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The mental status examination (MSE) is an instrument the clinician uses to assess a patient's orientation, attention, feeling states, speech, thought patterns, and specific cognitive skills. Like a lens or filter, it allows the clinician to perceive details and patterns whose nature might otherwise be only vaguely delineated. This examination, along with a careful history, physical examination, and laboratory examination, provides the foundation for psychiatric diagnosis and clinical assessment. Table 18-1 lists the major elements of the mental status examination organized in hierarchical format.

As Hughlings Jackson pointed out, functions most recently evolved (phylogenetically and ontogenetically) are the most vulnerable to disruption. Psychiatrists study disruption of thoughts, feelings, and behaviors that emerge from the organic functioning of the brain. The hierarchical structure of the mental status examination reflects the fact that higher cortical functions, such as abstract thought, may be distorted or disrupted by pathologic processes at many levels. It is obvious that one cannot test a stuporous patient's appreciation of abstract similarities, but it is often forgotten that other factors also constrain assessment of thought processes. For example, a patient who is unable to attend because of fever or metabolic disturbance cannot make new memories, although the neuronal substrate for "memory making" may be structurally intact. Among the factors that affect the interpretation and conduct of the mental status examination are disturbances of attention, vigilance, or concentration; emotional turmoil; perceptual disturbances (impaired vision or hearing); and receptive or expressive language disorders. A patient unwilling to cooperate with the examination will neither reveal intact functions nor disclose deficits. Failure to recognize limitations at any of these levels will lead to errors both in diagnostic formulation and in determination of appropriate treatment.

Although the mental status examination will be

presented here as a separate part of the clinical examination (chief complaint, history of present illness, past medical, psychiatric, and social history, etc), it must be emphasized that the mental status examination is not simply an encapsulated or isolated part of the evaluation. Information noted throughout the interview will later be reported in the mental status examination, and information gained during formal mental status testing may prompt the physician to reevaluate the medical history or to seek confirmation of details by returning to specific items later in the examination. When a patient has a memory disorder, for example, the clinician should suspect omissions and inconsistencies in the history and investigate other sources if needed.

Physicians do not always have multiple opportunities to evaluate patients and may be called on for urgent decisions about a patient's capacity for self-care, potential for violence, suicidal risk, or hold on reality. Especially in emergency room and consultation/liaison settings, there is a premium on prompt assessment. To maximize the yield of the mental status examination, the clinician must be ever mindful of the privileged nature of the relationship with the patient and of the impact specific questions may have on the patient. Initially, the examiner should explain the purpose of the mental status examination, indicating that it is part of every complete patient evaluation. It may help reduce the patient's anxiety and avoid offending the patient to add, "You may find some of the questions very easy and some quite difficult to answer." The clinician must be able to note subtle behavioral clues (a change in voice tone, averted gaze, a tear, a swallow, a sigh, or hesitancy to discuss a particular matter) without losing track of material that must be covered in order to complete the examination. Although the examiner should have a structured scheme for covering all aspects of the mental status examination, a "shopping list" approach is not appropriate. Nevertheless, certain complaints, signs, or symptoms do require that a mental checklist be consulted. For example, if a patient experiences hallucinations, it is essential to obtain a detailed description of the phenomenon. (1) Are hallucinations auditory, visual, tactile, olfactory, or gustatory? (2) Are they elementary (simple points or lines) or complex (formed figures)? (3) Do visual hallucinations occur only in one part of the visual field? (4) Are they disturbing or comforting? (5) Is the hallucinating patient com-

Table 18-1. Organizing the mental status examination (hierarchical format).

1. Presentation.
2. Motor behavior and affect.
3. Cognitive status.
4. Thought.
5. Mood.

manded to perform certain acts (eg, do things harmful to self or others), and if so can the commands be resisted? (6) Do the hallucinations seem to emanate from a particular source?

GENERAL FORMAT OF THE MENTAL STATUS EXAMINATION

The goal of the mental status examination is to assess—both qualitatively and quantitatively—a range of mental functions at a specific time. A clear record of the data provides a baseline for future examinations. Quantification of elements of the mental status examination enables the clinician to assess deterioration or improvement in specific functions over time.

Assessment of cognitive strengths and weaknesses traditionally has been done by psychologists. Physicians who wish to benefit from precise measurement of cognitive function must either master the psychologic literature on the subject or learn to make their own assessments. Quantitative assessment of higher cortical functions (cognitive status examination) is a process that is essential for proper diagnosis and management of organic mental disorders. Specifically, attention, language, constructional ability, recent memory, calculation, and reasoning abilities such as appreciation of similarities and practical judgment can all be assessed in a graded fashion.

One practical way to characterize cognitive dysfunction is to systematically probe areas of intellectual functioning with screening questions difficult enough that a right answer implies an adequate level of function in that area and renders further testing of that area unnecessary. If the patient fails the screening item, the examiner presents a very easy question followed by a series of increasingly difficult ones (the metric). This “screen/metric” approach provides a graded quantitative measure of the degree of functional impairment in specific areas. Such an approach is rapid and efficient, since time is not wasted examining areas in which the patient has obvious strengths.

Several standardized brief mental status examinations serve as cognitive screening devices but are insensitive to important aspects of mental status. Textbooks often provide very detailed “laundry list” approaches to mental status examinations that may exhaust both patient and examiner when used rigidly and in their entirety. Such mental status examination formats are rarely presented hierarchically and do not provide quantifiable results. The following approach to the standardized and quantified mental status examination is recommended for routine use in single or serial assessments. Although its organization differs from that of standard examinations in current use, it contains the same elements. A detailed outline of this mental status examination and a standardized work sheet and report form are provided in Table 18–3 and Figures 18–4 and 18–5 at the end of this chapter. Many of the terms are defined in the Glossary of Psychiatric Signs & Symptoms or elsewhere in the text.

PRESENTATION

Level of Consciousness

Fluctuations in degree of alertness should be documented as precisely as possible. (For example, “Patient yawning and drowsy but responds to verbal encouragement with cooperation that never lasts more than 20 seconds.”) Level of consciousness can be described along a continuum from coma to full alertness. Coma is a state in which neither verbal nor motor responses can be elicited by noxious stimuli. (In moderate to light coma, motor reflexes may be elicited but not psychologic responses.) Stupor is a state in which vigorous and repeated stimulation is required to rouse the patient. Somnolence and lethargy are less obtunded states in which drowsy, inactive, and indifferent patients respond to stimulation in delayed or incomplete fashion. Drowsiness is a sleeplike state from which the patient cannot be roused fully by minor stimuli. Alert wakefulness is a state in which responses to auditory, tactile, or visual stimuli are prompt and appropriate.

The Glasgow Coma Scale (Table 18–2) developed by Teasdale and Jennett (1974) is a graded approach to assessment of impaired consciousness on the basis of eye opening and verbal and motor responses to various stimuli. The scale ranges from 3 for deep coma to 14 for alert wakefulness. It has demonstrated great value for assessing and predicting degree of recovery.

General Appearance

The examiner notes clothing, personal hygiene, and any use of cosmetics, documenting details of fastidiousness or inattention (eg, “a 3-day growth of beard with food spilled on his nightshirt”). Is the pa-

Table 18–2. Glasgow Coma Scale.

	Coma Scale
Eyes open (E)	
Spontaneously	4
To speech	3
To pain	2
None	1
Best motor response (M)	
Obeys commands	5
Localizes pain	4
Flexion to pain	3
Extension to pain	2
None	1
Best verbal response (V)	
Oriented	5
Confused	4
Inappropriate words	3
Incomprehensible sounds	2
None	1
Summed Glasgow Coma Scale = E + M + V.	
Range: From 3 for deep coma to 14 for alert wakefulness.	

tient robust in appearance? Does he or she appear physically ill, with signs of alcoholism (eg, palmar erythema, facial flushing, spider angiomas) or endocrine disease (eg, cushingoid)? Special attention is paid to idiosyncrasies of appearance. These details should be recorded carefully enough so that a third party would be able to recognize the patient from the description without having seen the patient.

Attitude

Is the patient cooperative, evasive, arrogant, bemused, or apathetic? The patient's attitude toward the examiner and the examination situation determines to a large extent how much and what kind of information will be derived.

MOTOR BEHAVIOR & AFFECT

Motor Behavior

Are the patient's movements rapid, abrupt, clumsy, graceful, or totally absent? Is the level of motor activity fairly constant, or do abrupt periods of fitful hyperactivity alternate with apathetic withdrawal? If the patient displays unusual responses, how are they provoked? Are movements coherent and goal-directed, or do they have no discernible purpose? Are there bizarre repetitive stereotyped movements? Does behavior include nail biting (anxiety), tapping the feet (anxiety or akathisia), or sticking out the tongue and licking the lips repetitively (buccolingual-masticatory syndrome of tardive dyskinesia)?

If the patient is mute, does he or she consistently avoid the examiner's gaze, closing eyes tightly and resisting efforts to lift the lids (catatonic negativism or malingering)? Do the patient's movements repeat those of the examiner (echopraxia)? Will the patient's limbs remain in unnatural positions if placed there (called catalepsy, or "waxy flexibility")? Is a mute patient able to write if handed a pencil or to nod yes or no in response to certain questions (indicating either aphemia or hysterical mutism)? Is there any change in behavior depending upon whether the examiner discusses nonpersonal events rather than more personal issues such as the health of either the patient or the patient's immediate family?

Affect

"Affect" may be considered the observable correlate of emotion, ie, the outer manifestation of inner states. It may be characterized as bright, sluggish, voluble, expansive, anguished, tearful, etc. The examiner pays particular attention to the range, intensity, lability, and appropriateness of affective behavior.

Affect has 3 components: facial expression, gestures, and speech. Although speech and language are often described together, there is a rationale for considering the flow, volume, pressure, rhythm, and intonation of speech as kinetic phenomena apart from language. The emotional coloring (prosody) of speech may be impaired in major depression, in dysfunction

of the basal ganglia, in Broca's aphasia ("motor" aphasia), or secondary to damage of the right cerebral hemisphere (see Chapter 10).

The term "witzelsucht" refers to a facetious jocularity sometimes observed in association with frontal lobe lesions.

"Blunted" affect is grossly diminished in range of emotional expression.

Explosions of tears or anger ("catastrophic reactions") can occur in organically impaired individuals confronted with tasks once simple but now difficult or impossible to perform.

COGNITIVE STATUS

Arguments can be made for assessing the patient's cognition at either the outset or the conclusion of the mental status examination. The authors believe that a structured assessment of the patient's cognitive status is best performed immediately after the clinician has noted the patient's initial presentation, motor behavior, and affect, before an attempt is made to assess thought and mood. Impairments in cognitive ability may masquerade as either thought disorder (aphasia may appear as "concreteness of thought") or mood disturbance (an amnesic patient given the diagnosis of cancer 2 days previously may make no spontaneous mention of this and may therefore appear to deny or be indifferent to the diagnosis).

Attention

Is the patient so preoccupied or easily distracted that cooperation with the examiner is impossible? Is there a visual field cut, inattention to a visual hemifield in the absence of a field cut, or neglect of one side of the body?

A. Immediate Recall: Immediate recall refers to the retention of small amounts of information for up to 30 seconds. Material "in" immediate recall requires further processing before it can enter more permanent memory stores.

Proper assessment of attention is of great importance, since it may have implications for further evaluation and treatment. In the presence of an attentional deficit, the examiner must be wary of drawing inferences from further testing of higher cortical functions. Since inattention is a hallmark of acute confusional state, its presence should prompt a search for remediable (toxic, metabolic, or infectious) medical problems. However, inattention may also be seen in nonorganic mental disorders such as brief psychotic reaction and posttraumatic stress disorders. As a general rule, digit span (see below) is preserved in the early stages of dementia, and it is not until cortical degeneration is well advanced that one finds impaired attention.

Attention span may be assessed by having the patient repeat a list of words or a digit sequence presented at the rate of one digit per second. It is important that the digits not be grouped (by rhythmic clusters or intonation) and that they be somewhat ran-

dom (eg, not all odd or all even). This should be practiced, since it is difficult to present a string of digits in this fashion without clustering. Intact repetition of 6 digits forward rules out major attentional disturbance. Inability to repeat at least 5 digits is considered abnormal.

Patients who fail the initial screening task of 6-digit repetition are presented with a metric: digit sequences of increasing length, beginning with 3-digit numbers. The examiner discontinues this task only after the patient has missed twice at a given level (eg, 2 mistakes at the 5-digit level).

B. Concentration & Vigilance: The ability to sustain attention over a longer period may be referred to as "concentration" or "vigilance." Serial 7s (see p 199) or repetition backward of a digit sequence or the months of the year (or days of the week) may be used to assess concentration. Psychiatric disorders such as anxiety, depression, and schizophrenia may impair vigilance without disrupting digit repetition.

Orientation

Orientation is assessed with reference to person, place, and time. Orientation to person (ability to give one's own name when asked to do so) reflects "over-learned" information and is seldom if ever lost in organic brain disease. Failure to give one's own name occurs in hysterical dissociation and most often reflects negativism, confusion, distraction, hearing impairment, or receptive language disorder.

Orientation to place can be tested with reference to country, state, county, city, type of building, name of building, location of building, and location in the building. A patient may know he or she is in a hospital but not know the city or state.

Orientation to time may be tested with reference to year, season, month, day of week, and date. Because time changes more frequently than location, it is more vulnerable to disruption and thus is the most sensitive index of disorientation. (One cannot, however, use time of day as a screen for orientation to time, since patients may know or guess the time of day from numerous cues but have no idea of the month or year.)

Language

Failure to assess language in a systematic fashion is a shortcoming of many mental status examinations and can lead to diagnostic confusion. Word-finding difficulty (anomia), for example, may be mistakenly thought to reflect a disorder of memory or judgment. Aphasia (see Chapter 10) is a language disorder often mistakenly attributed to confusion, dementia, hysteria, or psychosis.

Language proficiency is assessed by testing 4 parameters: fluency, comprehension, repetition, and naming. (Reading and writing will not be discussed here.)

A. Fluency: Fluency refers to the ability to produce sentences of normal length, rhythm, and melody. It is commonly assessed by listening to the patient's spontaneous speech. Is speech hesitant, stammering,

or inarticulate? Are words mumbled or spoken too softly to be heard? Is the volume constant, or does it decrease toward the end of the sentence? Does the patient use bizarre syntax resulting in nonsense? What is the range of vocabulary? Is speech "empty," consisting of few substantive words and frequent circumlocutions? (The function or some particular attribute of an item may be offered as a substitute for its name—eg, "the thing that holds it on your shirt," rather than "the clip of the pen.") Patients may become adept at masking word-finding difficulty by skirting certain issues or using unobtrusive circumlocutions.

A helpful method for assessing fluency is to have the patient describe what he or she observes in a picture such as the "fishing picture" (Fig 18-1). Although this is not truly spontaneous speech, there are distinct advantages to presenting each patient with a uniform speech stimulus. The examiner quickly learns to note neglect of details and to recognize subtle word-finding difficulties. Upon completion of the patient's description, the examiner can return to specific details of the picture that have been omitted or incorrectly described. Verbatim recording of a patient's description of the picture is essential. Special attention is paid to paraphasic errors, which consist of distortions involving either individual letters ("brain clumor") or whole words (eg, "stick" for pencil). Speech is described for clinical purposes in an all-or-nothing fashion as either "fluent" or "nonfluent."

B. Comprehension: Just as intact auditory perception is essential for optimal interactions between geriatric patients and friends or hospital staff, language comprehension is also crucial. Since repetition and comprehension may be "dissociated" in language disorders that spare the perisylvian speech areas (see Chapter 10), it is dangerous to infer intact comprehension from a patient's ability to repeat what is said. Thus, any tendency by the patient to consistently echo or repeat should actually raise a question of comprehension deficit. It is as if these patients are trying to "run the tape by" one more time in order to extract from it as much information as possible.

There are many ways to assess comprehension at the bedside. The patient can be asked to point to objects the examiner names or whose function is described. This method is limited by objects that are at hand and by the examiner's skill in abstract description of common objects. Another approach is to present questions that can be answered yes or no. If this is done, the examiner must ask at least 6 questions, since the patient has a 50-50 chance of answering any one question correctly. (It should also be noted that some aphasic patients are unable to say yes or no even when they know the answer.)

A graded screening and metric approach to testing comprehension that has proved useful is as follows:

The screening item consists of obeying a 3-step command. At least 5 objects are placed in front of the patient, who is told to "turn over the paper, hand me the pen, and point to your nose." A patient who fails this task is asked to perform the metric, which consists

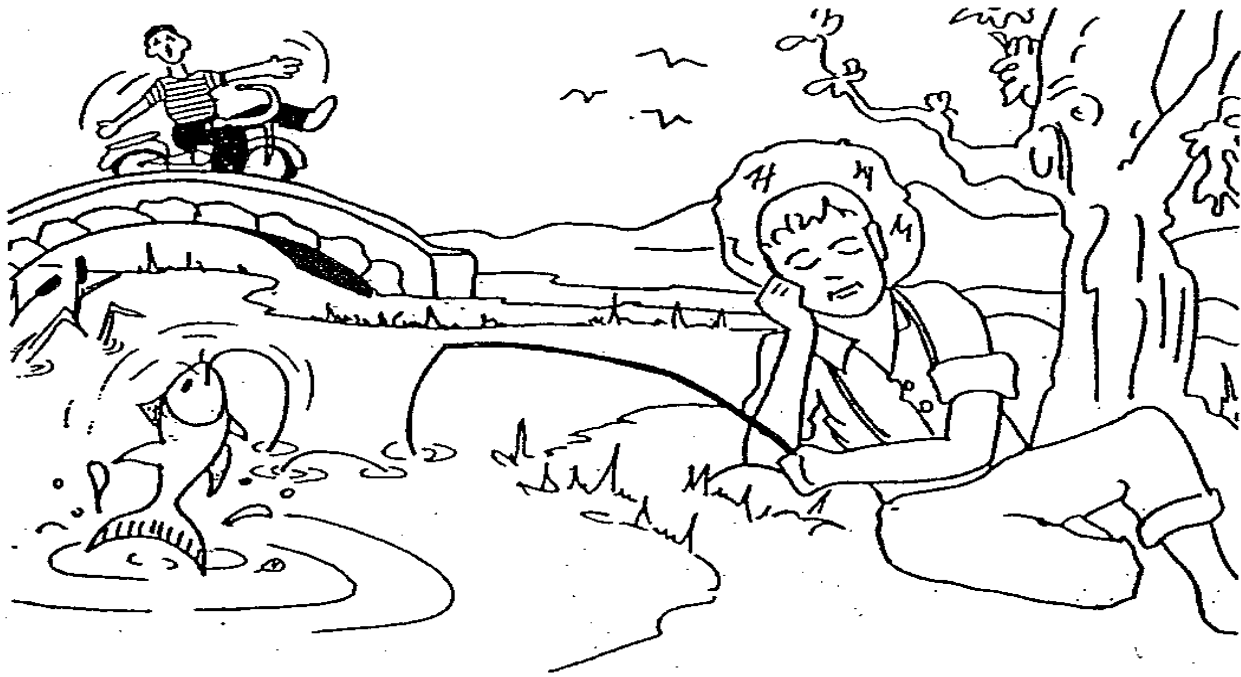


Figure 18-1. "Fishing Picture." (Reproduced with permission of the Northern California Neurobehavioral Group, Inc.: *Neurobehavioral Mental Status Examination Test Booklet and Stimulus Booklet*. Copyright © 1983.)

of three 1-step commands, two 2-step commands, and one 3-step command. Success in performing each of the one-step commands rules out major apraxic problems. (See Chapter 10 for discussion of ideomotor apraxia.)

The metric is performed (for example) as follows:

One-step commands: (1) Pick up the pen. (2) Point to the floor. (3) Hand me the keys.

Two-step commands: (1) Point to the pen and pick up the keys. (2) Hand me the paper and point to the coin.

Three-step command: Point to the keys, hand me the pen, and pick up the coin.

A surprising number of patients are unable to perform a 3-step command despite intact cooperation, attention, and auditory acuity. Careful documentation of inability to comprehend and comply with complex requests (ie, subclinical language disorder) is of great value to the nursing staff and others who manage the patient on the ward. Documentation of such deficits minimizes the risk that these patients will be wrongfully considered negativistic or uncooperative.

C. Repetition: Sentences that are short and contain high-frequency ("everyday") words are the easiest to repeat. Longer sentences that contain low-frequency words or short grammatical function words with no objective referents ("from," "and") are more difficult to repeat. An appropriate screening sentence for repetition might be "The beginning movement revealed the composer's intention." The patient who fails this is given a series of phrases or sentences of graded difficulty as the metric: "Out the window." "He

swam across the lake." "The winding road led to the village." "He left the latch open." "The honeycomb drew a swarm of bees." "No *ifs, ands, or buts.*"

Because the bizarre speech of patients with Wernicke's aphasia is fluent, the physician may incorrectly conclude that these patients are psychotic or in a confusional state. Demonstration of paraphasic errors on repetition tasks provides elegant proof of primary language dysfunction. Repetition is impaired in all of the major perisylvian aphasic syndromes.

D. Naming: Naming parts of an object (eg, "tentacle") is even more difficult than naming the object itself ("octopus"). Thus, an appropriate screening question turns out to be naming a pen and its parts on visual confrontation: cap or cover, point or nib, and clip. (The patient who can name a pen and its parts has intact naming ability and does not have aphasia.) A patient unable to pass the screening question is confronted with a metric consisting of 8 pictured items that are increasingly difficult to name (Fig 18-2). Thus, one obtains a graded estimate of the degree of word-finding difficulty.

Although an individual who names items correctly does not have aphasia, not every patient who manifests naming difficulties has aphasia. Otherwise healthy individuals who are physically exhausted or sleep-deprived often manifest dysnomia. Dysnomia may be an early nonspecific sign of generalized cerebral dysfunction secondary to metabolic disturbance. Aphasic dysnomia may occur as an isolated and dramatic deficit with localized left hemispheric lesions, or it may exist as part of a larger aphasic syndrome.

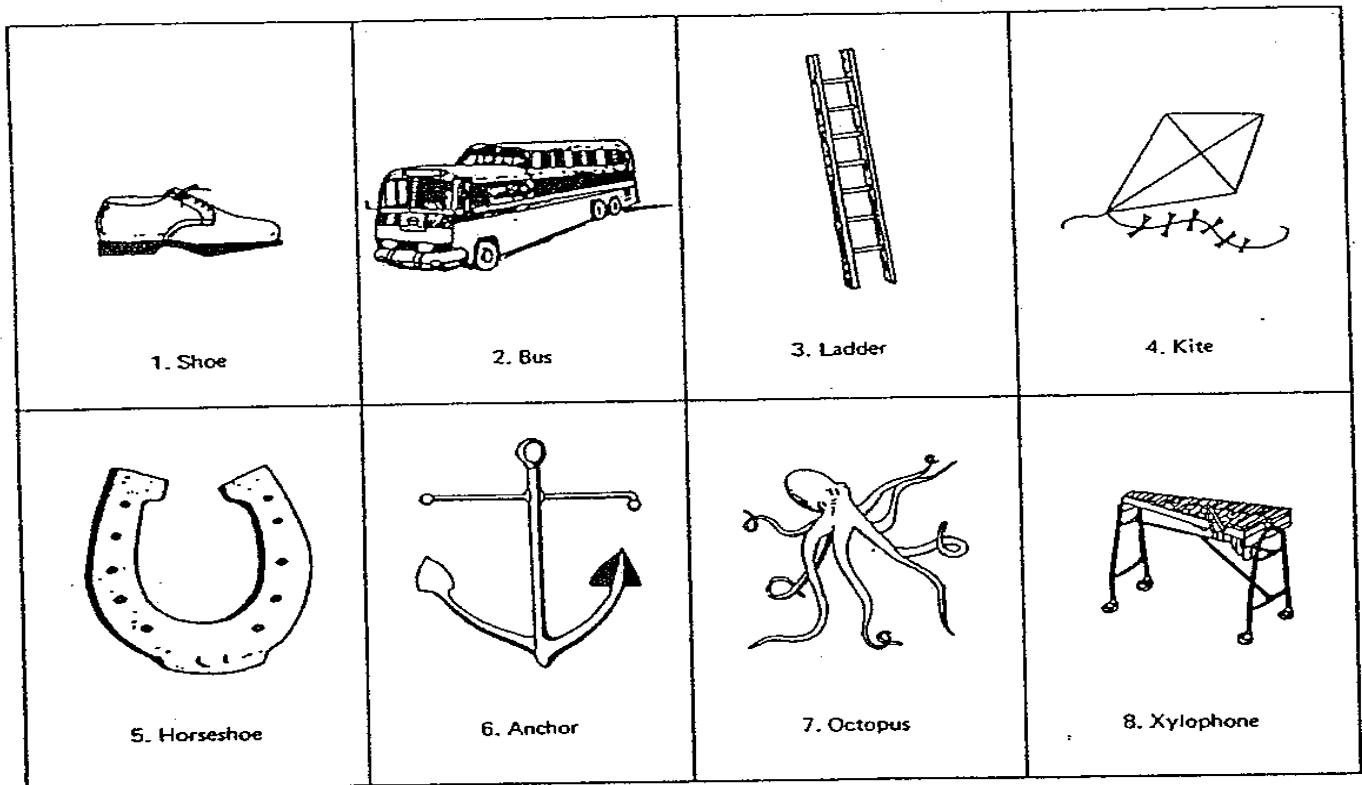


Figure 18-2. Eight pictures from the metric test of naming ability. (Reproduced with permission of the Northern California Neurobehavioral Group, Inc.: *Neurobehavioral Mental Status Examination Test Booklet and Stimulus Booklet*. Copyright © 1983.)

Unless naming is carefully assessed, the clinician runs the risk of mistaking word-finding difficulty for “thought blocking,” amnesia, or impaired judgment. Accordingly, language is assessed prior to memory.

Memory

A. Verbal Memory: A general impression of the patient’s memory can be gained from the way in which he or she presents the history. Is there internal consistency, or are there gaps and contradictions? Does the patient remember the physician’s name from a past encounter, or does the patient confabulate, claiming to have met an individual whom he or she has never seen before? Is there a period for which the patient has poor recall? If so, is the patient unable to recall either personal or general information from that period (organic amnesia), or is there selective inability to recall personally relevant information (psychogenic amnesia)?

1. **Recent memory**—Ability to recall events of the past minutes or days reflects recent memory. (Orientation to place and time also actually reflects memory.) Recent memory is assessed clinically by asking the patient to learn new information. This is commonly done by presenting 4 unrelated words. The patient is told that he or she will be asked for these words later in the examination. The examiner must be certain the patient can repeat all 4 words before going on with other parts of the examination, which constitute

“interference material.” (The number of trials required to learn 4 words is another measure of attention.) Failure to make sure that the patient can repeat all 4 words invalidates any conclusions about recent memory as a specific ability area—the patient may simply not have been attending to the task, and apparent failure to recall may really reflect initial failure to register material.

For each word a patient is unable to recall after 5 or 10 minutes, a category prompt (eg, “a color” or “an animal”) is given. If the patient is still unable to recall the word, a list of 3 or 4 words—one of which is the test word—is presented. Points are assigned on the basis of whether a word is recalled on command (3 points), following a prompt (2 points), or recognized from a list (1 point).

Five to 10 minutes after a depressed patient or a severely amnesic alcoholic has been given 4 words to learn, neither may be able to recall any of the words when asked to do so. The depressed patient, however, will usually respond to category prompts or recognize the words from lists, whereas an alcoholic patient with Korsakoff’s syndrome may not even recall having been given a list of words to learn. The examiner who simply records “none of 4 words recalled at 5 minutes” for both of these patients fails to distinguish 2 very different situations. Moreover, a maximum 12-point scoring system (4 items, each rated 0–3) allows the

clinician to monitor improvement or deterioration of memory following administration of agents such as thiamine, digitalis and diuretics, or tricyclic antidepressants. Clinicians who ask patients what they had for breakfast should verify the answer by asking the nursing staff also. It is worth repeating that the distinction between attentional and amnesic deficits is crucial. *The diagnosis of amnesic syndrome cannot be made in the presence of an attentional deficit.*

2. Remote memory—Ability to recall the events of weeks or years ago is difficult to assess clinically, since the examiner seldom knows enough about the patient to ask pertinent or verifiable questions. Unless the examiner is prepared to seek corroboration (such as what schools the patient actually attended or the dates of military service), there is no point in asking such questions. Questions about past presidents, dates of wars, and events that affect everyone (such as President Kennedy's assassination) are helpful, but evaluation of responses remains problematic, since failure to recall may reflect increasing forgetfulness (as in senile dementia) or a period of time during which the patient was unable to lay down memories. With resolution of memory problems (eg, following traumatic amnesia secondary to head injury, or in response to thiamine treatment of Wernicke-Korsakoff syndrome), older memories tend to return before more recent ones (Ribot's law).

B. Visual Memory: Patients may be asked to reproduce designs or report details of pictures after delays of seconds or minutes. Alternatively, the examiner may ask the patient to remember a series of items (eg, clock, window, chair) or where the examiner places or hides an item such as a dollar bill (eg, behind a picture).

Constructional Ability

While testing of constructional ability is frequently omitted from the routine mental status examination, it may be helpful in the detection of organic brain disease. Patients may be asked to copy drawings, manipulate blocks, or reconstruct a figure using tokens. Before the examiner draws conclusions about a patient's constructional ability, it is essential to assess visual acuity, motor functions (strength, praxis, and coordination), and tactile sensation.

As a screening test for constructional ability, the patient is instructed to study 2 figures for 10 seconds and is then asked to reproduce them from memory. Successful completion of the screen requires intact immediate visual recall as well as significant visual-spatial ability. The screening test and examples of acceptable and unacceptable responses are shown in Fig 18-3.

Individuals who fail the screen are asked either to copy a series of increasingly difficult figures or to reconstruct geometric figures using tokens (Fig 18-3).

Calculations

The patient's education and professional background should be considered before calculating ability

is tested. The traditional "serial 7s" task, in which the patient is asked to "subtract 7 from 100 and then continue, subtracting 7 from each answer," is a difficult task for many high school graduates (ie, over two-thirds are unable to get into the 50s without an error in less than 30 seconds). In addition to calculating ability, the task requires sustained concentration and is easily disrupted by anxiety; for this reason, difficulty with serial 7s should not be taken as evidence of dyscalculia. Simple addition, subtraction, and multiplication often assess rote learning (a type of remote recall) rather than calculating. Thus, an appropriate assessment of calculations involves tasks that fall somewhere between the 2 examples. As a screening device, the question "How much is 5×13 ?" is appropriate. Examples of metric items are shown below.

How much is $5 + 3$?
 How much is $15 + 7$?
 How much is 39 divided by 3?
 How much is $31 - 8$?

Reasoning

Cognition can be subdivided into 2 areas: practical judgment and abstraction (similarities and proverb interpretation).

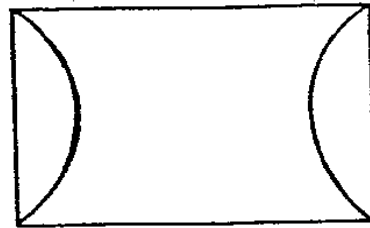
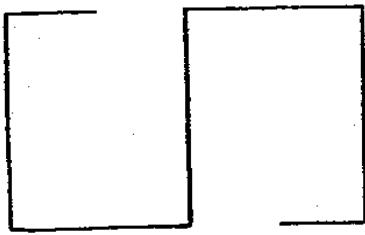
A. Practical Judgment: Assessing practical judgment is especially important in the evaluation of thought disorders, character disorders, or dementia. This area is difficult to appraise because many judgment questions can be answered "correctly" by the aid of simple memory (remembering what one's parents or teachers said should be done in a given situation). Practical judgment also reflects the patient's social and financial background. (A prosperous physician who loses his wallet in the airport in Denver, Colorado, might call home to have money wired to him, whereas an adolescent runaway might turn to Traveler's Aid, go to a local church, or try to hitchhike.)

1. Screening question—The patient is asked, "What would you do if you were stranded in the airport in Denver, Colorado, with only a dollar in your pocket?" Acceptable answers are calling a friend or family member to wire money and going to Traveler's Aid. If the patient claims to know people in the Denver area, the examiner should say, "For the purposes of this question, imagine you are in an airport far away from anyone you know." If the patient suggests using credit cards, the examiner should say, "For the purposes of this question, imagine you do not have credit cards." Patients should be asked to explain their answers further when vague or partially correct answers are given.

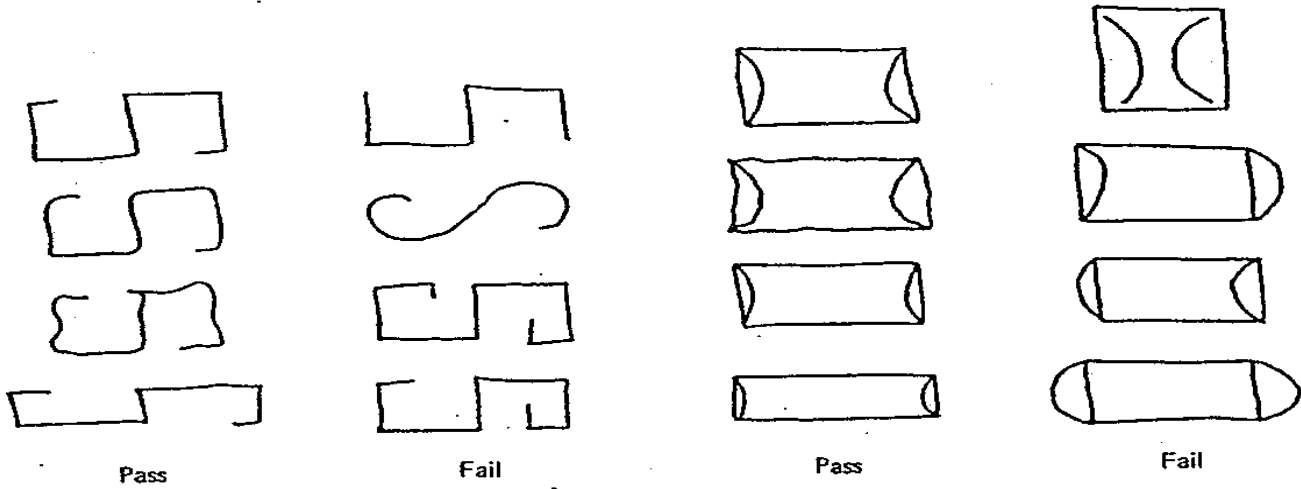
2. Metric—The patient is asked the following series of questions. A score of 2 points is given for a fully correct answer, 1 point for a partially correct or vague answer, and no points for an incorrect answer. Examples of 2-point, 1-point, and 0-point answers for each item are given below.

a. What would you do if you woke up at 1 minute before 8:00 AM and remembered an appointment

Screening test: Copy these figures:



Acceptable and unacceptable responses to screening test:



Metric test for constructions:

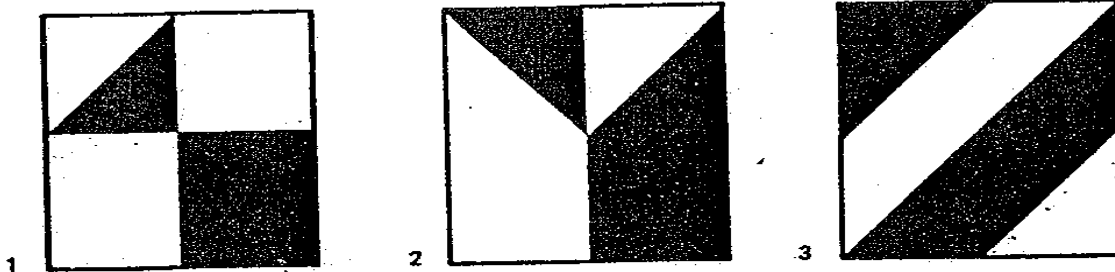


Figure 18-3. Testing constructional ability. (Reproduced with permission of the Northern California Neurobehavioral Group, Inc.: *Neurobehavioral Mental Status Examination Test Booklet and Stimulus Booklet*. Copyright © 1983.)

downtown at 8:00 AM? *Answers:* 2 points—call the person; 1 point—dress as quickly as I can and rush downtown; 1 point (vague)—cancel the appointment; 0 points—go back to bed.

b. What would you do if while walking beside a lake you saw a 2-year-old child playing alone at the end of a pier? *Answers:* 2 points—remove the child from the pier and look for the parents; 1 point—tell the child to get away from the water; 1 point (vague)—make sure the child is not harmed; 0 points—yell for help; look for a lifeguard; go for help.

c. What would you do if you came home and found

a broken pipe was flooding the kitchen? *Answers:* 2 points—shut off the main water valve; 1 point—call the plumber; 1 point (vague)—stop the water; 0 points—mop up the mess.

B. Abstraction: (Similarities and proverb interpretation.)

1. Similarities—Ability to appreciate the commonality between 2 objects is tested as part of the Wechsler Adult Intelligence Scale. Low native intelligence, psychosis, distraction, or dementia may produce impairment in abstracting ability.

a. Screening question—The patient is told, "I

am going to ask you how some things are alike." A specific example is then given: "For example, a hat and a coat are alike because they are both clothing." As a screening item, the patient is asked, "In what way are painting and music alike?" Only the abstract responses "art" or "forms of art" are passing. Less specific abstract responses, such as both are "artistic" or "created," are not passing answers.

b. **Metric**—The patient is told, "I have some other pairs of items. Again, I want you to tell me how they are alike. In what way are a rose and a tulip alike?" Each item is similarly introduced. The first time a patient responds with a difference between the items, that response is recorded and the patient is told, "That is how they are different. I want you to tell me how they are alike." Regardless of whether the patient goes on to give a good answer, no credit is given. Subsequent "difference" responses are not corrected or credited with points.

(1) Rose-tulip: 2 points—flowers; 1 point—grow, have petals, need water, smell nice; 0 points—pretty, same color, fresh, outdoors.

(2) Bicycle-train: 2 points—vehicles, means of transportation; 1 point—ride them, wheels, toys; 0 points—go fast, have tracks.

(3) Watch-ruler: 2 points—measuring instruments; 1 point—have numbers, tell how much; 0 points—are useful, have many parts.

(4) Corkscrew-hammer: 2 points—tools; 1 point—used by humans, made of metal, do work; 0 points—cut into things, are strong.

2. **Proverb Interpretation**—Another means of assessing a patient's capacity to abstract is to ask for the patient's interpretation of a proverb. Proverbs such as "There's no use crying over spilled milk" and "The grass is always greener on the other side of the street" are easier than "People who live in glass houses shouldn't throw stones" or "Every cloud has a silver lining." Proverb interpretation is strongly influenced by culture, educational level, and socioeconomic class.

THOUGHT

Assessment of thought may be divided into several areas: process, content, cognitive functions (abstraction and judgment), fund of knowledge, and insight. Each will be discussed briefly.

Thought Process

Process of thought is assessed by noting coherence of speech and reflects the way in which mental associations are made. Thought process may be described as concrete, tangential (getting off the track of the subject and failing to return), circumstantial (digressive but able to return to the subject), perseverative (sticking to a single thought, phrase, or word), loose (absence of logical thought progression), or incoherent. Thought "blocking" refers to sudden cessation of thought or speech. It may occur in schizophrenia, and lesser de-

grees are seen in anxiety states such as obsessive compulsive disorders. In rare instances, thought process may be so disrupted that the examiner has little or no idea of the content of a patient's thought.

Thought Content

In assessing the content of a patient's thought, the examiner notes preoccupations, ambitions, phobias, and perceptual disturbances (such as illusions and hallucinations). Patients may be asked, "Do you have the feeling that you control your own thoughts?" On careful questioning, patients may admit that they believe thoughts are inserted into or withdrawn from their minds or broadcast to others, or that their thoughts are controlled by outside forces.

Specific fears or beliefs should not be taken at face value, but their origins should be explored. A statement such as "I don't want to go out of my house," for example, may have widely different meanings. A patient with a right parietal lobe tumor may no longer be able to find the way home after walking to a nearby store. One suffering from a major depressive disorder may feel too tired to go for a walk or may have lost all interest in former sources of pleasure. A schizophrenic patient may fear being overtaken by enemies and tortured. Yet another individual may fear open streets or becoming trapped in a crowd.

Patients who deny specific delusions may still claim to have a special relationship with God. It is often helpful to ask patients, "How do you think others feel about you?" (admired, shunned, unappreciated, etc).

Although visual and olfactory hallucinations may occur in "functional" psychoses such as schizophrenia or affective disorder, they tend to occur more frequently in association with organic disease. Patients should be asked to describe how vivid and frequent their hallucinations are, in what circumstances they occur (on falling asleep or waking), and whether they are pleasant, comforting, or terrifying. They should be asked to identify the source of the hallucination (whether it originates within the patient or is projected from some outer source). If hallucinations consist of commands, patients should be asked whether they are able to resist the commands. Patients who are asked if they have special bodily feelings may respond that they feel dead or unreal inside.

Insight

The patient's degree of understanding of his or her medical or psychologic problems is a measure of insight. The patient may be asked, "How do you understand your problems?" or "What has been most helpful to you in dealing with this problem in the past?" Although insight and understanding are often essential to working with patients, some patients are able to acquire insight only after their behavior has changed. It is always important to look for cognitive, perceptual, or informational explanations of "poor insight" before imputing to patients psychodynamic defenses against insight.

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The term "mood" denotes a persisting subjective state of feeling tone as reported by the patient. If the patient does not volunteer a description of his or her mood, the examiner may ask, "How are you feeling inside?" or "What are your spirits like?" Mood may be characterized (for example) as blue, despondent, anxious, fearful, bored, exuberant, irritable, or restless.

Are there dissociations between affect and reported mood? Does the patient with immobile facies say that he or she feels nothing inside or report that he or she feels sad but cannot cry? Does the facial expression of a schizophrenic patient who describes inner feelings of fear or emptiness reflect this, or does he or she wear a "silly" smile while describing inner turmoil? Patients with pseudobulbar palsy (due to disruption of fibers connecting frontal motor cortex with brain stem nuclei subserving emotional expression) may report episodes of laughing or crying uncontrollably, breaking into laughter when they feel blackly depressed, or crying when amused.

MENTAL STATUS & INTELLIGENCE

Mental status examination and intelligence testing are often combined. Elements of the mental status examination are tested in formal tests of intelligence. Abnormalities in mental status (eg, attention or memory) clearly affect ability to complete tests of intelligence (see Chapter 20 for a detailed discussion of tests of intelligence). Conversely, some rough measures of intelligence, especially fund of knowledge, often are included in mental status examinations. Our formal examination format does not include measurement of fund of knowledge, but it is briefly described here for the sake of completeness.

The patient's fund of knowledge may be assessed by asking questions about a wide range of subjects (politics, literature, art, history, geography, etc). In addition to reflecting educational level, the questioning may also help evaluate recent and remote memory. Although intelligence often manifests itself in a wide range of interests, some individuals with superior intelligence actually have very restricted interests. Vocabulary (noted under speech) represents a particular example of fund of knowledge and correlates highly with intelligence.

Table 18-3. Detailed elements of the mental status examination (hierarchical format).

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1. **Presentation:**
 - Level of consciousness: coma to alert wakefulness (Glasgow Coma Scale; see Table 18-2).
 - General appearance: body habitus; hygiene; cosmesis; dress.
 - Attitude: degree of cooperation and effort.
 2. **Motor behavior and affect:**
 - Motor behavior: akinesia; involuntary movements; mannerisms.
 - Affect: facial expression; gestures; speech characteristics; pressure, volume, prosody.
 3. **Cognitive status:**
 - Attention:
 - Attention span: digit span; number of trials required to learn 4 words.
 - Concentration and vigilance: serial subtraction; letter cancellation tasks; months of year backwards.
 - Orientation: for personal identity; place; time.
 - Language:
 - Fluency: spontaneous speech; description of picture.
 - Comprehension: of spoken or written language; performing commands of graded complexity; response to "yes/no" questions; pointing to named or described items.
 - Repetition: sentences of graded difficulty; isolated words; letters; numbers.
 - Naming: objects and parts of objects to visual confrontation (or on tactile presentation).
 - Reading: aloud vs for comprehension; paragraph; sentence; words; letters; numbers.
 - Writing: written description of picture; write name and address; write from dictation; copy a written phrase, word, or letter.
 - Spelling: words of graded difficulty.
 - Memory:
 - Verbal memory: 4 unrelated words recalled after 5 minutes; recall of short story or paired words.
 - Visual memory: reproduction of figures; recall of where examiner hides object.
 - Constructional ability: reproducing figures from memory; copying figures; constructing blocks or token designs.
 - Calculations: addition, subtraction, multiplication, and division.
 - Reasoning:
 - Practical judgment.
 - Abstraction: similarities and proverb interpretation.
 4. **Thought:**
 - Process: coherence; goal directedness; logicity.
 - Content: hallucinations; delusions; preoccupations; suicidal or homicidal ideation.
 - Insight: nature of illness and awareness of factors that affect the course of the illness.
 5. **Mood:**
 - Relation to affect and congruence with thought content.
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