski's sign, ankle clonus; absent superficial reflexes
(especially abdominal)

PAIN/DISCOMFORT

- May report:** Painful spasms, burning pain along nerve path (some patients do not experience normal pain sensations)
 Frequency varied may be sporadic/intermittent (possibly once a day) or may be constant
 Duration lightning-like, repetitive, intermittent; persistent long-term painful spasms of extremity or back
 Facial neuralgia
 Dull back pain
- May exhibit:** Distraction behaviors (restlessness, moaning), guarding
 Self-focusing

SAFETY

- May report:** Uneasiness around small children or moving objects, fear of falling (weakness, decreased vision, slowed reflexes, loss of position sense, decreased judgment)
 History of falls/accidental injuries
 Use of ambulation devices
 Vision impairment
 Suicidal ideation
- May exhibit:** Wall/furniture walking

SEXUALITY

- May report:** Relationship stresses
 Enhanced or decreased sexual desire
 Problems with positioning
 Genital anesthesia/hyperesthesia, decreased lubrication (female)
 Impotence/nocturnal erections or ejaculatory difficulties
 Disturbances in sexual functioning (affected by nerve impairment, fatigue, bowel and bladder control, sense of vulnerability, and effects of medications)

SOCIAL INTERACTION

- May report:** Lack of social activities/involvement
 Withdrawal from interactions with others/isolation behaviors (e.g., stays at home/in room, watches TV all day)
 Feelings of isolation (increased divorce rate/loss of friends)
 Difficult time with employment because of excessive fatigue/cognitive dysfunction, physical limitations
- May exhibit:** Speech impairment

TEACHING/LEARNING

- May report:** Use of prescription/OTC medications, may forget to take regularly
 Difficulty retaining information
 Family history of disease (possibly due to common environmental/inherited factors)
 Use of “holistic”/natural products/healthcare practices, “trying out cures,” “doctor shopping”
- Discharge plan considerations:** **DRG projected mean length of inpatient stay: 5.7 days.**
 May require assistance in any or all areas, depending on individual situation
 May eventually need total care/placement in assisted living/extended care facility
Refer to section at end of plan for postdischarge considerations.

DIAGNOSTIC STUDIES

- Brain MRI:** Detects presence of plaques characteristic of MS that are due to nerve sheath demyelination, but is not diagnostic without supporting clinical symptoms.
- CT scan:** Demonstrates brain lesions, ventricular enlargement or thinning.
- Evoked potentials:** Visual (VER), brainstem auditory (BAER), and somatosensory (SSER) are abnormal early in a high percentage of patients with definite or suspected MS.
- Lumbar puncture:** CSF may show elevated levels of IgG and IgM. Protein level normal or only slightly elevated, oligoclonal bands present on electrophoresis; WBC count slightly elevated; elevated concentration of myelin basic protein may be noted during active demyelination process.

EEG: May be mildly abnormal in some cases.

NURSING PRIORITIES

1. Maintain optimal functioning.
2. Assist with/provide for maintenance of ADLs.
3. Support acceptance of changes in body image/self-esteem and role performance.
4. Provide information about disease process/prognosis, therapeutic needs, and available resources

DISCHARGE GOALS

1. Remain active within limits of individual situation.
2. ADLs are managed by patient/caregivers.
3. Changes in self-concept as acknowledged and being dealt with.
4. Disease process/prognosis, therapeutic regimen are understood and resources identified.
5. Plan in place to meet needs after discharge.

<p>NURSING DIAGNOSIS: Fatigue</p> <p>May be related to</p> <p>Decreased energy production, increased energy requirements to perform activities Psychological/emotional demands Pain/discomfort Medication side effects</p> <p>Possibly evidenced by</p> <p>Verbalization of overwhelming lack of energy Inability to maintain usual routines; decreased performance Impaired ability to concentrate; disinterest in surroundings Increase in physical complaints</p> <p>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</p> <p>Energy Conservation (NOC)</p> <p>Identify risk factors and individual actions affecting fatigue. Identify alternatives to help maintain desired activity level. Participate in recommended treatment program. Report improved sense of energy.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Energy Management (NIC)</p> <p>Independent</p> <p>Note and accept presence of fatigue.</p>	<p>The most persistent and common symptom of MS. Studies indicate that the fatigue encountered by patients with MS occurs with expenditure of minimal energy, is more frequent and severe than “normal” fatigue, has a disproportionate impact on ADLs, has a slower recovery time, and may show no direct relationship between fatigue severity and patient’s clinical neurological status.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Energy Management (NIC)</p> <p>Independent</p> <p>Identify/review factors affecting ability to be active, e.g., temperature extremes, inadequate food intake, insomnia, use of medications, time of day.</p> <p>Accept when patient is unable to do activities.</p> <p>Determine need for walking aids, e.g., Canadian canes, braces, walker, wheelchair, scooter; review safety considerations.</p> <p>Schedule ADLs in the morning if appropriate. Investigate use of cooling vest.</p> <p>Plan care consistent rest periods between activities. Encourage afternoon nap.</p> <p>Stress need for stopping exercise/activity just short of fatigue.</p> <p>Investigate appropriateness of obtaining a service dog.</p>	<p>Provides opportunity to problem-solve to maintain/improve mobility.</p> <p>Ability can vary from moment to moment. Nonjudgmental acceptance of patient's evaluation of day-to-day variations in capabilities provides opportunity to promote independence while supporting fluctuations in level of required care.</p> <p>Mobility aids can decrease fatigue, enhancing independence and comfort, as well as safety. However, individual may display poor judgment about ability to safely engage in activity.</p> <p>Fatigue commonly worsens in late afternoon (when body temperature rises). Some patients report lessening of fatigue with stabilization of body temperature.</p> <p>Reduces fatigue, aggravation of muscle weakness.</p> <p>Pushing self beyond individual physical limits can result in excessive/prolonged fatigue and discouragement. In time, patient can become very adept at knowing limitations.</p> <p>Service dogs not only can increase patient's level of independence (e.g., balance/mobility assistance), but can assist in energy conservation by carrying items in "saddle" bags, fetching/retrieving, and performing tasks (e.g., turning lights on/off).</p>
<p>Collaborative</p> <p>Recommend participation in groups involved in fitness/exercise and/or the Multiple Sclerosis Society.</p> <p>Administer medications as indicated, e.g.:</p> <p style="padding-left: 40px;">Amantadine (Symmetrel); pemoline (Cylert);</p> <p style="padding-left: 40px;">Methylphenidate (Ritalin), modafinil (Provigil);</p>	<p>Can help patient to stay motivated to remain active within the limits of the disability/condition. Group activities need to be selected carefully to meet patient's need(s) and prevent discouragement or anxiety.</p> <p>Useful in treatment of fatigue. Positive antiviral drug effect in 30%–50% of patients. Use may be limited by side effects of increased spasticity, insomnia, paresthesias of hands/feet.</p> <p>CNS stimulants that may reduce fatigue but may also cause side effects of nervousness, restlessness, and insomnia.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Energy Management (NIC)</p> <p>Collaborative</p> <p>Sertraline (Zoloft), fluoxetine (Prozac);</p> <p>Tricyclic antidepressants, e.g., amitriptyline (Elavil), nortriptyline (Pamelor);</p> <p>Anticonvulsants, e.g., carbamazepine (Tegretol), gabapentin (Neurontin), lamotrigine (Lamictal);</p> <p>Steroids, e.g., prednisone (Deltason), dexamethasone(Decadron), methylprednisolone (Solu-Medrol)</p> <p>Vitamin B</p> <p>Immunomodulating agents, e.g., cyclophosphamide (Cytoxan), azathioprine (Imuran), methotrexate (Mexate), interferon [beta]-1B (Betaseron); interferon [beta]-1A (Avonex, Rebif), glatiramer (Copaxone); mitoxentron (Novantrone).</p> <p>Prepare for plasma exchange treatment as indicated.</p>	<p>Antidepressants useful in lifting mood, and “energizing” patient (especially when depression is a factor) and when patient is free of anticholinergic side effects.</p> <p>Useful in treating emotional lability, neurogenic pain, and associated sleep disorders to enhance willingness to be more active.</p> <p>Used to treat neurogenic pain and sudden intermittent spasms related to spinal cord irritation.</p> <p>May be used during acute exacerbations to reduce/prevent edema formation at the sclerotic plaques; however, long-term therapy seems to have little effect on progression of symptoms.</p> <p>Supports nerve-cell replication, enhances metabolic functions, and may increase sense of well-being/energy level (although reports are more anecdotal than research based).</p> <p>May be used to treat acute relapses, reduce the frequency of relapse, and promote remission. Inteferon [beta]-1B (Betaseron) has been approved for use by ambulatory patients with remitting relapsing MS and is the first drug found to alter the course of the disease. Current research indicates early treatment with drugs that reduce inflammation and lesion formation may limit permanent damage. Therapy of choice is “A, B, C” drugs: Avonex, Betaseron, and Copaxone. Therapeutic benefits have been reported in patients at all stages of disability with reduction in both steroid use and hospital days. (Copaxone chemically resembles a component of myelin and may act as a decoy, diverting immune cells away from myelin target.) <i>Note:</i> Novantrone may be used if other medications not effective but is contraindicated in patients with primary progressive MS.</p> <p>Research suggests that individuals experiencing severe exacerbations not responding to standard therapy may benefit from a course of plasma exchange.</p>

NURSING DIAGNOSIS: Self-Care deficit (specify)

May be related to

Neuromuscular/perceptual impairment; intolerance to activity; decreased strength and endurance; motor impairment, tremors

Pain, discomfort, fatigue

Memory loss

Depression

Possibly evidenced by

Frustration; inability to perform tasks of self-care, poor personal hygiene

DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:

Self-Care Activities of Daily Living (ADLs) (NOC)

Identify individual areas of weakness/needs.

Demonstrate techniques/lifestyle changes to meet self-care needs.

Perform self-care activities within level of own ability.

Identify personal/community resources that provide assistance.

ACTIONS/INTERVENTIONS	RATIONALE
<p>Self-Care Assistance (NIC)</p> <p>Independent</p> <p>Determine current activity level/physical condition. Assess degree of functional impairment using 0–4 scale.</p> <p>Encourage patient to perform self-care to the maximum of ability as defined by patient. Do not rush patient.</p> <p>Assist according to degree of disability; allow as much autonomy as possible.</p> <p>Encourage patient input in planning schedule.</p> <p>Note presence of/accommodate for fatigue.</p> <p>Encourage scheduling activities early in the day or during the time when energy level is best.</p> <p>Allot sufficient time to perform task(s), and display patience when movements are slow.</p>	<p>Provides information to develop plan of care for rehabilitation. <i>Note:</i> Motor symptoms are less likely to improve than sensory ones.</p> <p>Promotes independence and sense of control; may decrease feelings of helplessness.</p> <p>Participation in own care can ease the frustration over loss of independence.</p> <p>Patient’s quality of life is enhanced when desires/likes are considered in daily activities.</p> <p>Fatigue experienced by patients with MS can be very debilitating and greatly impact ability to participate in ADLs. The subjective nature of reports of fatigue can be misinterpreted by healthcare providers and family, leading to conflict and the belief that the patient is “manipulative” when, in fact, this may not be the case.</p> <p>Patients with MS expend a great deal of energy to complete ADLs, increasing the risk of fatigue, which often progresses through the day.</p> <p>Decreased motor skills/spasticity may interfere with ability to manage even simple activities.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Self-Care Assistance (NIC)</p> <p>Independent</p> <p>Anticipate hygienic needs and calmly assist as necessary with care of nails, skin, and hair; mouth care; shaving (use electric razor).</p> <p>Provide assistive devices/aids as indicated, e.g., shower chair, elevated toilet seat with arm supports.</p> <p>Reposition frequently when patient is immobile (bed/chairbound). Provide skin care to pressure points, such as sacrum, ankles, and elbows. Position/encourage to sleep prone as tolerated.</p> <p>Provide massage and active/passive ROM exercises on a regular schedule. Encourage use of splints/footboards as indicated.</p> <p>Encourage stretching and toning exercises and use of medications, cold packs, and splints and maintenance of proper body alignment, when indicated.</p> <p>Problem-solve ways to meet nutritional/fluid needs, e.g., wrap fork handle with tape, cut food, and show patient how to hold cup with both hands.</p>	<p>Caregiver's example can set a matter-of-fact tone for acceptance of handling mundane needs that many be embarrassing to patient/repugnant to SO.</p> <p>Reduces fatigue, enhancing participation in self-care.</p> <p>Reduces pressure on susceptible areas, prevents skin breakdown. Minimizes flexor spasms at knees and hips.</p> <p>Prevents problems associated with muscle dysfunction and disuse. Helps maintain muscle tone/strength and joint mobility, and decreases risk of loss of calcium from bones.</p> <p>Helps decrease spasticity and its effects.</p> <p>Provides for adequate intake and enhances patient's feelings of independence/self-esteem.</p>
<p>Collaborative</p> <p>Consult with physical/occupational therapist.</p> <p>Administer medications as indicated, e.g.:</p> <p style="padding-left: 20px;">Tizanidine (Zanaflex), baclofen (Lioresal), carbamazepine (Tegretol);</p> <p style="padding-left: 20px;">Diazepam (Valium), clonazepam (Klonopin), cylobenzaprine (Flexeril), gabapentin (Neurontin), dantrolene (Dantrium);</p>	<p>Useful in identifying devices/equipment to relieve spastic muscles, improve motor functioning, prevent/reduce muscular atrophy and contractures, promoting independence and increasing sense of self-worth.</p> <p>Newer drugs used for reducing spasticity, promoting muscle relaxation, and inhibiting reflexes at the spinal nerve root level. Enhance mobility and maintenance of activity. Tizanidine (Zanaflex) may have an additive effect with baclofen (Lioresal), but use with caution because both drugs have similar side effects. Short duration of action requires careful individualizing of dosage to maximize therapeutic effect.</p> <p>A variety of medications are used to reduce spasticity. The mechanisms are not well understood, and responses vary in each person. Therefore, it may take a period of medication trials to discover what provides the most effective relief of muscle spasticity and associated pain. <i>Note:</i> Adverse effects may be increased muscle weakness, loss of muscle tone, and liver toxicity.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Self-Care Assistance (NIC)</p> <p>Collaborative</p> <p>Meclizine (Antivert), scopolamine patches (Transderm-Scop).</p>	<p>Reduces dizziness, allowing patient to be more mobile.</p>

<p>NURSING DIAGNOSIS: Self-Esteem, (specify situational/chronic) low</p> <p>May be related to</p> <p>Change in structure/function Disruption in how patient perceives own body Role reversal; dependence</p> <p>Possibly evidenced by</p> <p>Confusion about sense of self, purpose, direction in life Denial, withdrawal, anger Negative/self-destructive behavior Use of ineffective coping methods Change in self/other's perception of role/physical capacity to resume role</p> <p>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</p> <p>Self-Esteem (NOC)</p> <p>Verbalize realistic view and acceptance of body as it is. View self as a capable person. Participate in and assume responsibility for meeting own needs. Recognize and incorporate changes in self-concept/role without negating self-esteem. Develop realistic plans for adapting to role changes.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Self-Esteem Enhancement (NIC)</p> <p>Independent</p> <p>Establish/maintain a therapeutic nurse-patient relationship, discussing fears/concerns.</p> <p>Note withdrawn behaviors/use of denial or overconcern with body/disease process.</p>	<p>Conveys an attitude of caring and develops a sense of trust between patient and caregiver in which patient is free to express fears of rejection, loss of previous functioning/appearance, feelings of helplessness, powerlessness about changes that may occur. Promotes a sense of well-being for patient.</p> <p>Initially may be a normal protective response, but if prolonged, may prevent dealing appropriately with reality and may lead to ineffective coping.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Self-Esteem Enhancement (NIC)</p> <p>Independent</p> <p>Support use of defense mechanisms, allowing patient to deal with information in own time and way.</p> <p>Acknowledge reality of grieving process related to actual/perceived changes. Help patient deal realistically with feelings of anger and sadness.</p> <p>Review information about course of disease, possibility of remissions, prognosis.</p> <p>Provide accurate verbal and written information about what is happening and discuss with patient/SO.</p> <p>Explain that labile emotions are not unusual. Problem-solve ways to deal with these feelings.</p> <p>Note presence of depression/impaired thought processes, expressions of suicidal ideation (evaluate on a scale of 1–10).</p> <p>Assess interaction between patient and SO. Note changes in relationship.</p> <p>Provide open environment for patient/SO to discuss concerns about sexuality, including management of fatigue, spasticity, arousal, and changes in sensation.</p> <p>Discuss use of medications and adjuncts to improve sexual function.</p>	<p>Confronting patient with reality of situation may result in increased anxiety and lessened ability to cope with changed self-concept/role.</p> <p>Nature of the disease leads to ongoing losses and changes in all aspects of life, blocking resolution of grieving process.</p> <p>When patient learns about disease and becomes aware that own behavior (including feeling hopeful/maintaining a positive attitude) can significantly improve general well-being and daily functioning, patient may feel more in control, enhancing sense of self-esteem. <i>Note:</i> Some patients may never have a remission.</p> <p>Helps patient stay in the “here and now,” reduces fear of the unknown; provides reference source for future use.</p> <p>Relieves anxiety and assists with efforts to manage unexpected emotional displays.</p> <p>Adapting to a long-term, progressively debilitating incurable disease is a difficult emotional adjustment. In addition, cognitive impairment may affect adaptation to life changes. A depressed individual may believe that suicide is the best way to deal with what is happening.</p> <p>SO may unconsciously/consciously reinforce negative attitudes and beliefs of patient, or issues of secondary gain may interfere with progress and ability to manage situation.</p> <p>Physical and psychological changes often create stressors within the relationship, affecting usual roles/expectations, further impairing self-concept.</p> <p>Patient and partner may want to explore trial of medications (e.g., papaverine [Pavabid], dinoprostone [Prostin E₂]) or other avenues of improving sexual relationship.</p>
<p>Collaborative</p> <p>Consult with occupational therapist/rehabilitation team.</p>	<p>Identifying assistive devices/equipment enhances level of overall function and participation in activities, enhancing sense of well-being and viewing self as a capable individual.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Self-Esteem Enhancement (NIC)</p> <p>Collaborative</p> <p>Refer to psychiatric clinical nurse specialist, social worker, psychologist as indicated.</p>	<p>May require more in-depth/supportive counseling to resolve conflicts, deal with life changes.</p>

<p>NURSING DIAGNOSIS: Powerlessness [specify degree]/Hopelessness</p> <p>May be related to</p> <p>Illness-related regimen, unpredictability of disease Lifestyle of helplessness</p> <p>Possibly evidenced by</p> <p>Verbal expressions of having no control or influence over situation Depression over physical deterioration that occurs despite patient compliance with regimen Nonparticipation in care or decision making when opportunities are provided Passivity, decreased verbalization/affect Verbal cues (despondent content, “I can’t,” sighing) Lack of involvement in care/passively allowing care Isolating behaviors/social withdrawal</p> <p>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</p> <p>Hope (NOC)</p> <p>Identify and verbalize feelings. Use coping mechanisms to counteract feelings of hopelessness. Identify areas over which individual has control. Participate/monitor and control own self-care and ADLs within limits of the individual situation.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Hope Instillation (NIC)</p> <p>Independent</p> <p>Note behaviors indicative of powerlessness/hopelessness, e.g., statements of despair, “They don’t care,” “It won’t make any difference.”</p> <p>Acknowledge reality of situation, at the same time expressing hope for patient.</p> <p>Encourage/assist patient to identify activities he or she would like to be involved in (e.g., volunteer work) within the limits of his or her abilities.</p> <p>Discuss plans for the future. Suggest visiting alternative care facilities, taking a look at the possibilities for care as condition changes.</p>	<p>The degree to which patient believes own situation is hopeless, that he or she is powerless to change what is happening, affects how patient handles life situation.</p> <p>Although the prognosis may be discouraging, remissions may occur, and because the future cannot be predicted, hope for some quality of life should be encouraged. Additionally, research is ongoing and new treatment options are being initiated.</p> <p>Staying active and interacting with others counteract feelings of helplessness.</p> <p>When options are considered and plans are made for any eventuality, patient has a sense of control over own circumstances.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Self-Responsibility Facilitation (NIC)</p> <p>Independent</p> <p>Determine degree of mastery patient has exhibited in life to the present. Note locus of control, i.e., internal/external.</p> <p>Assist patient to identify factors that are under own control, e.g., list things that can or cannot be controlled.</p> <p>Encourage patient to assume control over as much of own care as possible.</p> <p>Discuss needs openly with patient/SO, setting up agreed-on routines for meeting identified needs.</p> <p>Incorporate patient's daily routine into home care schedule/hospital stay, as possible.</p> <p>Collaborative</p> <p>Refer to vocational rehabilitation as indicated.</p> <p>Identify community resources, e.g., adult day enrichment program.</p>	<p>Patient who has assumed responsibility in life previously tends to do the same during difficult times of exacerbation of illness. However, if locus of control has been focused outward, patient may blame others and not take control over own circumstances.</p> <p>Knowing and accepting what is beyond individual control can reduce helpless/acting out behaviors, promote focusing on areas individual can control.</p> <p>Even when unable to do much physical care, individual can help plan care, having a voice in what is/is not desired.</p> <p>Helps deal with manipulative behavior, when patient feels powerless and not listened to.</p> <p>Maintains sense of control/self-determination and independence.</p> <p>Can assist patient to develop and implement a vocational plan incorporating specific interests/abilities.</p> <p>Participation in structured activities can reduce sense of isolation and may enhance feeling of self-worth.</p>

NURSING DIAGNOSIS: Coping, risk for ineffective

Risk factors may include

- Physiological changes (cerebral and spinal lesions)
- Psychological conflicts; anxiety; fear
- Impaired judgment, short-term memory loss; confusion; unrealistic perceptions/ expectations, emotional lability
- Personal vulnerability; inadequate support systems
- Multiple life changes
- Inadequate coping methods

Possibly evidenced by

[Not applicable; presence of signs and symptoms establishes an *actual* diagnosis.]

DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:

Coping (NOC)

- Recognize relationship between disease process (cerebral lesions) and emotional responses, changes in thinking/behavior.
- Verbalize awareness of own capabilities/strengths.
- Display effective problem-solving skills.
- Demonstrate behaviors/lifestyle changes to prevent/minimize changes in mentation and maintain reality orientation.

ACTIONS/INTERVENTIONS	RATIONALE
<p>Coping Enhancement (NIC)</p>	
<p>Independent</p>	
<p>Assess current functional capacity/limitations; note presence of distorted thinking processes, labile emotions, cognitive dissonance. Note how these affect the individual's coping abilities.</p>	<p>Organic or psychological effects may cause patient to be easily distracted, to display difficulties with concentration, problem solving, dealing with what is happening, being responsible for own care.</p>
<p>Determine patient's understanding of current situation and previous methods of dealing with life's problems.</p>	<p>Provides a clue as to how patient may deal with what is currently happening, and helps identify individual resources and need for assistance.</p>
<p>Discuss ability to make decisions, care for children/dependent adults, handle finances. Identify options available to individuals involved.</p>	<p>Impaired judgment, confusion, inadequate support systems may interfere with ability to meet own needs/needs of others. Conservatorship, guardianship, or adult protective services may be required until (if ever) patient is able to manage own affairs.</p>
<p>Maintain an honest, reality-oriented relationship.</p>	<p>Reduces confusion and minimizes painful, frustrating struggles associated with adaptation to altered environment/lifestyle.</p>
<p>Encourage verbalization of feelings/fears, accepting what patient says in a nonjudgmental manner. Note statements reflecting powerlessness, inability to cope. (Refer to ND: Powerlessness/Hopelessness)</p>	<p>May diminish patient's fear, establish trust, and provide an opportunity to identify problems/begin the problem-solving process.</p>
<p>Observe nonverbal communication, e.g., posture, eye contact, movements, gestures, and use of touch. Compare with verbal content and verify meaning with patient as appropriate.</p>	<p>May provide significant information about what patient is feeling; however, verification is important to ensure accuracy of communication. Discrepancy between feelings and what is being said can interfere with ability to cope, problem-solve.</p>
<p>Provide clues for orientation, e.g., calendars, clocks, notecards, organizers/date book.</p>	<p>These serve as tangible reminders to aid recognition and permeate memory gaps and enable patient to cope with situation.</p>
<p>Encourage patient to tape-record important information and listen to the recording periodically.</p>	<p>Repetition puts information in long-term memory, where it is more easily retrieved and can support decision-making/problem-solving process.</p>
<p>Collaborative</p>	
<p>Refer to cognitive retraining program.</p>	<p>Improving cognitive abilities can enhance basic thinking skills when attention span is short; ability to process information is impaired; patient is unable to learn new tasks; or insight, judgment, and problem-solving skills are impaired.</p>
<p>Refer to counseling, psychiatric clinical nurse specialist/psychiatrist, as indicated.</p>	<p>May need additional help to resolve issues of self-esteem and regain effective coping skills.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Coping Enhancement (NIC)</p> <p>Collaborative</p> <p>Administer medications as appropriate, e.g., amitriptyline (Elavil); bupropion (Wellbutrin); imipramine (Tofranil);</p>	<p>Medications to improve mood and restful sleep may be useful in combating depression and relieving degree of fatigue interfering with function.</p>

<p>NURSING DIAGNOSIS: Family Coping, ineffective: compromised/disabled</p> <p>May be related to</p> <p>Situational crisis; temporary family disorganization and role changes</p> <p>Highly ambivalent family relationship</p> <p>Prolonged disease/disability progression that exhausts the supportive capacity of SO</p> <p>Patient providing little support in turn for SO</p> <p>SO with chronically unexpressed feelings of guilt, anxiety, hostility, despair</p> <p>Possibly evidenced by</p> <p>Patient expresses/confirms concern or complaint about SO response to patient's illness</p> <p>SO withdraws or has limited personal communication with patient or displays protective behavior disproportionate to patient's abilities or need for autonomy.</p> <p>SO preoccupied with own personal reactions</p> <p>Intolerance, abandonment</p> <p>Neglectful care of patient</p> <p>Distortion of reality regarding patient's illness</p> <p>DESIRED OUTCOMES/EVALUATION CRITERIA—FAMILY WILL:</p> <p>Family Coping (NOC)</p> <p>Identify/verbalize resources within themselves to deal with the situation.</p> <p>Express more realistic understanding and expectations of patient.</p> <p>Interact appropriately with patient/healthcare providers providing support and assistance as indicated.</p> <p>Verbalize knowledge and understanding of disability/disease and community resources.</p>
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ACTIONS/INTERVENTIONS	RATIONALE
<p>Family Involvement Promotion (NIC)</p> <p>Independent</p> <p>Note length/severity of illness. Determine patient's role in family and how illness has changed the family organization.</p> <p>Determine SO's understanding of disease process and expectations for the future.</p>	<p>Chronic/unresolved illness, accompanied by changes in role performance/responsibility, often exhausts supportive capacity and coping abilities of SO/family.</p> <p>Inadequate information/misconception regarding disease process and/or unrealistic expectations affect ability to cope with current situation. <i>Note:</i> A particular area of misconception is the fatigue experienced by patients with MS. Family members may view patient's inability to perform activities as manipulative behavior rather than an actual physiological deficit.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Family Involvement Promotion (NIC)</p> <p>Independent</p> <p>Discuss with SO/family members their willingness to be involved in care. Identify other responsibilities/factors impacting participation.</p> <p>Assess other factors that are affecting abilities of family members to provide needed support, e.g., own emotional problems, work concerns.</p> <p>Discuss underlying reasons for patient’s behaviors.</p> <p>Encourage patient/SO to develop and strengthen problem-solving skills to deal with situation.</p> <p>Encourage free expression of feelings, including frustration, anger, hostility, and hopelessness.</p> <p>Collaborative</p> <p>Identify community resources, e.g., local MS organization, support groups, home care agencies, respite programs.</p> <p>Refer to social worker, financial adviser, psychiatric clinical nurse specialist/psychiatrist as appropriate.</p>	<p>Individuals may not have desire/time to assume responsibility for care. If several family members are available, they may be able to share tasks.</p> <p>Individual members’ preoccupation with own needs/concerns can interfere with providing needed care/support for stresses of long-term illness. Additionally, caregiver(s) may incur decrease or loss of income/risk losing own health insurance if they alter their work hours.</p> <p>Helps SO understand and accept/deal with behaviors that may be triggered by emotional or physical effects of MS.</p> <p>Family may/may not have handled conflict well before illness, and stress of long-term debilitating condition can create additional problems (including unresolved anger).</p> <p>Individual members may be afraid to express “negative” feelings, believing it will discourage patient. Free expression promotes awareness and can help with resolution of feelings and problems (especially when done in a caring manner).</p> <p>Provides information, opportunities to share with others who are experiencing similar difficulties, and sources of assistance when needed.</p> <p>May need more in-depth assistance from professional sources.</p>

<p>NURSING DIAGNOSIS: Urinary Elimination, impaired</p> <p>May be related to Neuromuscular impairment (spinal cord lesions/neurogenic bladder)</p> <p>Possibly evidenced by Incontinence; nocturia; frequency Retention with overflow Recurrent UTIs</p> <p>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</p> <p>Urine Continence (NOC) Verbalize understanding of condition. Demonstrate behaviors/techniques to prevent/minimize infection. Empty bladder completely and regularly (voluntarily or by catheter as appropriate). Be free of urine leakage.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Urinary Elimination Management (NIC)</p> <p>Independent</p> <p>Note reports of urinary frequency, urgency, burning, incontinence, nocturia, and size/force of urinary stream. Palpate bladder after voiding.</p> <p>Review drug regimen, including prescribed, over-the-counter (OTC), and street.</p> <p>Institute bladder training program or timed voidings as appropriate.</p> <p>Encourage adequate fluid intake, avoiding caffeine and use of aspartame, and limiting intake during late evening and at bedtime. Recommend use of cranberry juice/vitamin C.</p> <p>Promote continued mobility.</p> <p>Recommend good handwashing/perineal care.</p> <p>Encourage patient to observe for sediment/blood in urine, foul odor, fever, or unexplained increase in MS symptoms (e.g., spasticity, dysarthria).</p>	<p>Provides information about degree of interference with elimination or may indicate bladder infection. Fullness over bladder following void is indicative of inadequate emptying/retention and requires intervention.</p> <p>A number of medications such as some antispasmodics, antidepressants, and narcotic analgesics; OTC medications with anticholinergic or alpha agonist properties; or recreational drugs such as cannabis may interfere with bladder emptying.</p> <p>Helps restore adequate bladder functioning; lessens occurrence of incontinence and bladder infection.</p> <p>Sufficient hydration promotes urinary output and aids in preventing infection. <i>Note:</i> When patient is taking sulfa drugs, sufficient fluids are necessary to ensure adequate excretion of drug, reducing risk of cumulative effects. <i>Note:</i> Aspartame, a sugar substitute (e.g., Nutrasweet), may cause bladder irritation leading to bladder dysfunction.</p> <p>Decreases risk of developing UTI.</p> <p>Reduces skin irritation and risk of ascending infection.</p> <p>Indicative of infection requiring further evaluation/treatment.</p>
<p>Urinary Catheterization (NIC)</p> <p>Collaborative</p> <p>Refer to urinary continence specialist as indicated.</p> <p>Administer medications as indicated, e.g.: Oxybutynin (Ditropan), propantheline (Pro-Banthine), hyoscyamine sulfate (Cytospaz-M), flavoxate hydrochloride (Urispas), tolterodine (Detrol).</p> <p>Catheterize as indicated.</p> <p>Teach self-catheterization/instruct in use and care of indwelling catheter.</p>	<p>Helpful for developing individual plan of care to meet patient's specific needs using the latest techniques, continence products.</p> <p>Reduce bladder spasticity and associated symptoms of frequency, urgency, incontinence, nocturia.</p> <p>May be necessary as a treatment and for evaluation if patient is unable to empty bladder or retains urine.</p> <p>Helps patient maintain autonomy and encourages self-care. Indwelling catheter may be required, depending on patient's abilities and degree of urinary problem.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Urinary Elimination Management (NIC)</p> <p>Collaborative</p> <p>Obtain periodic urinalysis/urine culture and sensitivity as indicated.</p> <p>Administer anti-infective agents as necessary, e.g.:</p> <ul style="list-style-type: none"> Nitrofurantoin macrocrystals. (Macrochantin); co-trimoxazole (Bactrim, Septra); ciprofloxacin (Cipro); norfloxacin (Noroxin). 	<p>Monitors renal status. Colony count over 100,000 indicates presence of infection requiring treatment.</p> <p>Bacteriostatic agents that inhibit bacterial growth and destroy susceptible bacteria. Prompt treatment of infection is necessary to prevent serious complications of sepsis/shock.</p>

<p>NURSING DIAGNOSIS: Knowledge, deficient [Learning Need] regarding condition, prognosis, complications, treatment, self-care, and discharge needs</p> <p>May be related to</p> <ul style="list-style-type: none"> Lack of exposure; information misinterpretation Unfamiliarity with information resources Cognitive limitation, lack of recall <p>Possibly evidenced by</p> <ul style="list-style-type: none"> Statement of misconception Request of information Inaccurate follow-through of instruction; development of preventable complications Inappropriate or exaggerated behaviors (e.g., hysterical, hostile, agitated, apathetic) <p>DESIRED OUTCOMES/EVALUATION CRITERIA—PATIENT WILL:</p> <p>Knowledge: Disease Process (NOC)</p> <ul style="list-style-type: none"> Participate in learning process. Assume responsibility for own learning and begin to look for information and to ask questions. Verbalize understanding of condition/disease process and treatment. Initiate necessary lifestyle changes. Participate in prescribed treatment regimen.

ACTIONS/INTERVENTIONS	RATIONALE
<p>Learning Facilitation (NIC)</p> <p>Independent</p> <p>Evaluate desire/readiness of patient and SO/caregiver to learn.</p> <p>Note signs of emotional lability or whether patient is in dissociative state (loss of affect, inappropriate emotional responses).</p>	<p>Determines amount/level of information to provide at any given moment.</p> <p>Patient will not process/retain information and will have difficulty learning during this time.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Learning Facilitation (NIC)</p> <p>Independent</p> <p>Provide information in varied formats depending on patient’s cognitive/perceptual abilities and considering patient’s locus of control.</p> <p>Encourage active participation of patient/SO in learning process, including use of self-paced instruction as appropriate.</p> <p>Teaching: Disease Process (NIC)</p> <p>Review disease process/prognosis, effects of climate, emotional stress, overexertion, fatigue.</p> <p>Identify signs/symptoms requiring further evaluation.</p> <p>Discuss importance of daily routine of rest, exercise, activity, and eating, focusing on current capabilities. Instruct in use of appropriate devices to assist with ADLs, e.g., eating utensils, walking aids.</p> <p>Stress necessity of weight control.</p> <p>Review possible problems that may arise, such as decreased perception of heat and pain, susceptibility to skin breakdown and infections, especially UTI.</p> <p>Identify actions that can be taken to avoid injury, e.g., avoid hot baths, inspect skin regularly, take care with transfers and wheelchair/walker mobility, force fluids, and get adequate nutrition. Encourage avoidance of persons with upper respiratory infection.</p> <p>Discuss increased risk of osteoporosis and review preventive measures, e.g., regular exercise, intake of calcium and vitamin D, reduced intake of caffeine, cessation of smoking, hormone replacement therapy (HRT) or alternatives (e.g., bisphosphonates—Fosamax), and fall prevention measures such as wearing low-heeled shoes with nonskid soles, use of handrails/grab bars in bathroom and along stairwells, removal of small area rugs.</p> <p>Identify bowel elimination concerns. Recommend adequate hydration and intake of fiber; use of stool softeners, bulking agents, suppositories, or possibly mild laxatives; bowel training program.</p>	<p>Changes in cognitive, visual, auditory function impact choice of teaching modalities, e.g., verbal instruction, books, pamphlets, audiovisuals, computer programs. Whether locus of control is internal or external affects patient’s attitude toward helpfulness of learning.</p> <p>Enhances sense of independence and control and may strengthen commitment to therapeutic regimen.</p> <p>Clarifies patient/SO understanding of individual situation.</p> <p>Prompt intervention may help limit severity of exacerbation/complications.</p> <p>Helps patient maintain current level of physical independence and may limit fatigue.</p> <p>Excess weight can interfere with balance and motor abilities and make care more difficult.</p> <p>These effects of demyelination and associated complications may compromise patient’s safety and/or precipitate an exacerbation of symptoms.</p> <p>Review of risk factors can help patient take measures to maintain physical state at optimal level/prevent complications.</p> <p>Decreased mobility, vitamin D deficiency (possibly a result increased of decreased exposure to sunlight, which can exacerbate MS symptoms), and decreased likelihood of engaging in preventive measures increase bone mass loss and the risk of fractures.</p> <p>Constipation is common, and bowel urgency and/or accidents may occur as a result of dietary deficiencies or impaction.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Teaching: Disease Process (NIC)</p> <p>Independent</p> <p>Review specifics of individual medications. Recommend avoidance of OTC drugs.</p> <p>Discuss concerns regarding sexual relationships, contraception/reproduction, effects of pregnancy on affected woman. Identify alternative ways to meet individual needs; counsel regarding use of artificial lubrication (females), genitourinary (GU) referral for males regarding available medication/sexual aids.</p> <p>Encourage patient to set goals for the future while focusing on the “here and now,” what can be done today.</p> <p>Identify financial concerns.</p> <p>Refer for vocational rehabilitation as appropriate.</p> <p>Recommend contacting local and national MS organizations, relevant support groups.</p>	<p>Reduces likelihood of drug interactions/adverse effects, and enhances cooperation with treatment regimen.</p> <p>Pregnancy may be an issue for the young patient relative to issues of genetic predisposition and/or ability to manage pregnancy or parent offspring. Increased libido is not uncommon and may require adjustments within the existing relationship or in the absence of an acceptable partner. Information about different positions and techniques and/or other options for sexual fulfillment (e.g., fondling, cuddling) may enhance personal relationship and feelings of self-worth.</p> <p>Having a plan for the future helps retain hope and provides opportunity for patient to see that although today is to be lived, one can plan for tomorrow even in the worst of circumstances.</p> <p>Loss or change of employment (for patient and/or SO) impacts income, insurance benefits, and level of independence, requiring additional family/social support.</p> <p>May need assessment of capabilities/job retraining as indicated by individual limitations/disease progression.</p> <p>Ongoing contact (e.g., mailings) informs patient of programs/services available, and can update patient’s knowledge base. Support groups can provide role modeling, sharing of information and enhance problem-solving ability.</p>

<p>NURSING DIAGNOSIS: Caregiver Role Strain, risk for</p> <p>Risk factors may include</p> <p>Severity of illness of the care receiver, duration of caregiving required, complexity/amount of caregiving task</p> <p>Caregiver is female, spouse</p> <p>Care receiver exhibits deviant, bizarre behavior</p> <p>Family/caregiver isolation; lack of respite and recreation</p> <p>Possibly evidenced by</p> <p>[Not applicable; presence of signs/symptoms establishes an <i>actual</i> diagnosis.]</p> <p>DESIRED OUTCOME/EVALUATION CRITERIA—CAREGIVER WILL:</p> <p>Caregiver Performance: Direct Care (NOC)</p> <p>Identify individual risk factors and appropriate interventions.</p> <p>Demonstrate/initiate behaviors or lifestyle changes to prevent development of impaired function.</p> <p>Use available resources appropriately.</p> <p>Report satisfaction with plan and support available.</p>

ACTIONS/INTERVENTIONS	RATIONALE
<p>Caregiver Support (NIC)</p>	
<p>Independent</p>	
<p>Note physical/mental condition, therapeutic regimen of care receiver.</p>	<p>Determines individual needs for planning care. Identifies strengths and how much responsibility patient may be expected to assume, as well as disabilities requiring accommodation.</p>
<p>Determine caregiver's level of commitment, responsibility, involvement in and anticipated length of care. Use assessment tool, such as Burden Interview, to further determine caregiver's abilities, when appropriate.</p>	<p>Progressive debilitation taxes caregiver and may alter ability to meet patient/own needs. (Refer to ND: Family Coping, ineffective: compromised/disabled.)</p>
<p>Discuss caregiver's view of and about situation.</p>	<p>Allows ventilation and clarification of concerns, promoting understanding.</p>
<p>Determine available supports and resources currently used.</p>	<p>Organizations (e.g., national MS society, local support groups) can provide information regarding adequacy of supports and identify needs.</p>
<p>Facilitate family conference to share information and develop plan for involvement in care activities as appropriate.</p>	<p>When others are involved in care, the risk of one person's becoming overloaded is lessened.</p>
<p>Identify additional resources to include financial, legal assistance.</p>	<p>These areas of concern can add to burden of caregiving if not adequately resolved.</p>
<p>Identify adaptive equipment needs/resources for the home and vehicles.</p>	<p>Enhances independence and safety of both caregiver and patient.</p>
<p>Provide information and/or demonstrate techniques for dealing with acting-out/violent or disoriented behavior.</p>	<p>Helps caregiver maintain sense of control and competency. Enhances safety for care receiver and caregiver.</p>
<p>Stress importance of self-nurturing, e.g., pursuing self-development interests, personal needs, hobbies, and social activities.</p>	<p>Taking time for self can lessen risk of "burnout"/being overwhelmed by situation.</p>
<p>Identify alternate care sources (such as sitter/day care facility), senior care services, e.g., Meals on Wheels, respite care, home care agency.</p>	<p>As patient's condition worsens, SO may need additional help from several sources to maintain patient at home even on a part-time basis.</p>
<p>Assist caregiver to plan for changes that may be necessary for the care receiver (e.g., eventual placement in extended care facility).</p>	<p>Planning for this eventually is important for the time when burden of care becomes too great.</p>
<p>Collaborative</p>	
<p>Refer to supportive services as need indicates.</p>	<p>Medical case manager or social services consultant may be needed to develop ongoing plan to meet changing needs of patient and SO/family.</p>

POTENTIAL CONSIDERATIONS following acute hospitalization (dependent on patient's age, physical condition/presence of complications, personal resources, and life responsibilities)

Trauma, risk for—weakness, poor vision, balancing difficulties, reduced temperature/tactile sensation, reduced muscle and hand/eye coordination, cognitive or emotional difficulties, insufficient finances to purchase necessary equipment.

Home Maintenance, impaired—insufficient finances, unfamiliarity with neighborhood resources, inadequate support systems.

Disuse Syndrome, risk for/[actual]—paralysis/immobilization, severe pain.

Therapeutic Regimen: ineffective management—economic difficulties, family conflict, social support deficits.