2013

The Successes and Challenges of Program Development

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The Successes and Challenges of Program Development

Description
Recognizing the benefits and values of interdisciplinary health care, Pacific University School of Occupational Therapy initiated collaboration with the School of Professional Psychology in 2012 to embrace interdisciplinary education. Two occupational therapy (OT) graduate students Ingrid Borland and Ariel Schiller, under the supervision of Assistant Professor Sean Roush, OTD, OTR/L, had successfully completed a needs analysis and conducted a pilot stress management group in the Pacific Psychology Clinic in Hillsboro. Their analysis revealed limited mental health groups led by healthcare professionals in the local community. Furthermore, there was a lack of groups co-led by OT and psychology (PSY) in the community and lack of or limited OT and PSY collaboration in the U.S. educational system (Borland & Schiller, 2012). Such findings justified their efforts to pilot an OT-led stress management group in the Pacific Psychology Clinic. Although their groups were well received, time constraints led to a low enrollment rate. Moreover, the groups were solely led by OT due to the limited availability of the PSY student therapists.

In 2013 two OT graduate students Elizabeth Bair and Man Wa Eva Shing, again acting under the supervision of Professor Roush and in collaboration with Psychology Services Director Lisa Christiansen, Psy.D., continued the partnership between OT and PSY.

The Pacific Psychology Clinic is one of several affordable mental health services in the local Washington County area. The Borland and Schiller (2012) needs analysis of the Pacific Psychology Clinic revealed several themes: 1) clients of the Pacific Psychology Clinic often have both mental and physical health conditions, 2) PSY student therapists have limited or lack of experience with OT, 3) PSY student therapists identified physical health issues, which are outside their scope of practice, as a barrier to their treatments, and 4) PSY student therapists listed a variety of health and safety management concerns that are within OT’s scope of practice.

Bair and Shing aim to develop a more encompassing group to attract more participants and to invite PSY student therapists to co-lead the groups to increase involvement of PSY as well as initiate the interdisciplinary education approach. Upon reviewing Borland and Schiller’s need analysis of Pacific Psychology Clinic and the local community, the creation and collection of comprehensive health education materials and program planning for people with multiple health concerns was proposed to and approved by Professor Roush and Director Christiansen. Due to contractual obligations, implementation of an interdisciplinary pilot group was not carried out. The focus of this project shifted to creating a program development guide for healthcare professionals.

Disciplines
Occupational Therapy

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The Successes and Challenges of Program Development

Innovative Practice Project 2013

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Overview

Recognizing the benefits and values of interdisciplinary health care, Pacific University School of Occupational Therapy initiated collaboration with the School of Professional Psychology in 2012 to embrace interdisciplinary education. Two occupational therapy (OT) graduate students Ingrid Borland and Ariel Schiller, under the supervision of Assistant Professor Sean Roush, OTD, OTR/L, had successfully completed a needs analysis and conducted a pilot stress management group in the Pacific Psychology Clinic in Hillsboro. Their analysis revealed limited mental health groups led by healthcare professionals in the local community. Furthermore, there was a lack of groups co-led by OT and psychology (PSY) in the community and lack of or limited OT and PSY collaboration in the U.S. educational system (Borland & Schiller, 2012). Such findings justified their efforts to pilot an OT-led stress management group in the Pacific Psychology Clinic. Although their groups were well received, time constraints led to a low enrollment rate. Moreover, the groups were solely led by OT due to the limited availability of the PSY student therapists.

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Literature Review

Health Education and Self-Management

The principles of health education and self-management have been identified and elaborated upon by a number of researchers including professionals from higher education institutions as well as medical and mental health providers (Druss et al., 2010; Lorig et al., 2006; Goldberg et al., 2013).

A central theme is that every person plays an active part in the decision making process of managing their physical and mental health. The end results are dependent on the choices they make, health related goals they set and on how actively they pursue these goals. There are a few basic tenets for individuals to becoming an effective partner with their health care providers in maintaining and promoting good health and wellness. Individuals need to have a basic understanding of their conditions as well as access to the resources and supports needed to make good decisions in their health care management. The group format of health education classes offers peer social supports that influence the individual’s ability to stay on track by providing reminders, brainstorming ideas, sometimes providing physical assistance, and ongoing emotional supports.

Research shows that adults are motivated to persevere when they understand the benefits of behavioral change and believe that they can be successful in making those changes. Each success increases the individual’s sense of self-efficacy and confidence in managing their health problems by setting realistic goals and implementing behavior changes over time (Milbank Memorial Fund, 1999).

Chronic Conditions

Generally health problems are categorized as acute or chronic. An acute condition often begins with a sudden onset (accident or illness). It goes through a predictable process of getting worse, getting treatment, hopefully the situation resolves and the individual gets better. Chronic conditions have a different profile. They develop over a long period of time. A multitude of factors can contribute to the condition including: lifestyle, heredity, stress, socio-economic factors, inadequate nutrition, exposure to toxins, environmental hazards and physiological problems. Chronic conditions manifest a number of symptoms (pain, shortness of breath, muscle spasms, inflammation, depression, fatigue, etc.) that in combination multiply and feed on each other; continuously increasing the negative effects of the condition (Lorig et al., 2006).

Chronic disease comes in many forms; heart disease, diabetes, chronic obstructive pulmonary disease (COPD), asthma, arthritis, kidney disease, cancer, and chronic stroke are
common examples. In the United States, chronic diseases are responsible for 7 out of 10 deaths every year. The Healthy People 2020 report advises that in 2008, 107 million Americans, almost 50 percent of people age 18 or older, had at least one of the above listed chronic conditions (Centers for Disease Control and Prevention [CDC], 2008; Healthy People 2020, 2009). The Centers for Medicare & Medicaid Services report that 50 percent of Medicare Fee-for-Service beneficiaries in 2005 were receiving care for one or more of these chronic conditions (Schneider & O’Donnell, 2009).

In addition to affecting the body’s cellular structures and organic processes, these diseases also affect the individual’s ability to perform activities of daily living (ADL). Furthermore, they interrupt leisure and social participation that add meaning and satisfaction to life. Physical limitations, emotional distress and loss of self-esteem often lead to isolation and inactivity, creating a vicious cycle of depression and disability for people dealing with chronic conditions (See Figure 1).

**Figure 1.** Symptoms of Vicious Cycle
Co-morbidity and Mental Health Conditions

While chronic conditions seriously impact people in the general population, the prevalence among persons with comorbid mental health conditions and chronic medical conditions is even higher. This combination of problems limits their ability to access appropriate resources and puts them at risk of receiving an inadequate level of care (Orszag & Emanuel, 2010). The National Comorbidity Survey Replication (NCS-R) showed over 68 percent of adults diagnosed with a mental health disorder also had at least one medical condition. Conversely, 29 percent of people reporting a medical condition also reported having a mental health disorder (Alegria, Jackson, Kessler, & Takeuchi, 2003; Kessler et al., 2004).

Socioeconomic factors are known to contribute to poor access to medical care, higher levels of medical diseases, and the likelihood of having mental health disorders. Consistently, the lower socioeconomic status (SES) a person has, the higher their chances are of having increased rates of mental disorders, lower educational attainment and poor health behaviors. All of which contribute to chronic diseases and higher rates of mortality (Brezinka & Kittel, 1996; Butler et al., 2008; Drewnowski, 2009; Harper & Lynch, 2007; Kronick, Bella, Gilmer, & Somer, 2007; Lantz et al., 1998; Lorant et al., 2003).

Individuals with mental health conditions also have a higher rate of unemployment and lack of financial resources (Goldberg et al., 2008). This situation reduces their access to social supports, healthcare resources and frequently exposes them to dangerous and unhealthful environments (Jeon, Essue, Stephen, Wells, & Whitworth, 2009; Phelan, Link, Diez-Roux, Kawachi, & Levin, 2004). Environment and emotional stresses are related to low SES and associated with the use of tobacco, substance abuse, poor physical fitness and inadequate nutrition which play a role in the development of chronic diseases (CDC, 2010).

In Oregon, there is a significant need of services for the mental health population. A recent press release on Feb. 6, 2013 quoted Senate President Peter Courtney stating that “…one in eight children, and one in 18 adults in Oregon suffers from mental illness.” He further advised that the Oregon Health Authority reported, “…the state is currently serving less than half the adults and slightly more than one-third of the young people who need treatment” (Senate President’s Office, 2013, para. 3). With about 17,376 residents who have mental health conditions and a 10.4% poverty rate in Washington County (City Data, 2012; United States Census Bureau, 2012), the need for affordable mental health services in the local community is high.
Care and Treatment for Co-morbid Conditions

Chronic mental illness and chronic medical conditions both require treatment and self-management by the individual to achieve the highest quality of life possible. Treatment may come in the form of prescribed medications, exercise and lifestyle modifications (Lorig & Holman, 2003). Individuals dealing with comorbid chronic medical and mental health conditions struggle to manage the often complex medication and behavior regimens necessary to control symptoms and maintain health. People dealing with depression may lack the energy, motivation and confidence to manage their conditions. Depressed patients are three times more likely to be non-compliant with medical treatment plans than people who are not depressed (DiMatteo, Lepper, & Croghan, 2000). They often become inactive and isolated, impacting their ability to communicate well and maintain healthy relationships with others, including their health service providers (Katon, 2003). These contributing factors and barriers to self-care not only increase the prevalence and severity of comorbid chronic conditions among this population (Brown, Birtwistle, Roe, & Thompson, 1999; Daumit et al., 2005; Dickerson et al., 2006; Dickerson et al., 2009; Dixon, Postrado Delahanty, Fischer, & Lehman, 1999; Kreyenbuhl et al., 2010; McCreadie et al., 1998; Meyer & Nasrallah, 2009; Sokal et al., 2004), but also impact their ability to successfully manage their conditions (Mueser et al., 2002). Specific curriculums and general health education are needed to address the specific needs of these individuals with comorbid physical and mental health conditions (Mueser et al., 2002).

The issue of poor continuity of care between medical physicians and mental health professionals continues to exist. Individuals with mental health conditions often have difficulty recognizing chronic illness patterns and seeking treatment. The primary care physician may not be familiar with the treatments and protocols used for patients with mental health issues; often resulting in poor communication and a lack of understanding of the patient’s mental/emotional status and their ability to comply with treatment recommendations. Lastly, many mental health care providers do not have the extensive training needed to recognize medical illnesses and to provide referrals to medical care for these patients. Currently, the U.S. medical systems are generally fragmented and do not provide the interdisciplinary collaboration that is required to provide optimum care for patients with comorbid mental and medical conditions (Druss & von Esenwein, 2006).

Best Practice and Existing Programs

Previous experience indicates that teaching primary care physicians and mental health care providers to screen patients for comorbidities has not resulted in improved care and treatment for these patients (Gilbody, House, & Sheldon, 2001). Fortunately, a newer model of communication and collaboration between the disciplines to improve delivery of care has shown to be effective (Butler et al., 2009; Gilbody et al., 2001; Gilbody, Bower, Fletcher, Richards, &
Sutton, 2006; Thielke, Vannoy, & Unitzer, 2007). Self-management education in group settings has shown to be promising in enabling patients to be better informed and participate more actively in health care decision making and management (Chodosh et al., 2005; Goldberg et al., 2013; Holman & Lorig, 2000; Monninkhop et al., 2003; Wagner et al., 2001).

There are a number of programs providing such educational support to patients with chronic medical conditions (Effing et al., 2009; Health Council of Canada, 2012; Milbank Memorial Fund, 2009; Viswanathan et al., 2012). Some programs provide online supports that allow individuals to pursue their own health education and offer tools for setting goals, developing action plans and monitoring their health. Other programs offer group health education classes that provide peer supports.

Within the United States, the peer-led Chronic Disease Self-Management Program (CDSMP) developed by Stanford University is the most widely-recognized with extensive research evidence. CDSMP is a 6-week course focused on problem-solving, decision-making, and action planning skills to manage common chronic physical conditions (Stanford University School of Medicine, 2013a).

Within the mental health community, there are several well-established recovery programs that contain elements of self-management. The self-directed Wellness Recovery Action Plan (WRAP) focuses on increasing self-awareness and developing personal Wellness Tools to maintain a healthy lifestyle (Copeland, 2013). The Building Recovery of Individual Dreams & Goals through Education & Support (BRIDGES) focuses on developing self-help skills and establishing on-going support (Tennessee Mental Health Consumers’ Association, 2013). National Alliance on Mental Illness (NAMI)’s Peer-to-Peer Program focuses on relapse prevention (NAMI, 2013). The Vet-to-Vet focuses on peer-counseling using the Illness Management and Recovery (IMR) program to promote personal responsibility through learning information, skills, and strategies for managing their psychiatric conditions (Vet to Vet, 2013).

In addition to these recovery programs, there are recent developments in self-management programs for chronic mental health conditions. The Health and Recovery Peer (HARP) program, adapted from CDSMP for the mental health population, has been shown to improve health and quality of life (Druss et al., 2010). There has been recognition of the need for such programs to be modified and expanded to address the specific needs of persons with comorbid mental and physical conditions (Mueser et al., 2002). These programs have been targeted to psychiatric clinics, consumer rehabilitation settings and community mental health services. The classes provide information about specific disease management techniques and how mental illness affects a person’s medical status and vice versa (Cabassa, Ezell, & Lewis-Fernandez, 2010).
To date most group programs have used a mental health professionals/peer co-leaders format or are led by trained mental health consumer peers (Stanford University School of Medicine, 2013a; Druss et al., 2010; Goldberg et al., 2013). Lately the number of peer-led self-management or recovery programs has grown due to its financial feasibility. These programs also have the unique advantages of providing emotional support, promoting hope and empowerment, increasing positive self-esteem and social inclusion through shared experience (Moll, Holmes, Geronimo, & Sherman, 2009; Repper & Carter, 2011). However, there are many challenges and limitations faced by peer-leaders such as role confusion, power struggles with group members and colleagues, boundary issues, and stress (Moll et al., 2009; Repper & Carter, 2011). Furthermore, there is no evidence suggesting that peer-led programs yield better results or attendance than clinician-led programs (Bottonari et al., 2012; Eisen et al., 2012). A 2010 study conducted by Hoagwood and colleagues examined 50 family support programs for children’s mental health and found that while peer-led programs have an emphasis in advocacy for services, clinician-led programs focus on skills development. This suggests that program design should be selected based on population and need.

**Unique OT contribution/Student collaboration**

Occupational therapists are medical professionals with expertise in the areas of lifestyle modification, rehabilitation and prevention. The person-centered focus of OT provides a unique insight into the specific challenges, both emotional and physical, of a client dealing with comorbid mental illness and chronic medical conditions. A founding principle of occupational therapy is that the therapist works as a partner with their client to understand the situation, evaluate needs, plan treatment and support the client to achieve their self-identified goals (American Occupational Therapy Association, 2008).

Clients learning to manage living with comorbid chronic conditions, benefit from the OT perspective on developing healthy habits and routines to integrate medications, exercise, healthy diet and social participation into their life. Living with diabetes, heart disease and other chronic medical conditions affects a person’s strength, endurance and emotions, limits their ability to keep up with ADL, impacts employment responsibilities and family/social obligations.

As leaders in health management education, OTs use knowledge of mental illness and medical diseases/conditions to facilitate the discussion of how comorbid conditions affect an individual’s daily routines and to identify barriers and strengths for their success. OTs provide emotional support and encouragement during the process of adapting routines and modifying the environment to help the individual build a sense of self-control and confidence in their ability to manage their conditions. Although education is part of OT’s scope of practice, the approach of occupational therapy is one of “doing”. It focuses on incorporating the individuals’ goals and treatments into their daily life to support change and growth without undue disruption to existing
family patterns and routines. This is especially important for individuals who have the additional challenge of coping with mental illness or mood disorders as they work to manage chronic medical conditions.

Using meaningful occupation as a guide, OTs explore and teach various strategies for dealing with physical and emotional symptoms in daily life. This may include: addressing issues of fatigue by incorporating energy conservation and modifying activities; teaching and practicing techniques to reduce pain, stress, fatigue and spasticity symptoms; educating on possible progressions of specific condition, and helping clients cope and manage tasks as their physical or mental abilities change.

Living with comorbid mental illness and chronic medical conditions is a complicated business. Although each discipline has its value, delivering services in isolation has been shown to result in fragmented care and unsatisfactory health outcomes. It is clear that interdisciplinary communication and collaboration with the client is critical to developing treatment plans that support them in achieving both physical and emotional health and wellness.

It was from this perspective that Bair and Shing developed the idea of a collaborative co-led health education program created and led by health profession students. The following questions needed to be answered before proceeding with the project:

1. Why should occupational therapy students and psychology students collaborate in providing health education and self-care classes to individuals with comorbid medical and mental health chronic conditions?
2. What are the benefits and liabilities related to using student co-leaders rather than consumer peer leaders?

Discussions between the students and faculty advisors and literature reviews on the subject yielded the following rationale for an interdisciplinary effort using student OT and PSY practitioners as co-leaders.

- To provide a professionally supervised training ground for the next generation of health care providers, using interdisciplinary approaches to treating patients with comorbid chronic conditions.
- To initiate the establishment of an OT clinic for occupational therapy students’ professional development and fieldwork experiences
- To increase the presence of the university, the School of Occupational Therapy and School of Professional Psychology while providing needed services to the community.
To provide cost effective services to individuals with low income who need assistance and education to manage their chronic medical and mental health conditions

A collaborative program developed by occupational therapy students and psychology students will provide needed services to meet the complex physical, emotional and health management needs of clients with comorbid mental health issues and chronic medical conditions in the local community.

Method

Models

Bair and Shing’s concept of a comprehensive health education class was guided by the Model of Human Occupation (MOHO) and Transtheoretical Model of Change. The goal of the class is to assist participants in skill development and restore their sense of control over their health conditions through behavioral changes supporting their functional roles.

Model of Human Occupation

MOHO was developed by Gary Kielhofner in 1980 as the first contemporary model that has an occupation-focus. MOHO aims to explain “how occupation is motivated, organized into everyday life patterns and performed in the context of the environment” (Kielhofner, 2008, p. 3). MOHO perceived humans as three dynamic internal subsystems: volition, habituation, and performance capacity.

Volition refers to personal causation, values, and interest. This force reflects the person’s motives to act; which may be external motivators such as financial incentives or an internal drive such as hunger. Habituation refers to one’s behavioral patterns based on one’s habits, roles and routines. Performance capacity is defined as one’s objective ability and subjective experience. Each of these subsystems interacts with the environmental context. The environment can create demands, supports, or opportunities.

MOHO has five principles outlining the concepts of human occupations (Kielhofner, 2008, p.31):

1. Occupational actions, thoughts, and emotions arise out of the interaction of volition, habituation, performance capacity, and environmental context.
2. Change in any aspect of volition, habituation, performance capacity, and/or the environment can result in a change in thought, feeling, and doing.
3. Volition, habituation, and performance capacity are maintained and changed through what one does and what one thinks and feels about doing.
4. A particular pattern of volition, habituation, and performance capacity will be maintained so long as the underlying thoughts, feelings, and actions are consistently repeated in a supporting environment.
5. Change requires that novel thoughts, feelings, and actions emerge and be sufficiently repeated in a supportive environment to coalesce into a new organized pattern.

Transtheoretical Model of Change

The Transtheoretical Model of Change, developed by James Prochaska and Carlo DiClemente, emerged in the late 1970s to explain the cyclical process individuals used to change their smoking habits (Prochaska & DiClemente, 1982). The Transtheoretical Model of Change outlined the six distinct stages of change: 1) pre-contemplation, 2) contemplation, 3) preparation, 4) action, 5) maintenance, and 6) termination.

The pre-contemplation stage is when individuals are unaware of the problem and/or have no intention to change. Once the individuals recognize the problem and have the motivation to seriously consider changing their habit, they have entered the contemplation stage. Following contemplation is the preparation stage. This is when individuals have strong intention to make a change and/or may have made some small changes, such as delaying smoking or smoking less. When the individuals are fully committed to change and have successfully changed their behaviors for a short period of time, they have entered the action stage. They progress to maintenance stage when changes are maintained for at least three to six months. After a prolonged period of maintenance (at least six months), the individuals reach termination stage in which they are no longer at risk for relapse (Prochaska & DiClemente, 1982; Prochaska, DiClemente, & Norcross, 1992).

Creation and Collection of Comprehensive Health Education Materials

To begin the development of an interdisciplinary comprehensive health education class, Bair and Shing researched and reviewed publicly available information including but not limited to the following health management programs:

- Stanford CDSMP (Stanford University School of Medicine, 2013a)
- The Flinders Program in Australia (Flinders University, 2013)
- New Health Partnership: Information for People with Chronic Condition – Self-Management Support (Institute for Healthcare Improvement, 2011)
- Healthy Coping in Diabetes: A Guide for Program Development and Implementation (Fisher et al., 2009)
- Strengthen Your Spirit: Self Assessment and Tools for Healthy Coping of Negative Emotions (Marshall University School of Medicine, 2009)
- Project Dulce in California (Scripps Health San Diego, 2013)
- WRAP (Copeland, 2013)

Many of those programs cover universal healthy coping skills such as physical activities, stress management, nutrition, spirituality, communication, support groups, mind-body techniques, and medication management. From there, Bair and Shing selected essential health topics that both OT and PSY students are well-qualified to cover. Next they conducted multiple internet queries for free credible sources that offer quality health educational materials. Credibility of the sources are based on the type of web site sponsorship with government web sites as the most credible, credential of the author(s), date of publication, completeness of the information, depth of the information, and user friendliness of the web site.

Once the source was deemed credible, the students reviewed copyright guidelines and requested permission to use the materials (See Appendix A: Permission Request for Usage and Reprint Sample Letter). When permission was denied or associated with a licensing/copyright usage fee, the students either created their own materials or searched for another credible source.

When permission was granted, the original article was used as the instructor’s version. Depending on the breadth and depth of the article, a concise patient education handout may be generated by adapting and excerpting contents from the original articles with proper citation as follows:

Content excerpted/adapted from the CDC: http://www.cdc.gov/physicalactivity/everyone/health/index.html

Excerpted/Adapted from the NIH Go4Life Tip Sheets: http://go4life.nia.nih.gov/resources/tip-sheets (I. Gilman, personal communication, February 27, 2013)

**Partnership with Psychology**

Bair and Shing met with Director Christiansen to identify the goals of this project and to ensure that their concept of a health education class meets the needs of the Pacific Psychology Clinic clientele. Continuous communication occurred via email. Director Christiansen was responsible for recruiting PSY students who were interested in co-leading the class. Once the PSY student was identified, Bair and Shing planned to meet with the PSY student to introduce him/her to the project, obtain a psychology perspective of the health topics, and modify class materials as needed.
Recruitment

Recruitment for a pilot group was intended to take place within Pacific University clinics and local health services providers such as Virginia Garcia Memorial Health Center and Tuality Care via posting flyers, email announcements, and word-of-mouth (See Appendix B: Recruitment Contact List). However, recruitment was not completed due to the discovery of an unforeseen contractual obligation between Pacific University and Stanford University.

Pilot Group

A pilot comprehensive health education class co-led by OT and PSY students was planned to take place in Pacific University. Bair and Shing reserved two conference rooms in Creighton Hall through the College of Health Profession administration. Class size was limited to eight to ten participants to encourage group discussion. Class time was set to begin at 5:30 p.m. to allow adequate travel time for participants who are working.

Outcome

Based on the MOHO principles, the comprehensive health education class is designed to evoke new thoughts, feelings, and actions and provide a supportive environment to establish healthy coping mechanisms. It is intended for individuals who are in the contemplation or preparation stage. The content of the course is to facilitate individuals in developing necessary skills to progress to action and maintenance stages for managing their multiple health conditions.

Creation and Collection of Comprehensive Health Education Materials

Through internet query, Bair and Shing located many credible and publically available resources. Government sites, such as Centers for Disease Control and Prevention, and National Institute of Health, have an abundance of health information and materials. All information and materials on their sites are public domain. There are also many non-profit organizations such as HelpGuide.org which permit non-profit reprint and usage of their materials.

Bair and Shing also created OT tools such as a daily activity log to facilitate awareness of personal behavioral patterns (habits, roles, and routines) in order to promote change (See Appendix C: Daily Activity Log).

Partnership with Psychology

Director Christiansen successfully recruited a PSY student to co-lead the comprehensive health education class with the OT students. The students corresponded via email and scheduled
a group meeting with the presence of Professor Roush to discuss the roles and responsibilities of each student. Unfortunately, the planning meeting became a debriefing meeting, where the group decided to cancel the pilot group due to unforeseen contractual obligations.

Cancellation of Recruitment and Pilot Group

As Bair and Shing prepared for recruitment, they discovered that Pacific University holds the license to the Stanford CDSMP. Under the licensing agreement with Stanford University, Pacific University as the licensee agreed to the following clauses:

6. Licensee may not create derivatives of the Program without the express written permission of Stanford. Licensee may not otherwise commercially exploit the Program or any material derived from or based upon the Program.
7. Licensee agrees to contact Stanford University for permission to reproduce or distribute the Program or any material derived or adapted from the Program for any use not specifically granted in this Agreement.
8. If Licensee wants to collaborate with another organization to offer training, Program materials, or any other use of the Program, Licensee should contact Stanford to ensure that the intended use is permitted and the organization has been licensed. (Stanford University School of Medicine, 2013b, para. 12-14)

Despite the lack of knowledge and access to CDSMP materials and training, the comprehensive health education class was deemed to be similar to the CDSMP. Due to time constraints, the students were unable to contact Stanford University for permission to implement a pilot of the comprehensive health education class at Pacific Psychology Clinic. Recruitment was not completed and the pilot group was cancelled. The unforeseen contractual obligations shifted the focus of the project from developing a class to creating a resource guide for students and practitioners interested in developing health education programs.

Bair and Shing compiled a list of publically available free resources for common health education topics (See Appendix D: Resource List), a sample module (See Appendix E: Sample Module – Medication Guide), and a program development checklist (See Appendix F: Program Development Checklist).

Limitations

In development and implementation of this Innovative Practice Project, there were several limitations:

- The program was researched by novice OT student researchers.
- The students had limited experience in health education program and curriculum development.
- The project was conducted over a short period of time (one semester). A longer, ongoing interdisciplinary program development process would allow for a richer curriculum and opportunity to include more health disciplines in the program. A longer time period would enable more in-depth research and analysis of desired outcomes to further refine and improve the program.
- The small number of clients who expressed interest in the class did not allow an in-depth analysis of the most prevalent needs within the proposed local population.
- There is currently no comprehensive process in place to identify potential legal and contractual issues related to student program development within Pacific University and associated programs. A lack of awareness of the contractual agreement between Pacific University and Stanford University CDSMP resulted in the cancellation of scheduled classes and recruitment efforts within the school and community.
- Due to cancellation of the classes the students did not have the opportunity to co-lead groups with the Pacific Psychology Clinic staff and student practitioners. Consequently, Bair and Shing were not able to integrate new knowledge based on their participation as co-leaders into the analysis of the curriculums effectiveness.
- Because the curriculum was not actually implemented, it is difficult to gauge the effectiveness of using an occupational therapy approach to self-management of chronic conditions within a university clinic, mental health setting. Additionally, there was no opportunity to assess and analyze the skills growth or the quantity and quality of the collaboration between OT and PSY students.
- Another concern was limited interaction with the PSY students and inability to include their feedback and ideas into the curriculum development. In future interdisciplinary IPP projects, the program would benefit by involving PSY students at an earlier stage of development.
- This project was designed to be implemented at Pacific University. Implementation of this occupation-based health education program among a number of colleges would allow further investigation and analysis of the implications of an OT/PSY student practitioner, co-led self-management program in university clinics.

Recommendations

Throughout the process of developing a program and creating a health education curriculum, the two students learned to adjust to changing circumstances and deal with a variety of barriers and challenges as they arose. Based on their experience, the following recommendations to students or others contemplating developing similar groups are offered:
- Train a university staff member to become a master trainer of CDSMP and provide ongoing training to student practitioners
- Collaborate to co-lead with Tuality Health Education community Living Well with Chronic Conditions program (perhaps the Pacific Psychology Clinic clients may be eligible for a discount to attend the class)
- Explore utilization of Diabetes Clinic’s CDSMP (Spanish version) for Pacific Psychology Clinic’s Spanish-speaking clients
- Integrate this co-led self-management curriculum within the OT and PSY curriculums as a part of fieldwork and internship electives, to allow graduate students to work together and improve their performance as future health professionals
- Proactively communicate with local partners regarding potential competition among services (perhaps can collaborate during development process)
- Communicate with legal department and within interdisciplinary university departments to share contract-related information
- Create a “contract” folder on Vault database to provide a centralized repository for information
- Create “legal/contract” committees with one representative from each department of the College of Health Professions to enhance communication within the CHP
- Expand inter-department collaboration to other health professions (physical therapy, physician assistant, optometry, pharmacy, dental hygiene, etc.) to broaden the knowledge base for students and services for clients
- Use the sample Program Development Checklist provided

**Summary**

The evidence is clear that there is a high need for affordable or free health education and self-management training among individuals experiencing comorbid mental illness and chronic medical conditions. This paper provides the reader with an in-depth discussion of the problems faced by these individuals, current trends in treating and living with chronic conditions, and the rationale supporting interdisciplinary programs that provide them with comprehensive, integrated health care.

Interdisciplinary programs such as the proposed curriculum for a health education program, allow health professions graduate students to practice collaboration and co-treatment with peers, and prepare them for future roles as leaders and health providers. Bair and Shing benefited from the coaching and direction of professional advisors and faculty members, and gained valuable experience conducting research, identifying best practices, and accessing credible resources. The students gained skills in program development, creating a curriculum, marketing, recruitment, and program implementation. These benefits will transfer over into their professional life.
This project enabled exploration of an interdisciplinary collaboration and treatment program at Pacific University. The program could benefit the School of Occupational Therapy, School of Professional Psychology, the university and the community at large by providing: student opportunities for skills development, use of evidence based practices, increased confidence as researchers, and the enhanced reputation of the university. Equally important is the provision of much needed services to individuals in the community.

The process also highlighted an area in need of improvement within the Pacific University College of Health Professions. There is no well-known, easy to access process for students and faculty to verify if programs and projects conflict with community partner programs or contractual obligations. In this instance a critical piece of information was missed, resulting in cancellation of the occupation-based self-management class prior to implementation.

Instead, Bair and Shing used their new knowledge to apply the principles of person-centered, occupation-based care and assembled a sample module and program development checklist for use by other students and practitioners. While there are many well established programs for self-management of chronic conditions and recovery symptom management models, there is always room for improvement and exploring alternatives. Occupational therapists have a unique and important role in this area as they have specialized knowledge of occupation, habits, routines and the psychosocial and physical implications of living with chronic conditions and/or mental illness. It is hoped that these students’ experience and the resources provided will inspire other healthcare professionals and students to collaborate within disciplines to further research and development in this important area of practice.
References:


Brezinka, V., & Kittel, F. (1996). Psychosocial factors of coronary heart disease in women: A review. Social Science Medicine, 42(10), 1351-1365.


February 14, 2013

To whom it may concern:

My name is Eva Shing. I am a third year occupational therapy student at Pacific University. As part of our education, my classmate Elizabeth and I are collaborating with Pacific Psychology Clinic to compile a comprehensive health education class for people with multiple health conditions.

I really like the comprehensive information along with the photos on Go4Life website (http://go4life.nia.nih.gov/try-these-exercises) regarding the different types of exercises: endurance, strength, balance, and flexibility. I would like to use your materials in my exercise portion of the self-management class.

I am seeking permission from you to allow us to modify, use, and reprint the materials for our group (see attached). In addition, our final product (which will include your material if permitted) will be published electronically in a PDF format under Pacific University's CommonKnowledge library resource.

I look forward to hearing for you. Thank you very much for your consideration.

Sincerely,

Eva

*P.S. by modify, I mean condensing info into a brief handout for participants, without any alteration of the text or wordings.
## Appendix B: Recruitment Contact List

### PACIFIC UNIVERSITY CLINICS

<table>
<thead>
<tr>
<th>Clinic</th>
<th>Contact Person</th>
<th>Contact Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interprofessional Diabetes Clinic</td>
<td>Carole Timpone</td>
<td><a href="mailto:timponec@pacificu.edu">timponec@pacificu.edu</a></td>
</tr>
<tr>
<td>Dental Clinic</td>
<td>--</td>
<td><a href="mailto:dentalhealth@pacificu.edu">dentalhealth@pacificu.edu</a></td>
</tr>
<tr>
<td>Optometry Clinics</td>
<td>Jennifer Smythe</td>
<td><a href="mailto:smythej@pacificu.edu">smythej@pacificu.edu</a></td>
</tr>
<tr>
<td></td>
<td>Ami Halvorson</td>
<td><a href="mailto:drys1702@pacificu.edu">drys1702@pacificu.edu</a></td>
</tr>
<tr>
<td></td>
<td>Kirk Halvorson</td>
<td><a href="mailto:halv2140@pacificu.edu">halv2140@pacificu.edu</a></td>
</tr>
<tr>
<td></td>
<td>Beth Kinoshita</td>
<td><a href="mailto:kino1924@pacificu.edu">kino1924@pacificu.edu</a></td>
</tr>
<tr>
<td></td>
<td>Susan Littlefield</td>
<td><a href="mailto:litt4871@pacificu.edu">litt4871@pacificu.edu</a></td>
</tr>
<tr>
<td></td>
<td>Blair Lonsberry</td>
<td><a href="mailto:lons3596@pacificu.edu">lons3596@pacificu.edu</a></td>
</tr>
<tr>
<td>Physical Therapy Clinic</td>
<td>Rebecca Reisch</td>
<td><a href="mailto:reischra@pacificu.edu">reischra@pacificu.edu</a></td>
</tr>
<tr>
<td></td>
<td>Jose Reyna</td>
<td><a href="mailto:reyn1741@pacificu.edu">reyn1741@pacificu.edu</a></td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Susan Stein</td>
<td><a href="mailto:stei6440@pacificu.edu">stei6440@pacificu.edu</a></td>
</tr>
<tr>
<td></td>
<td>Yvette K. Holman</td>
<td><a href="mailto:yvette.holman@pacificu.edu">yvette.holman@pacificu.edu</a></td>
</tr>
<tr>
<td>CHP Admin</td>
<td>Carole Billings</td>
<td><a href="mailto:carole.billings@pacificu.edu">carole.billings@pacificu.edu</a></td>
</tr>
</tbody>
</table>

### LOCAL COMMUNITY

<table>
<thead>
<tr>
<th>Organization</th>
<th>Contact Person</th>
<th>Contact Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuality Health Education Center</td>
<td>Susan Downs</td>
<td><a href="mailto:Susan.Downs@tuality.org">Susan.Downs@tuality.org</a></td>
</tr>
<tr>
<td>Virginia Garcia Memorial Health Center</td>
<td>Ann Turner</td>
<td><a href="mailto:aturner@vgmhc.org">aturner@vgmhc.org</a></td>
</tr>
<tr>
<td></td>
<td>Laura Byerly</td>
<td><a href="mailto:lbyerly@vgmhc.org">lbyerly@vgmhc.org</a></td>
</tr>
<tr>
<td>Lifeworks NW</td>
<td>--</td>
<td><a href="mailto:intake@lifeworksnw.org">intake@lifeworksnw.org</a></td>
</tr>
<tr>
<td>Washington county DAVS</td>
<td>Julie Webber</td>
<td><a href="mailto:Julie_Webber@co.washington.or.us">Julie_Webber@co.washington.or.us</a></td>
</tr>
<tr>
<td>Affordable health Clinics</td>
<td>--</td>
<td><a href="mailto:staff@affordablehealthclinics.com">staff@affordablehealthclinics.com</a></td>
</tr>
<tr>
<td>12720 SW Pacific Hwy Suite #1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tigard, Oregon 97223-6125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Essential Health Hillsboro Clinic</td>
<td>--</td>
<td><a href="mailto:info@essentialhealthclinic.org">info@essentialhealthclinic.org</a></td>
</tr>
<tr>
<td>266 W Main St MS68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hillsboro, OR 97123</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Essential Health Tigard Clinic</td>
<td>--</td>
<td><a href="mailto:info@healthcenteror.org">info@healthcenteror.org</a></td>
</tr>
<tr>
<td>15296 SW Royalty Parkway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tigard, OR 97224</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighborhood Health Center</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>3720 SW 141st Avenue, Suite 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beaverton, OR 97005</td>
<td></td>
<td></td>
</tr>
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</table>
### Sample Daily Activity Log

<table>
<thead>
<tr>
<th>Time</th>
<th>Action</th>
<th>Action Plan</th>
<th>Time</th>
<th>Action</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00AM</td>
<td>Sleep</td>
<td></td>
<td>1:00PM</td>
<td>School</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10-min break</td>
</tr>
<tr>
<td>2:00AM</td>
<td></td>
<td></td>
<td>2:00PM</td>
<td></td>
<td>10-min break</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3:00AM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:00AM</td>
<td></td>
<td></td>
<td>4:00PM</td>
<td>Study / do homework</td>
<td></td>
</tr>
<tr>
<td>5:00AM</td>
<td></td>
<td></td>
<td>5:00PM</td>
<td>Prepare dinner</td>
<td></td>
</tr>
<tr>
<td>6:00AM</td>
<td></td>
<td></td>
<td>6:00PM</td>
<td>Dinner / Watch TV</td>
<td></td>
</tr>
<tr>
<td>7:00AM</td>
<td>Morning grooming</td>
<td></td>
<td>7:00PM</td>
<td>Shower</td>
<td></td>
</tr>
<tr>
<td>8:00AM</td>
<td>Get dress, pack my bag</td>
<td>breakfast</td>
<td>8:00PM</td>
<td>Exercise (weights &amp; sit-up)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>take vitamin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00AM</td>
<td>School</td>
<td>10-min break</td>
<td>9:00PM</td>
<td>Study / Surf the web</td>
<td>play video games</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00AM</td>
<td></td>
<td>10-min break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00AM</td>
<td></td>
<td>10-min break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 noon</td>
<td>Lunch</td>
<td>walk</td>
<td>12 noon</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>surf on the web / emails</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mapping out your day helps you incorporate your action plan into your daily routines.

You can add tasks from your action plan in this column.

For example, I can add “take vitamin” during breakfast to help me remember to take my pills. Or add “walk” during my 1-hour lunch to get some exercise in my day.
## Daily Activity Log

<table>
<thead>
<tr>
<th>Morning Activities</th>
<th>Action Plan</th>
<th>Afternoon Activities</th>
<th>Action Plan</th>
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<tbody>
<tr>
<td>1:00AM</td>
<td></td>
<td>1:00PM</td>
<td></td>
</tr>
<tr>
<td>2:00AM</td>
<td></td>
<td>2:00PM</td>
<td></td>
</tr>
<tr>
<td>3:00AM</td>
<td></td>
<td>3:00PM</td>
<td></td>
</tr>
<tr>
<td>4:00AM</td>
<td></td>
<td>4:00PM</td>
<td></td>
</tr>
<tr>
<td>5:00AM</td>
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<td>5:00PM</td>
<td></td>
</tr>
<tr>
<td>6:00AM</td>
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<td>6:00PM</td>
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</tr>
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<td>7:00AM</td>
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<td>8:00PM</td>
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<tr>
<td>9:00AM</td>
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<td>10:00PM</td>
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</tr>
<tr>
<td>11:00AM</td>
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</tr>
<tr>
<td>12 noon</td>
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<td>12 midnight</td>
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### Appendix D: Resources List

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<tr>
<th>Health Topics</th>
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<tr>
<td>700 health-related topics</td>
<td>National Library of Medicine's Medline Plus</td>
<td><a href="http://www.medlineplus.gov">www.medlineplus.gov</a></td>
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<tr>
<td>Caring for a loved one with Alzheimer's disease</td>
<td>National Institute of Health</td>
<td><a href="http://www.nia.nih.gov/alzheimers">www.nia.nih.gov/alzheimers</a></td>
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<td>Communication - Nonverbal</td>
<td>HelpGuide</td>
<td><a href="http://www.helpguide.org/mental/effective_communication_skills.htm">http://www.helpguide.org/mental/effective_communication_skills.htm</a></td>
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<tr>
<td>- Conflict Resolution</td>
<td></td>
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</tbody>
</table>
Provided as a public service by JAMA and AMA |
| Diet and Nutrition information, educational handouts, Tip Sheets and quizzes | United States Department of Agriculture Center for Nutrition Policy and Promotion | www.dietaryguidelines.gov
www.ChooseMyPlate.gov                              |
| Diet, Nutrition and food safety                   | The U.S. Food and Drug Administration Center for Food Safety and Applied Nutrition Food Information | www.fda.gov
http://www.fda.gov./Food/default.htm
http://www.fda.gov./Food/IngredientsPackagingLabeling/default.htm
http://www.fda.gov./Food/DietarySupplements/default.htm
http://www.fda.gov./Food/ResourcesForYou/default.htm
www.fda.gov/Food/ResourcesForYou/Consumers/Seniors |
<table>
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<tr>
<th>Dietary supplements</th>
<th>Department of Agriculture</th>
<th>Food and Nutrition Information Center</th>
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<tr>
<td></td>
<td>Federal Trade Commission</td>
<td>National Agricultural Library</td>
</tr>
<tr>
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<td>National Center for Complementary and Alternative Medicine</td>
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<td><a href="http://www.medlineplus.gov">www.medlineplus.gov</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="http://www.ods.od.nih.gov">www.ods.od.nih.gov</a></td>
</tr>
<tr>
<td>Fatigue and Sleep</td>
<td>Canadian Centre for Occupation Health and Safety</td>
<td><a href="http://www.ccohs.ca/oshanswers/psychosocial/fatigue.html">http://www.ccohs.ca/oshanswers/psychosocial/fatigue.html</a></td>
</tr>
<tr>
<td>Health and medication info specific to Seniors</td>
<td>National Institute of Health</td>
<td><a href="http://www.nihseniorhealth.gov">www.nihseniorhealth.gov</a></td>
</tr>
<tr>
<td>Topic</td>
<td>Source</td>
<td>URL</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Information to prevent or manage conditions related to heart diseases</td>
<td>American Heart Association</td>
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<td><a href="http://www.heart.org/HEARTORG/GettingHealthy/GettingHealthy_UCM_001078_SubHomePage.jsp">http://www.heart.org/HEARTORG/GettingHealthy/GettingHealthy_UCM_001078_SubHomePage.jsp</a></td>
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<tr>
<td>- Breathing Techniques</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Energy Conservation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Do Everyday Chores with Less Effort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Health Conditions and Medications</td>
<td>National Institute of Mental Health</td>
<td>Information from NIMH is available in multiple formats You can browse online, download documents in PDF, and order paper brochures through the <a href="http://www.nimh.nih.gov/health/publications/index.shtml">http://www.nimh.nih.gov/health/publications/index.shtml</a></td>
</tr>
<tr>
<td>Nutrition</td>
<td></td>
<td><a href="http://www.nutrition.gov">www.nutrition.gov</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="http://www.choosemyplate.gov">www.choosemyplate.gov</a> — information about the Dietary Guidelines for Americans</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>Centers for Disease Control and Prevention</td>
<td><a href="http://www.cdc.gov/physicalactivity/">http://www.cdc.gov/physicalactivity/</a></td>
</tr>
<tr>
<td>Problem Solving and Changing Health Habits</td>
<td>HowsYourHealth</td>
<td><a href="http://howsyourhealth.com/pblmslv/">http://howsyourhealth.com/pblmslv/</a></td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>----------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Relaxation</td>
<td>Inner Health Studio</td>
<td><a href="http://www.innerhealthstudio.com/">http://www.innerhealthstudio.com/</a></td>
</tr>
<tr>
<td>Supporting Student Mental Health: tools and information</td>
<td>University of Michigan</td>
<td>campusmindworks.org</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="http://nihseniorhealth.gov/talkingwithyourdoctor/askingquestions/01.html">http://nihseniorhealth.gov/talkingwithyourdoctor/askingquestions/01.html</a></td>
</tr>
<tr>
<td></td>
<td>10 Questions to Help You Make Sense of Health Headlines</td>
<td><a href="http://www.health-insight-harvard.org">www.health-insight-harvard.org</a></td>
</tr>
<tr>
<td></td>
<td>Medical Library Association</td>
<td><a href="http://www.mlanet.org">www.mlanet.org</a></td>
</tr>
<tr>
<td></td>
<td>QuackWatch</td>
<td><a href="http://www.quackwatch.org">www.quackwatch.org</a></td>
</tr>
</tbody>
</table>
Appendix E: Sample Module – Medication Management Guide

How to be an Effect Self-Manager of your Medications

What Are Medicines? What Are Drugs?
Modern medicine has made our lives better in many ways. It has helped us live longer, healthier lives. Some people refer to the pills, liquids, creams, or sprays they take as “medicine,” and other people call them “drugs.” Both words can mean:

- Medicines you get from a pharmacy with a doctor’s prescription
- Pills, liquids, or creams you buy without a prescription to use now and then, for example, for aches and pains, colds, or heartburn
- Vitamins or dietary supplements you take regularly
- Drugs you get without a doctor’s prescription are called over-the-counter medicines.

Because mixing certain medicines can cause problems, be sure to let your doctor know about all the prescription and over-the-counter drugs you are taking.

Excerpted from Source URL: http://www.nia.nih.gov/health/publication/medicines-use-them-safely

How medicines work in the body

- As recently as 10 to 15 years ago, up to 40 percent of drugs failed to work properly because they were poorly absorbed, were destroyed by the body, failed to get to the right place or were excreted from the body too quickly. Today, fewer than 10 percent of medicines fail for these reasons. In part, that’s because scientists are able to identify which enzymes metabolize a specific drug and what the end products will be. The Food and Drug Administration now requires this information before it considers approving a new drug.

- The formulation, packaging and delivery methods (pills, injection, topical creams…) of drugs are tailored to ensure optimal effectiveness, safety and convenience. Therapeutics ranging from cold remedies to anti-AIDS treatments are dispensed in time-release capsules that provide a constant level of a drug over several hours. Acid-sensitive drugs like some antibiotics and antihistamines are packaged so they can pass safely through the stomach into the small intestine, where they are absorbed. Other delivery systems include pumps (insulin), inhalers (asthma medications), implants (anticancer and pain medications), patches (estrogen replacement and smoking cessation treatments) and the covering of stents (the blood thinner heparin).

- Patient instructions routinely indicate whether a drug should be taken at a particular time of day and whether oral medications should be consumed with a meal or on an empty stomach.

- Technical and scientific advances will allow researchers, pharmacists and doctors to deliver drugs that more closely target to specific organs or disease sites.

- These advances coupled with informed patients and effective self-management of medications will increase the therapeutic benefits and reduce the bad side effects of drugs.
Your mind has a direct influence on how your body reacts to medications.

The purpose of medication is to reduce the impact of a disease or symptom, or to slow down its progression. Your mind as well as your body has an important role to play in determining how effective your medication will be. It’s a good idea to pay attention to both!

**Placebo effect:** Scientific studies show that when given a sugar pill, in 1/3 of cases studied the person’s belief about the medicine’s effectiveness could positively or negatively affect how they feel physically or emotionally. Placebos have been seen to improve headaches, arthritis, hay fever, pain, even constipation; just because the person expected to find relief. The body responds to the brain’s positive expectation by turning on our self-healing mechanisms.

This is NOT a recommendation to stop taking medications prescribed by our doctor. It is a reminder to expect that your medications are doing their work. Your positive (or negative) outlook can affect how well your medications work!

**Instructor: Group Discussion of mental imagery:**

Examples of images: A broom sweeping away pollen and dust and making it easier to breathe; a carpenter’s chisel breaking away cholesterol from your arteries.

It is good to reflect on the benefits your medications offer you. Does it:

Relieve pain? Kill cancer cells? Allow you to take a life-giving breath?
We don’t take medications because somebody tells us to; we do it to improve our health and quality of life.

What is your attitude towards your medications?
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Visualize medicines as a positive way to achieve better health and wellness. Create a vivid mental image and write it here.
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Some people take over the counter medicines for temporary symptoms like colds, and muscles soreness. Other folks take prescription medications for chronic illnesses or conditions. This is a good time to think about the types of medications you take and why.

Side effects or Adverse Reactions:

All drugs have more than one effect on the body. A side effect is any response other than the one the drug is prescribed for. Usually when we think of side effects it is in a negative view based on unpleasant or adverse reaction to the medicine. Some reactions are uncomfortable but not life threatening; such as upset stomach, sleepiness, constipation, itching etc.

Other adverse reactions such as true allergic reactions are serious and can result in death or disability. Rash, fever, difficulty breathing and swelling of eyes, tongue or throat are signs of possible allergic reaction. Make a plan and know what to do to contact a physician or emergency personnel should the need arise.
Common Side-effects and Symptoms

• Nausea
• Diarrhea
• Sleepiness
• Dizziness
• Agitation
• Memory loss
• Blurred vision
• Fatigue
• Dry mouth
• Thirst
• Impotence
• Muscle pain
• Ringing in ears
• Numbness or tingling

How to manage side effects:

_Instructor: Open discussion of “Benefits vs. Side Effects”, in conjunction with worksheet._

(Medicine) ______________________ helps me by _____________________________
_______________________________________________________________________.

Is this more important than the side effect of ________________________________?

Is there a way to reduce or stop these side effects?

Can I take a different medication that provides the same benefit but may have different side effects?

Consider these questions for yourself; then consult with your doctor or pharmacist if you experience adverse reactions. They may be able to help improve the situation while still effectively treating your condition. It is important to consult the doctor BEFORE you stop taking a medication. Some medications can cause serious or even fatal responses if suddenly discontinued.
If You Take Multiple Medications

Your job is to become part of your medical team. This means communicating clearly and listening carefully to your doctor.

Instructor: Create and Discuss poster “What Self Managers Do…”.

Self-managers are involved in:

- Identifying the need for treatment
- Choosing a medication
- Properly taking the medication
- Talking to your doctor about your response to the medicine
- Talking with your pharmacist all your medications, old and new

Because we are each unique individuals, every person responds differently to medications! Factors that contribute to how a drug may affect you are:

- Age
- Weight
- Health
- Genetics
- Family medical history
- Co-occurring diseases
- Lifestyle
- Access to regular health care

Without your input of vital information your doctor cannot make appropriate decisions about continuing a particular medicine or making alterations to your medical plan.

Talking with your doctor about your medications can be challenging. It’s no secret that face-to-face time with the doctor can be short. Sometimes it may seem that the doctor spends too much time talking at patients and too little time listening to them! As the expert on “You”, there is important information that you need to share with the doctor. Here are some tips on things you can do to make the process go a little smoother.
Sometimes people are intimidated by the doctor’s status and level of education. Nobody wants to offend their doctor or to be seen as a “difficult” patient. Sometimes people are simply afraid of looking foolish or ignorant and so do not ask questions and offer valuable feedback to the doctor. **Whatever the reasoning, it is a mistake to relinquish your responsibility as manager of your own healthcare!**

**At Your Doctor’s Office**

If you’ve gone to your doctor because you don’t feel well, the doctor might decide a medicine will help and will write a prescription.

*Insert document 1.1 “How Medicines Work Fact Sheet*
*Insert document 1.1a “Benefits of medications” worksheet*

**Drug information you need to ask for:**

- Medication name (don’t be shy, ask him/her to spell it if you can’t read their writing!)
- Why am I taking this medication, what symptoms does it address
- Proper dose and method of taking the medicine (how many times a day, how many hours apart).
- Do I take it with food or without?
- Are there foods I should not eat when taking this medicine? What does “take as needed” mean?
- If I forget to take my medicine on time what should I do?
- What are side effects of this medicine, what should I expect?
- Risks associated with the medication
- Precautions - what not to do when taking the medicine

*Insert document 1.2; “Medicines, use them safely”*
*Document 1.2; Poster. Drugs and Alcohol. Start discussion about mixing medications and other substances such as alcohol.*
*Insert document 1.2b; “Risks of Prescription Drug Abuse”*

If you have more than one doctor they may not be aware of all the medications you take! Some side effects may look like symptoms of an infection or disease. **If the doctor doesn’t know all of the medications you take, he/she may misdiagnose your condition based on the symptoms that are visible to them.**
Inform your doctor of all chronic diseases or medical conditions. Often a disease may affect how a drug is metabolized (used and cleared) in the body. For example, people with kidney disease, hepatitis and other diseases affecting the liver metabolize drugs at a slower rate. Too frequent or high of dosage may cause a toxic effect in these people.

Some drugs may not be appropriate for patients with certain medical conditions, and can increase risks of harm.

**Things your Doctor wants to know about:**
- Allergies to medicines
- Drugs you have had problems with in the past; be specific what the side-affects were
- Over the counter drugs
- Vitamins
- Herbal and nutritional supplements
- Other prescription medications you take

*Discuss poster document 1.5; “Can you trust online health information.*
*Insert document 1.6; “Online Health Information: Can You Trust It?”*
*Insert document 1.6a; “Dietary Supplements. NIH”*

**Tell the doctor if you have:**
- Hypertension / High blood pressure
- Ulcers
- Heart disease
- Asthma
- Diabetes
- Prostate problems
- Thyroid disease

*Insert document 1.7 here, “Blood Pressure Medications”*

**Pregnant and nursing women should always inform the doctor and inquire about medications prescribed. Many prescription drugs, over the counter medicines and herbal supplements can cause harm or damage to an unborn fetus or nursing infants.**

*Insert document 1.3 “Strategies for managing your medication”*
*Use document 1.3a Create Poster. Medication reminders and pill boxes*
*Insert document 1.5 “Wise choices, take your medication properly.”*
Create a medication list and update it every time a change is made. Providing this list to you’re the nurse or physician’s assistant at each visit saves time by allowing them to make sure information in your chart is accurate and complete. Giving the doctor the list gives them more time to spend actually consulting with you rather than looking up information on the computer.

Include in your medication list a record of medications currently being used to treat your chronic condition, as well as drugs that have been used in the past to treat the chronic condition. Note the condition or symptoms it was prescribed for and the effect it had on you. This info can help your doctor’s select and recommend the best medications for you.

It is important to keep in mind that a medication that did not help in the past, may be beneficial now. Your health condition changes all the time and your responses to specific medications may change as well.

Instructor: Create Poster or overhead with “Medications List”
Insert page 2.0. Medication Tracker (blank) with example...

Other important considerations

There are often a variety of ways to treat a condition (lifestyle, diet, exercise, herbs, vitamins, stress management, acupuncture and other alternative or complementary methods). Ask your doctor if new medication is the only best option.

Take time to consider your options and be realistic in your discussion. If you do not intend to follow through on recommended lifestyle changes, perhaps taking the medication is the best option!

In some cases time is of the essence in treatment; discuss with your doctor if medication combined with alternative methods is an option for re-evaluation at a later time.

Insert document 3.0 “Questions 4 doctor and pharmacist” here.
Insert document 3.1 “Ask Your Pharmacist” document from excerpted from NIH.

Additional Resources for clients
Insert document 4.0; “What do diabetes medicines do”
Insert document 4.1; “Mental-health-medications booklet”
Insert document 4.2; “Drug and medicine resources from NIH”
Insert document 4.3; “Age Page- Medicines_use_them_safely”
How Medicines Work Fact Sheet

Advances in understanding a drug’s journey through the body

Thirty Years Ago

- Doctors, pharmacists and researchers knew that some medicines caused serious side effects or reacted dangerously with other drugs. But there were few tests to predict these problems before drugs went into clinical studies or were used by many people.

- Most studies on drug-metabolizing enzymes were done in rats or mice, so scientists didn’t know much about these enzymes in humans.

- To infer if a drug candidate would be toxic to humans, scientists evaluated whether the molecule caused organ damage in animals.

- Drug makers lacked the ability to customize the packaging and delivery of a drug to ensure that it would be well absorbed and available to the body.

Today

- As recently as 10 to 15 years ago, up to 40 percent of drugs failed to work properly because they were poorly absorbed, were destroyed by the body, failed to get to the right place or were excreted from the body too quickly. Today, fewer than 10 percent of medicines fail for these reasons. In part, that’s because scientists are able to identify which enzymes metabolize a candidate drug and what the end products will be. The Food and Drug Administration now requires this information before it considers approving a new drug.

- Researchers have characterized dozens of human drug-metabolizing enzymes and transport proteins that regulate the activity and levels of drugs in the body.

- Scientists also have identified certain medicines, vitamins, herbal remedies, nutritional supplements and other compounds that interact with these enzymes and transporters, possibly causing adverse cross-reactions. To minimize dangerous interactions, doctors and pharmacists maintain lists of such substances. Pharmaceutical scientists are able to detect potentially troublesome compounds early in drug discovery so they can prevent these compounds from moving forward in development.

- By analyzing the genetic sequences of drug-metabolizing enzymes from many people, researchers have identified more than 100 slightly different versions of the enzymes. Although most of these genetic variations are rare, some of them can markedly alter the activity and side effects of drugs.

- As scientists learn more about drug-metabolizing enzymes, particularly those called P450s, they are able to design and develop drugs that influence the activity of the enzymes.

- Advances in technology allow researchers to determine the detailed, three-dimensional structures of some human P450 enzymes. By examining the shapes and biochemical properties of these molecules, researchers learn how medicines and other compounds interact with them.
• Scientists are now able to use human, rather than animal, enzymes to predict whether a drug candidate or any of its byproducts will be toxic to humans. However, rare, serious drug reactions remain difficult to predict before testing experimental medicines in humans.

• The formulation, packaging and delivery of drugs are tailored to ensure optimal effectiveness, safety and convenience. Therapeutics ranging from cold remedies to anti-AIDS treatments are dispensed in time-release capsules that provide a constant level of a drug over several hours. Acid-sensitive drugs like some antibiotics and antihistamines are packaged so they can pass unscathed through the stomach into the small intestine, where they are absorbed. Other delivery systems include pumps (insulin), inhalers (asthma medications), implants (anticancer and pain medications), patches (estrogen replacement and smoking cessation treatments) and the covering of stents (the blood thinner heparin).

• Patient instructions routinely indicate whether a drug should be taken at a particular time of day and whether oral medications should be consumed with a meal or on an empty stomach.

• Scientists are using computers to analyze publicly available genomic information to predict new uses for existing medicines. The approach could save time and money compared to traditional drug discovery methods. Already, researchers revealed that, based on their effect on the human genome, an anti-ulcer medicine might treat lung cancer and an anticonvulsant might alleviate inflammatory bowel diseases.

**Tomorrow**

• Scientists will understand drug transporters and drug-metabolizing enzymes well enough that they will be able to predict accurately the effect these proteins will have on the action and distribution of drug candidates in the body.

• Better animal models and sensitive protein markers that detect cellular damage in specific organs will allow scientists to predict toxicity early in drug development.

• Researchers will better understand how a person’s genetic makeup influences whether specific medicines are effective, ineffective or even dangerous.

• Doctors will be able to calculate the amount of drug at its site of action, not just the concentration in a patient’s blood.

• Technical advances will allow doctors to deliver pharmaceuticals to specific organs or disease sites. This will increase the therapeutic benefit and reduce the bad side effects of drugs.

• Scientists and engineers will develop new, automated devices for drug delivery.

• Drugs will be safer and more effective for everyone.

_NIGMS is a part of the National Institutes of Health that supports basic research to increase our understanding of life processes and lay the foundation for advances in disease diagnosis, treatment and prevention. For more information on the Institute’s research and training programs, see [http://www.nigms.nih.gov](http://www.nigms.nih.gov).

Content reviewed November 2012_
### Tracking Benefits of Your Medication

**Medication Name:** Zoloft  
**Treatment Purpose:** Treat symptoms of depression  
**Date Medication Started:** May 4, 2009  
**Today’s Date:** June 22, 2009

<table>
<thead>
<tr>
<th>My Symptoms</th>
<th>Frequency</th>
<th>Severity</th>
<th>Before Treatment</th>
<th>After Treatment</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty sleeping</td>
<td>Nearly every night (2-3 hours to fall asleep)</td>
<td>□ Very mild</td>
<td>□ Very mild</td>
<td>□ No Improvement</td>
<td>✓ Very little improvement</td>
</tr>
<tr>
<td>Feeling sad</td>
<td>Every day for most of the day</td>
<td>□ Very mild</td>
<td>□ Very mild</td>
<td>□ No Improvement</td>
<td>✓ Little improvement</td>
</tr>
</tbody>
</table>

- **Frequency:**  
  - Approximately 3x per week (45-60 minutes to fall asleep)  
  - A couple of days per week for a few hours

- **Severity:**  
  - □ Very mild  
  - □ Mild  
  - □ Somewhat mild  
  - □ Somewhat severe  
  - □ Severe  
  - □ Very severe

- **Amount:**  
  - □ No Improvement  
  - □ Very little improvement  
  - □ Little improvement  
  - □ Some improvement  
  - □ Much improvement  
  - □ Very much improvement

---

### Tracking Benefits of Your Medication

**Medication Name:**  
**Treatment Purpose:**  
**Date Medication Started:**  
**Today’s Date:**

<table>
<thead>
<tr>
<th>My Symptoms</th>
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<th>Before Treatment</th>
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<th>Improvement</th>
</tr>
</thead>
</table>

- **Frequency:**  
  - □ Very mild  
  - □ Mild  
  - □ Somewhat mild  
  - □ Somewhat severe  
  - □ Severe  
  - □ Very severe

- **Severity:**  
  - □ Very mild  
  - □ Mild  
  - □ Somewhat mild  
  - □ Somewhat severe  
  - □ Severe  
  - □ Very severe

- **Amount:**  
  - □ No Improvement  
  - □ Very little improvement  
  - □ Little improvement  
  - □ Some improvement  
  - □ Much improvement  
  - □ Very much improvement

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Medicines: Use Them Safely

When Jerry, age 71, came home from the drug store with his latest prescription, he placed all his pill bottles on the kitchen counter and counted them. “I take five different medications, and you take four,” he said to his wife. “We need a system. We need to know what medicines we have, what they’re for, and when we should take them.”

Modern medicine has made our lives better in many ways. It has helped us live longer, healthier lives. But people over 65 have to be careful when taking medications, especially when they’re taking many different drugs.

What Are Medicines? What Are Drugs?

Some people refer to the pills, liquids, creams, or sprays they take as “medicine,” and other people call them “drugs.” Both words can mean:

- Medicines you get from a pharmacy with a doctor’s prescription
- Pills, liquids, or creams you buy without a prescription to use now and then, for example, for aches and pains, colds, or heartburn
- Vitamins or dietary supplements you take regularly

Drugs you get without a doctor’s prescription are called over-the-counter medicines. Because mixing certain medicines can cause problems, be sure to let your doctor know about all the prescription and over-the-counter drugs you are taking.

At Your Doctor’s Office

If you’ve gone to your doctor because you don’t feel well, the doctor might decide a medicine will help and will write a prescription. Be sure you:

- Tell your doctor or nurse about all the medicines you take whenever a new drug is prescribed.
- Remind your doctor or nurse about your allergies and any problems you have had with medicines, such as rashes, indigestion, dizziness, or mood changes.
- Understand how to take the medicine before you start using it. Ask questions. It might help to write down the answers.
Questions To Ask Your Doctor About A New Medicine

- What is the name of the medicine, and why am I taking it?
- How many times a day should I take it? At what times? If the bottle says take “4 times a day,” does that mean 4 times in 24 hours or 4 times during the daytime?
- Should I take the medicine with food or without? Is there anything I should not eat or drink when taking this medicine?
- What does “as needed” mean?
- When should I stop taking the medicine?
- If I forget to take my medicine, what should I do?
- What side effects can I expect? What should I do if I have a problem?

Ask Your Pharmacist

Your pharmacist is an important part of your healthcare team. If you have questions about your medicine after you leave the doctor’s office, the pharmacist can answer many of them. For example, a pharmacist can tell you how and when to take your medicine, whether a drug may change how another medicine you are taking works, and any side effects you might have. Also, the pharmacist can answer questions about over-the-counter medications.

Try to have all your prescriptions filled at the same pharmacy so your records are in one place. The pharmacist will keep track of all your medications and will be able to tell you if a new drug might cause problems. If you’re not able to use just one pharmacy, show the new pharmacist your list of medicines and over-the-counter drugs when you drop off your prescription.

When you have a prescription filled:

- Tell the pharmacist if you have trouble swallowing pills. There may be liquid medicine available. Do not chew, break, or crush tablets without first finding out if the drug will still work.

- Make sure you can read and understand the name of the medicine and the directions on the container and on the color-coded warning stickers on the bottle. If the label is hard to read, ask your pharmacist to use larger type.

- Check that you can open the container. If not, ask the pharmacist to put your medicines in bottles that are easier to open.
• Ask about special instructions on where to store a medicine. For example, should it be kept in the refrigerator or in a dry place?

• Check the label on your medicine before leaving the pharmacy. It should have your name on it and the directions given by your doctor. If it doesn’t, don’t take it, and talk with the pharmacist.

**Generic Or Brand Name?**

When getting a prescription filled, sometimes you can choose between either a generic or brand-name drug. Generic and brand-name medicines are alike because they act the same way in the body. They contain the same active ingredients—the part of the medicine that makes it work. A generic drug is the same as a brand-name drug in dosage, safety, strength, quality, the way it works, the way it is taken, and the way it should be used. Generic drugs usually cost less.

If you want a generic drug, ask your healthcare provider if that’s a choice. Not all drugs are available in the generic form, and there might be medical reasons your doctor prefers the brand-name medicine.

**Now, It’s Your Turn**

Your doctor has prescribed a medication. The pharmacist has filled the prescription. Now it’s up to you to take the medicine safely. Here are some tips that can help:

• Make a list of all the medicines you take, including over-the-counter products and dietary supplements. Show it to all of your healthcare providers including physical therapists and dentists. Keep one copy in your medicine cabinet and one in your wallet or pocketbook. The list should include the: name of each medicine, doctor who prescribed it, reason it was prescribed, amount you take, and time(s) you take it.

• Read and save in one place all written information that comes with the medicine.

• Take your medicine in the exact amount and at the time your doctor prescribes.

• Call your doctor right away if you have any problems with your medicine or if you are worried that it might be doing more harm than good. Your
doctor may be able to change your prescription to a different one that will work better for you.

- Use a memory aid to take your medicines on time. Some people use meals or bedtime as reminders to take their medicine. Other people use charts, calendars, and weekly pill boxes. Find a system that works for you.

- Do not skip doses of medication or take half doses to save money. Talk with your doctor or pharmacist if you can't afford the prescribed medicine. There may be less costly choices or special programs to help with the cost of certain drugs.

- Avoid mixing alcohol and medicine. Some medicines may not work correctly or may make you sick if taken with alcohol.

- Take your medicine until it's finished or until your doctor says it's okay to stop.

- Don't take medicines prescribed for another person or give yours to someone else.

- Don’t take medicine in the dark. To avoid making a mistake, turn your light on before reaching for your pills.

- Check the expiration dates on your medicine bottles. Your pharmacist can probably tell you how to safely get rid of medicine you no longer need or that is out of date. The pharmacist might be able to dispose of it for you.

- Make sure you store all medicines and supplements out of sight and out of reach of children. And don’t take your medicines in front of young children. They might try to copy you.

**Shopping For Medicines Online**

Medicines can cost a lot. If you have a drug plan through your insurance, you can probably save money by ordering yours from them rather than at your neighborhood pharmacy. Or, you might be thinking about buying yours on the Internet. But how can you tell which websites are safe and reliable?
The Food and Drug Administration (see For More Information) has more information on buying medicines and medical products online.

**Medicare Prescription Drug Plans**

Medicare has prescription drug plans for people with Medicare to help save money on medicines. For information please call 1-800-633-4227 (1-800-MEDICARE) or visit the Medicare website at [www.medicare.gov](http://www.medicare.gov).

**What About Over-The-Counter Medicines?**

Many of the ideas in this *AgePage* are also true for over-the-counter (OTC) drugs, like medicines to relieve coughs, cold, allergies, pain, and heartburn. Be careful when taking an OTC drug. For example, don’t take a cough and cold product if you only have a runny nose and no cough. And, check with your doctor before taking aspirin if you are on a blood-thinning medicine, because aspirin also slows blood clotting.

Other things to remember:

- Measure the dose of a liquid OTC medicine as carefully as you would a prescription drug. Use a measuring spoon, since spoons you eat with vary in size.
- Be careful—OTC medicines can have side effects.
- Take the amount suggested on the label. If you don’t get better, see your doctor.
- Read the label—even if you have used the OTC product in the past. Important information can change.

Remember, medicines—whether prescription or over-the-counter—can hurt you if they aren’t used the right way. Learn to be a smart consumer of medicine.

**Source URL:** [http://www.nia.nih.gov/health/publication/medicines-use-them-safely](http://www.nia.nih.gov/health/publication/medicines-use-them-safely)
You've probably seen this warning on medicines you've taken. The danger is real. Mixing alcohol with certain medications can cause nausea and vomiting, headache, drowsiness, fainting, or loss of coordination. It can also put you at risk for internal bleeding, heart problems, and difficulties in breathing. In addition to these dangers, alcohol can make a medication less effective or even useless, or it may make the medication harmful or toxic to your body.

Some medications that you might never have suspected can react with alcohol, including many medications which can be purchased without a prescription. Even some herbal remedies can have harmful effects when combined with alcohol.

This pamphlet lists medications that can cause harm when taken with alcohol and describes the effects that can result. The list gives the brand name by which each medication is commonly known (for example, Benedryl®) and its generic name or active ingredient (in Benadryl® this is diphenhydramine). The list presented here does not include all the medicines that may interact harmfully with alcohol. Most important, the list does not include all the ingredients in every medication.

Medications are effective when used appropriately. Your pharmacist or other health care provider can help you determine which medications interact harmfully with alcohol.

Alcohol affects women differently

Women, in general, have a higher risk for problems than men. When a woman drinks, the alcohol in her bloodstream typically reaches a higher level than a man’s even if both are drinking the same amount. This is because women’s bodies generally have less water than men’s bodies. Because alcohol mixes with body water, a given amount of alcohol is more concentrated in a woman’s body than in a man’s. As a result, women are more susceptible to alcohol-related damage to organs such as the liver.

Older people face greater risk

Older people are at particularly high risk for harmful alcohol-medication interactions. Aging slows the body’s ability to break down alcohol, so alcohol remains in a person’s system longer. Older people also are more likely to take a medication that interacts with alcohol—in fact, they often need to take more than one of these medications.

Timing is important

Alcohol and medications can interact harmfully even if they are not taken at the same time.

Remember...

Mixing alcohol and medicines puts you at risk for dangerous reactions. Protect yourself by avoiding alcohol if you are taking a medication and don’t know its effect. To learn more about a medication and whether it will interact with alcohol, talk to your pharmacist or other health care provider.

Did You Know...

Mixing alcohol and medicines can be harmful. Alcohol, like some medicines, can make you sleepy, drowsy, or light-headed. Drinking alcohol while taking medicines can intensify these effects. You may have trouble concentrating or performing mechanical skills. Small amounts of alcohol can make it dangerous to drive, and when you mix alcohol with certain medicines you put yourself and others at greater risk. Combining alcohol with some medicines can lead to falls and serious injuries, especially among older people.

Medicines may have many ingredients

Some medications—including many popular painkillers and cough, cold, and allergy remedies—contain more than one ingredient that can react with alcohol. Read the label on the medication bottle to find out exactly what ingredients a medicine contains. Ask your pharmacist if you have any questions about how alcohol might interact with a drug you are taking.

Some medicines contain alcohol

Certain medicines contain up to 10 percent alcohol. Cough syrups and laxatives may have some of the highest alcohol concentrations.

| Commonly Used Medicines (Both Prescription and Over-the-Counter) |
|---|---|---|---|
| **Infections** | **Medication** | **Common Uses** |
| Allergies | Alavert® | Loratadine | Drowsiness, dizziness, increased risk |
| | Allegra® | Desloratadine | Drowsiness, dizziness |
| | Allegra-D® | | |
| | Benedryl® | Diphenhydramine | Drowsiness, dizziness |
| | Claritin® | | |
| | Claritin-D® | Loratadine | |
| | Dimetapp® | Brompheniramine | |
| | Cold & Allergy | | |
| | Sudafed® | Chlorpheniramine | |
| | Sinus & Allergy | | |
| | Tramal® | Chlorpheniramine | |
| | Cold & Allergy | | |
| | Tylenol® | Chlorpheniramine | |
| | Allergy Sinus | | |
| | Cold & Flu | | |
| | Zyrtec® | Cetirizine | |
| **Angina** (chest pain), coronary heart disease | isosorbid | Nitroglycerin | Rapid heartbeat, sudden changes in blood pressure, dizziness, fainting |
| **Anxiety and epilepsy** | Alprazolam | Lorazepam | Drowsiness, dizziness, increased risk for overdose; slowed or difficult breathing; impaired motor control; unusual behavior; and memory problems |
| | Klonopin® | Clonazepam | |
| | Librium® | Chlordiazepoxide | |
| | Valium® | Diazepam | |
| | Xanax® | Alprazolam | |
| | Herbal preparations | | Liver damage, drowsiness |
### Over-the-Counter) That Interact With Alcohol

<table>
<thead>
<tr>
<th>Symptoms/Disorders</th>
<th>Medication (Brand name)</th>
<th>Medication (Generic name)</th>
<th>Some possible reactions with alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthritis</td>
<td>Celebrex*</td>
<td>Celecoxib</td>
<td>Licens, stomach bleeding, liver problems</td>
</tr>
<tr>
<td></td>
<td>Naprosyn*</td>
<td>Naproxen</td>
<td></td>
</tr>
<tr>
<td>Clotting</td>
<td>Coumadin*</td>
<td>Warfarin</td>
<td>Occasional drinking may lead to increased risk for overdose</td>
</tr>
<tr>
<td></td>
<td>Delsym*</td>
<td>Dextromethorphan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Robitussin C-G*</td>
<td>Guaifenesin + codeine</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>Anafon*</td>
<td>Clomipramine</td>
<td>Drowsiness, dizziness; increased risk for overdose</td>
</tr>
<tr>
<td></td>
<td>Celexa*</td>
<td>Clomipramine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Desyrel*</td>
<td>Amitriptyline</td>
<td>Increased risk of depression or hopelessness in adolescents (suicide)</td>
</tr>
<tr>
<td></td>
<td>Effexor*</td>
<td>Amitriptyline</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elavil*</td>
<td>Amitriptyline</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lexapro*</td>
<td>Escitalopram</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Luvox*</td>
<td>Fluoxetine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Neurontin*</td>
<td>Pregabalin</td>
<td></td>
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<tr>
<td></td>
<td>Pamelor*</td>
<td>Pregabalin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prozac*</td>
<td>Fluoxetine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Serzone*</td>
<td>Fluoxetine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wellbutrin*</td>
<td>Bupropion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zoloft*</td>
<td>Sertraline</td>
<td></td>
</tr>
<tr>
<td>Herbal preparations</td>
<td>(St. John's Wort)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Commonly Used Medicines (Both Prescription and Over-the-Counter) That Interact With Alcohol

<table>
<thead>
<tr>
<th>Symptoms/Disorders</th>
<th>Medication (Brand name)</th>
<th>Medication (Generic name)</th>
<th>Some possible reactions with alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>Glucophage*</td>
<td>Metformin</td>
<td>Abnormally low blood sugar levels, flushing reaction (nausea, vomiting, headache, rapid heartbeat, sudden changes in blood pressure)</td>
</tr>
<tr>
<td></td>
<td>Micronase*</td>
<td>Glyburide</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Orinase*</td>
<td>Tolbutamide</td>
<td></td>
</tr>
<tr>
<td>Enlarged prostate</td>
<td>Cardura*</td>
<td>Doxazosin</td>
<td>Dizziness, light headedness, fainting</td>
</tr>
<tr>
<td></td>
<td>Florine*</td>
<td>Tamsulosin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hytrin*</td>
<td>Tamsulosin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minipress*</td>
<td>Prazosin</td>
<td></td>
</tr>
<tr>
<td>Heartburn, indigestion,</td>
<td>Axid*</td>
<td>Nizatidine</td>
<td>Rapid heartbeat, sudden changes in blood pressure (metoclopramide increased alcohol effect)</td>
</tr>
<tr>
<td>Heartburn, indigestion,</td>
<td>Reglan*</td>
<td>Metoclopramide</td>
<td></td>
</tr>
<tr>
<td>Heartburn, indigestion,</td>
<td>Zanidac*</td>
<td>Ranitidine</td>
<td></td>
</tr>
<tr>
<td>High blood pressure</td>
<td>Accupril*</td>
<td>Quinapril</td>
<td>Dizziness, fainting, drowsiness, heart problems such as change in heart's regular heartbeat</td>
</tr>
<tr>
<td></td>
<td>Cadapril*</td>
<td>Fluhydrochlorohydrazide</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Calan*</td>
<td>Doxazosin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Calanox*</td>
<td>Clopamine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cozaar*</td>
<td>Losartan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hytrin*</td>
<td>Irbesartin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lopressor*</td>
<td>Hydrochlorothiazide</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lotensin*</td>
<td>Enalapril</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minipress*</td>
<td>Prazosin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vasotec*</td>
<td>Enalapril</td>
<td></td>
</tr>
</tbody>
</table>

### Commonly Used Medicines (Both Prescription and Over-the-Counter) That Interact With Alcohol

<table>
<thead>
<tr>
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<th>Medication (Brand name)</th>
<th>Medication (Generic name)</th>
<th>Some possible reactions with alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nausea, motion sickness,</td>
<td>AntiVert*</td>
<td>Meclizine</td>
<td>Dizziness, increased risk for overdose</td>
</tr>
<tr>
<td></td>
<td>Alaram*</td>
<td>Meclizine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dramamine*</td>
<td>Dimenhydrinate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phenelzine*</td>
<td>Promethazine</td>
<td></td>
</tr>
<tr>
<td>Pain, such as headache, muscle</td>
<td>Advil*</td>
<td>Ibuprofen</td>
<td>Stomach upset, bleeding and ulcer, liver damage (acetaminophen)</td>
</tr>
<tr>
<td></td>
<td>Aleve*</td>
<td>Ibuprofen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Excedrin*</td>
<td>Aspirin, Acetaminophen</td>
<td></td>
</tr>
<tr>
<td>Ache, minor arthritis, pain, fever, inflammation</td>
<td>Motrin*</td>
<td>Ibuprofen</td>
<td>Rapid heartbeat</td>
</tr>
<tr>
<td></td>
<td>Tylenol*</td>
<td>Acetaminophen</td>
<td></td>
</tr>
<tr>
<td>Seizures</td>
<td>Dilantin*</td>
<td>Phenytoin</td>
<td>Dizziness, increased risk of seizures</td>
</tr>
<tr>
<td></td>
<td>Klonopin*</td>
<td>Clonazepam</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phenobarbital*</td>
<td>Phenytoin</td>
<td></td>
</tr>
<tr>
<td>Severe pain from injury, post surgical care, oral surgery, migraines</td>
<td>Darvocet-N*</td>
<td>Propoxyphene</td>
<td>Dizziness, increased risk for overdose</td>
</tr>
<tr>
<td></td>
<td>Demerol*</td>
<td>Propoxyphene</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fentaflur*</td>
<td>Butorphanol + codeine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percocet*</td>
<td>Oxycode</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vicodin*</td>
<td>Hydrocodone</td>
<td></td>
</tr>
<tr>
<td>Sleep problems</td>
<td>Ambien*</td>
<td>Zolpidem</td>
<td>Drowsiness, sleeplessness, dizziness</td>
</tr>
<tr>
<td></td>
<td>Lunesta*</td>
<td>Zolpidem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Procor*</td>
<td>Estazolam</td>
<td></td>
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<tr>
<td></td>
<td>Restoril*</td>
<td>Temazepam</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sometane*</td>
<td>Diphenhydramine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limmic*</td>
<td>Doxylamine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Herbal preparations</td>
<td>(Chamomile, valerian, lavender)</td>
<td>Increased drowsiness</td>
</tr>
</tbody>
</table>

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The Risks of Prescription Drug Abuse
Prescription drugs help millions of people live longer and healthier lives. But if you don’t take your medicines as directed, or if you take someone else’s medications, the results can be deadly. Unfortunately, prescription drug abuse is all too common in the United States.

Misuse of prescription medications affects people of all ages and races. The deaths of Michael Jackson and Heath Ledger have been blamed on dangerous combinations of prescribed drugs. But medication abuse can affect ordinary people—maybe even someone you know—as well as celebrities. A federal survey in 2008 found that about 1 in 5 people ages 12 and up said they’d taken a prescription drug for nonmedical purposes at least once in their lifetimes.

People abuse prescription drugs for many reasons, including to get high, lose weight or build muscle. But this abuse carries a serious risk of addiction. And it can lead to other health problems, including irregular heartbeats, seizures, breathing problems and personality changes. Car accidents and physical injury are other concerns.

“There’s a myth that prescription drugs are safe because they come from a drugstore. But when people take them outside of a doctor’s supervision, we don’t necessarily know how dangerous they can be,” says Dr. Wilson Compton of NIH’s National Institute on Drug Abuse. “A dose that’s perfectly safe for one person who’s taken the drug for a long time may be potentially lethal for another. And when you combine drugs with other substances, like alcohol, you’re taking a great risk.”

The 3 categories of drugs most commonly abused are stimulants, depressants and painkillers.

Stimulants—including Adderall, Dexedrine and Ritalin—are often prescribed to treat attention deficit hyperactivity disorder.

Depressants—such as Ativan, Valium and Xanax—are used to treat anxiety, panic attacks and sleep disorders.

Painkillers—
When taken exactly as prescribed, prescription painkillers like opioids can effectively manage pain and rarely cause addiction. But because of abuse, opioids and other prescription painkillers, sometimes taken in combination with other drugs, cause nearly half of overdose deaths. Opioids include morphine, codeine, hydrocodone (Vicodin) and oxycodone (such as OxyContin, Percodan or Percocet).
Opioid use among high school students is a major concern. “About 1 in 10 twelfth graders report non-medical use of Vicodin during the past year, and about 1 in 20 abused OxyContin,” says Compton.

NIH has several studies under way to learn more about prescription drug abuse and who’s at risk for addiction. “We’re also working to develop better treatments for pain that might be less addictive or less likely to be abused,” says Compton.

If you have prescription medications, take them exactly as directed. And if you have prescriptions for commonly abused drugs, maintain control of them so they don’t tempt visitors. “It appears that most people who are abusing prescription drugs are not getting them directly from physicians. In many cases, the drugs are obtained from family or friends who have prescriptions,” says Compton.

Make sure to use prescription medications the right way, just as the doctor ordered.
Strategies for Managing your Medications

- Keep a list of all your medicines in a safe place.
- Bring your list when you talk to your doctor or pharmacist.
- Use a pillbox.
- Put notes around the house to remind you to take your medicines.
- Talk to your doctor about all the medicines, remedies, and vitamins you use. Include any medicines you buy without a prescription. These are called OTC (over-the-counter) medicines.
- Ask a family member or friend to help you remember to take your pills.

What are some of your strategies for taking medications as prescribed?

__________________________________________

__________________________________________

__________________________________________

List things that make it hard to take your medications as prescribed?

__________________________________________

__________________________________________

__________________________________________

__________________________________________
A helping hand with your medications...

Pill Boxes

Pill Organizers

Pill Timers

Pill Splitters

Alarm Watches

Pill Holders
Pill Box Products and Pill Organizers from ForgettingThePill.com

Source: ForgettingThePill (2013). Retrieved from Forgettingthepill.com
Online Health Information: Can You Trust It?

A group of older adults are gathered for their weekly computer class. They are learning to use the Internet to find health information. Maria's husband, who is 75, had a stroke the month before so she's searching the web for some basic facts about stroke rehabilitation. Walter, who is 68, has questions about what causes Alzheimer's disease because he thinks that's what his mother had. Shirley and Howard, married for 48 years, are trying to find out if the cataract surgery their eye doctor suggests really is as safe as he says. The whole group has one big worry—"How can we trust the health information we get on the Internet?"

There are thousands of health-related websites on the Internet. Some of the information on these websites is reliable. Some of it is not. Some of the information is current. Some of it is not. Choosing which website to trust is worth thinking about.

How do I find reliable health information online?

As a rule, health websites sponsored by Federal government agencies are good sources of health information. You can reach all Federal websites by visiting www.usa.gov. Large professional organizations and well-known medical schools may also be good sources of health information.

The main page of a website is called the home page. The home page shows you the features on the website. You should be able to spot the name of the sponsor of the website right away.

Places To Start

There are a few good places to start if you are looking for online health information. An excellent source of reliable information is the National Institutes of Health (www.nih.gov). You can start here to find information on almost every health topic, including:

- managing heart disease (www.nhlbi.nih.gov)
- dealing with deafness (www.nidcd.nih.gov)
- taking care of dentures (www.nidcr.nih.gov)
- caring for a loved one with Alzheimer's disease (www.nia.nih.gov/alzheimers)

In addition, you can visit the National Library of Medicine's Medline
What questions should I ask?

As you search online, you are likely to find websites for many health agencies and organizations that are not well-known. By answering the following questions you should be able to find more information about these websites. A lot of these details can be found under the heading, "About Us" or "Contact Us."

1. **Who sponsors the website? Can you easily identify the sponsor?**

   Websites cost money—is the funding source readily apparent? Sometimes the website address itself may help—for example:

   - .gov identifies a government agency
   - .edu identifies an educational institution
   - .org identifies professional organizations (e.g., scientific or research societies, advocacy groups)
   - .com identifies commercial websites (e.g., businesses, pharmaceutical companies, sometimes hospitals)

2. **Is it obvious how you can reach the sponsor?**

   Trustworthy websites will have contact information for you to use. They often have a toll-free telephone number. The website home page should list an e-mail address, phone number, or a mailing address where the sponsor and/or the authors of the information can be reached.

3. **Who wrote the information?**

   Authors and contributors should be identified. Their affiliation and any financial interest in the content should also be clear. Be careful about testimonials. Personal stories may be helpful, but medical advice offered in a case history should be considered with a healthy dose of skepticism. There is a big difference between a website developed by a person with a financial interest in a topic versus a website developed using strong scientific evidence. Reliable health information comes from
scientific research that has been conducted in government, university, or private laboratories.

4. **Who reviews the information? Does the website have an editorial board?**

   Click on the "About Us" page to see if there is an editorial board that checks the information before putting it online. Find out if the editorial board members are experts in the subject you are researching. For example, an advisory board made up of attorneys and accountants is not medically authoritative. Some websites have a section called, "About Our Writers" instead of an editorial policy. Dependable websites will tell you where the health information came from and how it has been reviewed.

5. **When was the information written?**

   New research findings can make a difference in making medically smart choices. So, it's important to find out when the information you are reading was written. Look carefully on the home page to find out when the website was last updated. The date is often found at the bottom of the home page. Remember: older information isn't useless. Many websites provide older articles so readers can get an historical view of the information.

6. **Is your privacy protected? Does the website clearly state a privacy policy?**

   This is important because, sadly, there is fraud on the Internet. Take time to read the website's policy—if the website says something like, "We share information with companies that can provide you with products," that's a sign your information isn't private. Do not give out your Social Security number. If you are asked for personal information, be sure to find out how the information is being used by contacting the website sponsor by phone, mail, or the "Contact Us" feature on the website. Be careful when buying things on the Internet. Websites without security may not protect your credit card or bank account information. Look for information saying that a website has a "secure server" before purchasing anything online.
7. Does the website make claims that seem too good to be true? Are quick, miraculous cures promised?

Be careful of claims that any one remedy will cure a lot of different illnesses. Be skeptical of sensational writing or dramatic cures. Make sure you can find other websites with the same information. Don't be fooled by a long list of links—any website can link to another, so no endorsement can be implied from a shared link. Take the "too good to be true" test—information that sounds unbelievable probably is unbelievable.

A Final note

Use your common sense and good judgment when evaluating health information online. There are websites on nearly every conceivable health topic and no rules overseeing the quality of the information. Take a deep breath and think a bit before acting on any health information you find on the web. Don't count on any one website. If possible, check with several sources to confirm the accuracy of your results. And remember to talk with your doctor.

For More information

Here are some helpful Federal and non-Federal resources.

National Library of Medicine, Medline Plus

10 Questions to Help You Make Sense of Health Headlines
www.health-insight-harvard.org

Council of Better Business Bureaus
www.bbb.org

Medical Library Association
www.mlanet.org

QuackWatch
www.quackwatch.org

For information on health and aging, including the tip sheet, Understanding Risk: What Do Those Headlines Really Mean? , contact:
Visit NIHSeniorHealth.gov (www.nihseniorhealth.gov), a senior-friendly website from the National Institute on Aging and the National Library of Medicine. This website has health information for older adults. There are also special features that make it simple to use. For example, you can click on a button to have the text read out loud or to make the type larger.

A Quick Checklist

You can use the following checklist to help make sure that the health information you are reading online can be trusted. You might want to keep this checklist by your computer.

1. Can you easily see who sponsors the website?
2. Is the sponsor a Federal agency or a medical school, or is it related to one of these?
3. Can you find the mission or goal of the sponsor of the website?
4. Can you see who works for the agency or organization and who is the author? Is there contact information?
5. Can you tell when the information was written?
6. Is your privacy protected?
7. Does the website make claims that seem too good to be true? Are quick, miraculous cures promised?

Reprinted April 2007

Source URL: http://www.nia.nih.gov/health/publication/online-health-information-can-you-trust-it
Dietary Supplements

*Bill's retired and lives alone. Often he's just not hungry or is too tired to fix a whole meal. Does he need a multivitamin, or should he take one of those dietary supplements he sees in ads everywhere? Bill wonders if they work—will one help keep his joints healthy or another give him more energy? And, are they safe?*

**What Is a Dietary Supplement?**

Dietary supplements are substances you might use to add nutrients to your diet or to lower your risk of health problems, like osteoporosis or arthritis. Dietary supplements come in the form of pills, capsules, powders, gel tabs, extracts, or liquids. They might contain vitamins, minerals, fiber, amino acids, herbs or other plants, or enzymes. Sometimes, the ingredients in dietary supplements are added to foods, including drinks. A doctor's prescription is not needed to buy dietary supplements.

**Should I Take a Dietary Supplement?**

Do you need one? Maybe you do, but usually not. Ask yourself why you think you might want to take a dietary supplement. Are you concerned about getting enough nutrients? Is a friend, a neighbor, or someone on a commercial suggesting you take one? Some ads for dietary supplements in magazines or on TV seem to promise that these supplements will make you feel better, keep you from getting sick, or even help you live longer. Sometimes, there is little, if any, good scientific research supporting these claims. Some dietary supplements will give you nutrients that might be missing from your daily diet. But eating healthy foods is the best way to get the nutrients you need. Others may cost a lot or might not benefit you the way you would like. Some supplements can change how medicines you may already be taking will work. You should talk to your doctor or a registered dietitian for advice.

**What If I'm Over 50?**

People over 50 need more of some vitamins and minerals than younger adults do. Your doctor or a dietitian can tell you whether you need to change your diet or take vitamins or minerals to get enough of these:

- **Vitamin B12.** Vitamin B12 helps keep your red blood cells and nerves healthy. As people grow older, some have trouble absorbing vitamin
B12 naturally found in food. Instead, they can choose foods, like fortified cereals, that have this vitamin added or use a B12 supplement.

- **Calcium.** Calcium works with vitamin D to keep bones strong at all ages. Bone loss can lead to fractures in both older women and men. Calcium is found in milk and milk products (fat-free or low-fat is best), canned fish with soft bones, dark-green leafy vegetables like spinach, and foods with calcium added.

- **Vitamin D.** Some people's bodies make enough vitamin D if they are in the sun for 10 to 15 minutes at least twice a week. But, if you are older, you may not be able to get enough vitamin D that way. Try adding vitamin D-fortified milk and milk products, vitamin D-fortified cereals, and fatty fish to your diet, and/or use a vitamin D supplement.

- **Vitamin B6.** This vitamin is needed to form red blood cells. It is found in potatoes, bananas, chicken breasts, and fortified cereals.

### Different Vitamin and Mineral Recommendations for People Over 50 (2010)

The National Academy of Sciences recommends how much of each vitamin and mineral men and women of different ages need. Sometimes, the Academy also tells us how much of a vitamin or mineral is too much.

- **Vitamin B12**—2.4 mcg (micrograms) each day (if you are taking medicine for acid reflux, you might need a different form, which your healthcare provider can give you)
- **Calcium**—Women over 50 need 1,200 mg (milligrams) each day, and men need 1,000 mg between ages 51 and 70 and 1,200 mg after 70. But not more than 2,000 mg a day.
- **Vitamin D**—600 IU (International Units) for people age 51 to 70 and 800 IU for those over 70, but not more than 4,000 IU each day
- **Vitamin B6**—1.7 mg for men and 1.5 mg for women each day

When thinking about whether you need more of a vitamin or mineral, think about how much of each nutrient you get from food and drinks, as well as from any supplements you take. Check with a doctor or dietitian to learn whether you need to supplement your diet.
What Are Antioxidants?

You might hear about *antioxidants* in the news. These are natural substances found in food that might help protect you from some diseases. Here are some common sources of antioxidants that you should be sure to include in your diet:

- *beta-carotene*—fruits and vegetables that are either dark green or dark orange
- *selenium*—seafood, liver, meat, and grains
- *vitamin C*—citrus fruits, peppers, tomatoes, and berries
- *vitamin E*—wheat germ, nuts, sesame seeds, and canola, olive, and peanut oils

Right now, research results suggest that large doses of supplements with antioxidants will not prevent chronic diseases such as heart disease or diabetes. In fact, some studies have shown that taking large doses of some antioxidants could be harmful. Again, it is best to check with your doctor before taking a dietary supplement.

What About Herbal Supplements?

Herbal supplements are dietary supplements that come from plants. A few that you may have heard of are gingko biloba, ginseng, echinacea, and black cohosh. Researchers are looking at using herbal supplements to prevent or treat some health problems. It's too soon to know if herbal supplements are both safe and useful. But, studies of some have not shown benefits.

Are Dietary Supplements Safe?

Scientists are still working to answer this question. The U.S. Food and Drug Administration (FDA) checks prescription medicines, such as antibiotics or blood pressure medicines, to make sure they are safe and do what they promise. The same is true for over-the-counter drugs like pain and cold medicines.

But the FDA does not consider dietary supplements to be medicines. The FDA does not watch over dietary supplements in the same way it does prescription medicines. The Federal Government does not regularly test what is in dietary supplements. So, just because you see a dietary supplement on a store shelf does not mean it is safe or that it even does what the label says it will or contains what the label says it contains.
If the FDA receives reports of possible problems with a supplement, it will issue warnings about products that are clearly unsafe. The FDA may also take these supplements off the market. The Federal Trade Commission looks into reports of ads that might misrepresent what dietary supplements do.

A few private groups, such as the U.S. Pharmacopeia (USP), NSF International, ConsumerLab.com, and the Natural Products Association (NPA), have their own "seals of approval" for dietary supplements. To get such a seal, products must be made by following good manufacturing procedures, must contain what is listed on the label, and must not have harmful levels of things that don't belong there, like lead.

What's Best for Me?

If you are thinking about using dietary supplements:

- **Learn.** Find out as much as you can about any dietary supplement you might take. Talk to your doctor, your pharmacist, or a registered dietitian. A supplement that seemed to help your neighbor might not work for you. If you are reading fact sheets or checking websites, be aware of the source of the information. Could the writer or group profit from the sale of a particular supplement? For more information from the National Institute on Aging about choosing reliable health information websites, see For More Information.
- **Remember.** Just because something is said to be "natural" doesn't also mean it is either safe or good for you. It could have side effects. It might make a medicine your doctor prescribed for you either weaker or stronger.
- **Tell your doctor.** He or she needs to know if you decide to go ahead and use a dietary supplement. Do not diagnose or treat your health condition without first checking with your doctor.
- **Buy wisely.** Choose brands that your doctor, dietitian, or pharmacist says are trustworthy. Don't buy dietary supplements with ingredients you don't need. Don't assume that more of something that might be good for you is even better for you.
- **Check the science.** Make sure any claim made about a dietary supplement is based on scientific proof. The company making the dietary supplement should be able to send you information on the safety and/or effectiveness of the ingredients in a product, which you can then discuss with your doctor. Remember that if something sounds too good to be true, it probably is.
What Can I Do to Stay Healthy?

Here's what one active older person does:

*When she turned 60, Pearl decided she wanted to stay healthy and active as long as possible. She was careful about what she ate. She became more physically active. Now she takes a long, brisk walk 3 or 4 times a week. In bad weather, she joins the mall walkers at the local shopping mall. When it’s nice outside, Pearl works in her garden. When she was younger, Pearl stopped smoking and started using a seatbelt. She’s even learning how to use a computer to find healthy recipes. Last month, she danced at her granddaughter's wedding. Pearl is 84 years old.*

Try following Pearl's example—stick to a healthy diet, be physically active, keep your mind active, don't smoke, see your doctor regularly, and, in most cases, only use dietary supplements suggested by your doctor or pharmacist.

For More Information

Here are some helpful resources:

**Department of Agriculture**
Food and Nutrition Information Center
National Agricultural Library
10301 Baltimore Avenue, Room 105
Beltsville, MD 20705
1-301-504-5414
www.nal.usda.gov/fnic

**Federal Trade Commission**
600 Pennsylvania Avenue, NW
Washington, DC 20580
1-877-382-4357 (toll-free)
1-866-653-4261
www.ftc.gov/bcp/menus/consumer/health.shtm

**Food and Drug Administration**
Center for Food Safety and Applied Nutrition
5100 Paint Branch Parkway HFS-009
College Park, MD 20740-3835
1-888-723-3366 (toll-free)
www.fda.gov/AboutFDA/CentersOffices/OfficeofFoods/CFSAN
The Federal Government has several other websites with information on nutrition, including:

www.nutrition.gov — learn more about healthy eating, food shopping, assistance programs, and nutrition-related health subjects.

www.choosemyplate.gov — information about the Dietary Guidelines for Americans

For information on exercise, nutrition, and health quackery, contact:

National Institute on Aging Information Center
P.O. Box 8057
Gaithersburg, MD 20898-8057
1-800-222-2225 (toll-free)
1-800-222-4225 (TTY/toll-free)
www.nia.nih.gov
www.nia.nih.gov/espanol

To sign up for regular email alerts about new publications and other information from the NIA, go to www.nia.nih.gov/health.
Visit NIHSeniorHealth (www.nihseniorhealth.gov), a senior-friendly website from the National Institute on Aging and the National Library of Medicine. This website has health information for older adults. Special features make it easy to use. For example, you can click on a button to make the type larger.

National Institute on Aging
National Institutes of Health
U.S. Department of Health and Human Services

April 2008
Reprinted June 2010

Source URL: http://www.nia.nih.gov/health/publication/dietary-supplements
Types of Blood Pressure Medications

Here's a rundown on the main types of drugs and how they work. Often, two or more drugs work better than one.

**Diuretics**

Diuretics are sometimes called "water pills" because they work in the kidney and flush excess water and sodium from the body.

**Beta-blockers**

Beta-blockers reduce nerve impulses to the heart and blood vessels. This makes the heart beat slower and with less force. Blood pressure drops and the heart works less hard.

**ACE inhibitors**

Angiotensin converting enzyme (ACE) inhibitors prevent the formation of a hormone called angiotensin II, which normally causes blood vessels to narrow. The ACE inhibitors cause the vessels to relax and blood pressure goes down.

**Angiotensin antagonists**

Angiotensin antagonists shield blood vessels from angiotensin II. As a result, the vessels become wider and blood pressure goes down.

**Calcium channel blockers (CCBs)**

CCBs keep calcium from entering the muscle cells of the heart and blood vessels. This causes the blood vessels to relax and pressure goes down.

**Alpha-blockers**

Alpha-blockers reduce nerve impulses to blood vessels, which allows blood to pass more easily, causing the blood pressure to go down.

**Alpha-beta-blockers**

Alpha-beta-blockers work the same way as alpha-blockers but also slow the heartbeat, as beta-blockers do. As a result, less blood is pumped through the vessels and the blood pressure goes down.

**Nervous system inhibitors**

Nervous system inhibitors relax blood vessels by controlling nerve impulses. This causes the blood vessels to become wider and the blood pressure to go down.

**Vasodilators**

Vasodilators directly open blood vessels by relaxing the muscle in the vessel walls, causing the blood pressure to go down.
Take Your Medications Properly

- Always follow prescribed directions. Read all the information provided by the pharmacist.
- Never stop taking or change your medication doses without first discussing it with your doctor.
- Be aware of potential interactions with other drugs. Tell your healthcare professional about all the medications and dietary and herbal supplements you’re taking.
- Never use someone else’s prescription.
- Safeguard medications by keeping track of how much you have and safely disposing of drugs you don’t need.

Keeping Track / Developing a System

Keeping track of your prescribed medications can be challenging — especially if you're taking several different medicines. Writing things down will make managing your medications a lot easier. Use a medicine tracker worksheet to keep the information in one place.

Lowering High Blood Pressure

By treating high blood pressure, you can help prevent a stroke, heart attack, heart failure, kidney failure and peripheral artery disease. Keeping track of your blood pressure readings will help you monitor your blood pressure and record suggestions from your doctor.

Taking medicine may be new to you, and there may be a lot to remember. For example, why are you taking it? What time should you take it? How often do you take it and how many pills do you take? It's important to take medicine the right way — just as prescribed.

If you don't take medicine as directed, what could happen? First of all, it may not work. It could also cause side effects that may be mild — or very harmful. Without knowing it, you could counteract one medicine by taking it with another. Medicine can also make you feel sick or dizzy.

How can I remember to take my medicine?

1. ____________________________________________________________

2. ____________________________________________________________

3. ____________________________________________________________

4. ____________________________________________________________
Quick Tips for Medication Use

- Understand your medication. Know what it's for, and how and when you're supposed to take it.
- Ask your doctor or pharmacist whether to take your medicine with food or on an empty stomach.
- Make an instruction sheet for yourself by taping a sample of each pill you take on a sheet of paper and writing down all the information about each pill to remind you.
- Get some colored labels and stick them on your medicine bottles to simplify your routine. For example, blue can be for morning, red for afternoon and yellow for bedtime.
- Ask your pharmacist to help you come up with a coding system for your medications that makes them easier to take.
- Purchase timer caps for pill bottles to remind you when to take medication.

Adaptive Equipment and Changing Routines

- You can buy many types of pill containers. Some even beep when it's time to take medication. Ask your pharmacist about these aids.
- If your medication routine is too complicated, ask your physician or pharmacist to help you simplify the process, such as reducing the number of daily doses that you need.
- If your medications are too expensive, ask your physician or pharmacist about finding financial assistance.
- If you're away from home a lot, make sure you carry enough of your medication with you to take the prescribed doses while you're out. Some pharmacists will prepare blister paks for daily or weekly medications. Ask your pharmacist about this.
- If you're using a commercial pill dispenser, set a regular time each week to refill it; for example, every Friday night after you eat.
- If you have trouble understanding your physician or pharmacist, ask a friend or loved one to go with you and help you.
- If you don't feel like your medication is making a difference, talk to your physician and ask why.
- Do not stop any medications without talking to your physician or healthcare provider.
- Ask your physician if you should have a home blood pressure monitoring kit to see if your medicine is working.
- If you're monitoring your blood pressure at home, ask when you can expect to see the results from your medicine.
- If you don't feel like you're making progress, talk to your physician and ask why your progress is slow.
- If you're having trouble giving up smoking, ask your physician if you can take a smoking cessation drug to help.
- Become an active participant in making treatment decisions. Overcome barriers that keep you from following your doctor's orders.
Medication Safety Tips

- Store your medicine the way your doctor or pharmacist tells you. ALWAYS keep it away from heat, light and moisture.
- Never store medications in the bathroom. There's too much moisture there.
- Don't carry medicines next to your body. That can raise the temperature and cause some medications to break down.
- Keep track of what pills you can and can't take together, including over-the-counter medicines.
- Always get your prescription filled on time so you don't run out. Missing even one day can make a difference in the effectiveness of many medications.
- Don't stop taking a prescribed medication because your symptoms have gone away.
- Use one pharmacy for all your medicines. This will help ensure that you don't take conflicting medications.
- Try to see the same pharmacist each time.
- If you have any questions about your pills, make a note to remind yourself to ask your doctor or pharmacist.
- Tell your doctor if you have any side effects.
- Don't take more of your medicine than the prescribed dose.
- Ask your doctor or pharmacist before buying a new over-the-counter medicine, such as an antihistamine or "cold tablets," to be sure they won't interfere with your prescribed medicine.
- Always check with your doctor before you stop taking a medicine.
- Make sure that ALL of your doctors know ALL of the medicines you're taking — both prescription and over-the-counter drugs.
- Be sure to tell your doctor or pharmacist of any herbal preparations you're taking. Some herbals can interact with prescribed medications and cause them to be less effective.
- Know the names and doses of the medicines you're taking.
- Keep all medicines out of the reach of children.
- ALWAYS let your physician know about any side effects you experience.
- If you have a chronic condition, talk to your physician to determine whether your condition limits your ability to do regular physical activity in any way. Such a conversation should also help you learn about appropriate types and amounts of physical activity.
- Throw away any medicines that aren't currently prescribed to you.
- Don't share your medications with anyone else. What's right for you may be deadly for them.
- Ask for your pharmacist's advice before crushing or splitting tablets. Some should only be swallowed whole.
- If you store your medications in any container other than the one they come in, be sure to show the container to your pharmacist to ask if it will change the effectiveness of your medication.
Questions To Ask Your Doctor About Your Medication
Taking medications isn't as simple as swallowing a pill. Medicines can only help if you take them as prescribed. Take part in decisions regarding your treatment, follow the treatment plan you and your doctor agree on, watch for problems and become actively involved in solving them with your healthcare team. By following these guidelines, you can help reduce your risk of heart disease and stroke and achieve the fullest benefits from your treatment plan. Review the following questions with your healthcare team and take an active role in your health.

• What is the name of the medicine?
• Is this the brand or generic name?
• What is the medicine supposed to do?
• How and when do I take it, and for how long?
• What foods, drinks, other medicines or activities should I avoid while taking this medicine?
• Is there any written information available about the medicine?
• What happens if I miss a dose of my medicine?
• How often will I have to get the medication refilled?
• How will I know that my medication is working?
• What are the risks of taking this medication?
• What are the risks of NOT taking this medication?
• Are there less expensive medications for my conditions?

Get a Medication Checkup
Prescription and over-the-counter medicines help many people live longer, more active lives. When you take the right medicines the right way, they're safe and effective tools for good health. But using them incorrectly can harm you. The more medicines you take, the greater your risk of problems. You can protect your health by getting a checkup on your medications. Take these simple steps as outlined by the National Council on Patient Information and Education.

• Make an appointment with your doctor or your pharmacist.
• Put all your prescription and over-the-counter drugs in a bag. Be sure to include:
  - Prescriptions in vials, tubes, bottles and plastic bags
  - Sleep and motion-sickness aids
  - Headache remedies
  - Cold remedies (liquid, capsules and tablets)
  - Laxatives and upset stomach aids
  - Other prescription or over-the-counter drugs you may be taking
  - Vitamins and nutritional supplements
  - Herbal remedies
• Remember to take all of your medications in their original containers if possible.
• Take the bag to your doctor or pharmacist and get him or her to go over all of your medicines with you.
• Ask questions about anything you don't understand.

A checkup like this gives you the opportunity to ask your healthcare professional or pharmacist important questions about your medications. It can help you find dangerous medicine combinations you may be taking, medicines you may not need to take anymore, improper dosages of medicines, and mistakes that you may be making in taking them. Call your doctor or pharmacist today to schedule a medication checkup and take charge of your health.
<table>
<thead>
<tr>
<th>Name of Medicine</th>
<th>Color</th>
<th>What's It For</th>
<th>Dose</th>
<th>Time of Day &amp; How Much</th>
<th>Refill Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alginate</td>
<td>White</td>
<td>Blood Pressure</td>
<td>1 pill</td>
<td>every day at night</td>
<td>9/02</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
## Cholesterol Tracker

Record your cholesterol levels after each doctor visit — along with your exercise and diet goals. Watch your progress, and stick to your plan.

<table>
<thead>
<tr>
<th>Date of Checkup</th>
<th>Total Cholesterol</th>
<th>LDL</th>
<th>HDL</th>
<th>Triglycerides</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous Levels</td>
<td>/ /</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Levels</td>
<td>/ /</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My level GOALS</td>
<td>/ /</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Before my next appointment</td>
<td>/ /</td>
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</tbody>
</table>

### Eat Healthy

**Healthy foods I added to my diet this week:**
- 
- 
- 
- 

**Foods or drinks that I need less of:**
- 
- 
- 
- 

### Physical Activity

I commit to ____ minutes of physical activity ____ times a week.
This week, I will ________________ for my physical activity.

### Notes

- 
- 
- 
- 

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**www.americanheart.org/cholesterol**

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# Blood Pressure Tracker - Instructions

- You should have your monitor’s accuracy tested once a year by a healthcare professional. Date of last test: ______________

- Make sure the cuff fits: measure around your upper arm and choose a monitor that comes with the correct size cuff.

- It’s important to take the readings at the same time each day, such as morning and evening, or as your healthcare professional recommends.

- Don’t smoke, drink caffeinated beverages or exercise within the 30 minutes before measuring your blood pressure.

- Sit with your back straight and supported (on a dining chair, for example, rather than a sofa). Your feet should be flat on the floor: don’t cross your legs. Your arm should be supported on a flat surface (such as a table) with the upper arm at heart level. Make sure the middle of the cuff is placed directly over your brachial artery as shown in the picture or your monitor’s instructions, or have your healthcare provider show you how.

- Each time you measure, take two or three readings, one minute apart, and record all the results. Your doctor can calculate your average blood pressure from all of your readings, tell you what category you fall into, look at all your risk factors and give you a blood pressure goal.

## American Heart Association recommended blood pressure levels

<table>
<thead>
<tr>
<th>Blood Pressure Category</th>
<th>Systolic (mm Hg)</th>
<th>Diastolic (mm Hg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>less than 120</td>
<td>less than 80</td>
</tr>
<tr>
<td>Prehypertension</td>
<td>120–139</td>
<td>80–89</td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
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<tr>
<td>Stage 1</td>
<td>140–159</td>
<td>90–99</td>
</tr>
<tr>
<td>Stage 2</td>
<td>160 or higher</td>
<td>100 or higher</td>
</tr>
</tbody>
</table>

Blood pressure higher than 180/110 mm Hg is an emergency. Call 9-1-1 immediately. If 9-1-1 is not available, have someone drive you to the nearest emergency facility immediately.

Heart rate or pulse is the number of times your heart beats per minute. The average resting heart rate is 60–80 beats per minute, but it is generally lower in physically fit people and it usually rises with age.

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# Blood Pressure Tracker - Printable Tracker

## Instructions:

- Take your pressure at the same time each day, such as morning or evening, or as your healthcare professional recommends.

- Sit with your back straight and supported and your feet flat on the floor.

- Your arm should be supported on a flat surface with the upper arm at heart level.

- Make sure the middle of the cuff is placed directly over your brachial artery. Refer to the Instructions page of this tracker for a picture, or check your monitor’s instructions, or have your healthcare provider show you how.

- Each time you measure, take two or three readings, one minute apart, and record all the results.

| NAME: ___________________ | MY BLOOD PRESSURE TARGET GOAL IS: ___ / ___ mm Hg |

<table>
<thead>
<tr>
<th>DATE/TIME</th>
<th>READING 1</th>
<th>READING 2</th>
<th>READING 3</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/20/08</td>
<td>8:00 AM</td>
<td>132/88 mm Hg</td>
<td>91 Beats Per Min</td>
<td>130/80 mm Hg</td>
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</table>

Blood pressure higher than 180/110 is an emergency. Call 9-1-1 immediately. If 9-1-1 is not available, have someone drive you to the nearest emergency facility immediately.

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Questions to ask about your medicines

Ask these questions before you leave your doctor’s office. Take this list with you each time you visit your doctor. Be sure to write your answers and keep them where you will see them.

Ask your doctor:
1. What is the name of the medicine and why am I taking it?

2. What medical condition does this medicine treat?

3. How many times a day should I take this medicine? How much medicine should I take?

4. How long will it take this medicine to work? When should I stop taking it?

5. What should I do if I miss a dose?

6. Are there any side effects I should know about? When should I call you if I am having side effects?

7. Can I safely mix this medicine with the remedies, vitamins, and OTC drugs I am taking?

8. Each time you visit, be sure to ask your doctor if you still need to be on all your medicines.
You and your pharmacist

Before you leave the pharmacy, be sure to:
• Check the label on your medicine.
• Make sure the bottle has your name on it.
• Make sure the directions are the same as your doctor said. If not, tell the pharmacist.
• Ask for an easy-open cap if you have trouble opening the bottle. Be sure to keep all medicines out of reach of children.
• Important—make sure you can read and understand the directions on the container.

Staying on track with your medicines is not always easy. Ask friends and family for help. Following these hints will help make sure you take your medicines the right way—each day.
Ask Your Pharmacist

Your pharmacist is an important part of your healthcare team. If you have questions about your medicine after you leave the doctor’s office, the pharmacist can answer many of them. For example, a pharmacist can tell you how and when to take your medicine, whether a drug may change how another medicine you are taking works, and any side-effects you might have. Also, the pharmacist can answer questions about over-the-counter medications.

Try to have all your prescriptions filled at the same pharmacy so your records are in one place. The pharmacist will keep track of all your medications and will be able to tell you if a new drug might cause problems. If you’re not able to use just one pharmacy, show the new pharmacist your list of medicines and over-the-counter drugs when you drop off your prescription.

When you have a prescription filled:

- Tell the pharmacist if you have trouble swallowing pills. There may be liquid medicine available. Do not chew, break, or crush tablets without first finding out if the drug will still work.

- Make sure you can read and understand the name of the medicine and the directions on the container and on the color-coded warning stickers on the bottle. If the label is hard to read, ask your pharmacist to use larger type.

- Check that you can open the container. If not, ask the pharmacist to put your medicines in bottles that are easier to open.

- Ask about special instructions on where to store a medicine. For example, should it be kept in the refrigerator or in a dry place?

- Check the label on your medicine before leaving the pharmacy. It should have your name on it and the directions given by your doctor. If it doesn’t, don’t take it, and talk with the pharmacist.

Generic Or Brand Name?

When getting a prescription filled, sometimes you can choose between either a generic or brand-name drug. Generic and brand-name medicines are alike because they act the same way in the body. They contain the same active ingredients—the part of the medicine that makes it work. A generic drug is the same as a brand-name drug in dosage, safety, strength, quality, the way it works, the way it is taken, and the way it should be used. Generic drugs usually cost less.
If you want a generic drug, ask your healthcare provider if that’s a choice. Not all drugs are available in the generic form, and there might be medical reasons your doctor prefers the brand-name medicine.

Now, It’s Your Turn

Your doctor has prescribed a medication. The pharmacist has filled the prescription. Now it’s up to you to take the medicine safely. Here are some tips that can help:

- Make a list of all the medicines you take, including over-the-counter products and dietary supplements. Show it to all of your healthcare providers including physical therapists and dentists. Keep one copy in your medicine cabinet and one in your wallet or pocketbook. The list should include the: name of each medicine, doctor who prescribed it, reason it was prescribed, amount you take, and time(s) you take it.
- Read and save in one place all written information that comes with the medicine.
- Take your medicine in the exact amount and at the time your doctor prescribes.
- Call your doctor right away if you have any problems with your medicine or if you are worried that it might be doing more harm than good. Your doctor may be able to change your prescription to a different one that will work better for you.
- Use a memory aid to take your medicines on time. Some people use meals or bedtime as reminders to take their medicine. Other people use charts, calendars, and weekly pill boxes. Find a system that works for you.
- Do not skip doses of medication or take half doses to save money. Talk with your doctor or pharmacist if you can’t afford the prescribed medicine. There may be less costly choices or special programs to help with the cost of certain drugs.
- Avoid mixing alcohol and medicine. Some medicines may not work correctly or may make you sick if taken with alcohol.
- Take your medicine until it’s finished or until your doctor says it’s okay to stop.
- Don’t take medicines prescribed for another person or give yours to someone else.
- Don’t take medicine in the dark. To avoid making a mistake, turn your light on before reaching for your pills.
- Check the expiration dates on your medicine bottles. Your pharmacist can probably tell you how to safely get rid of medicine you no longer need or that is out of date. The pharmacist might be able to dispose of it for you.
• Make sure you store all medicines and supplements out of sight and out of reach of children. And don’t take your medicines in front of young children. They might try to copy you.

**Shopping For Medicines Online**

Medicines can cost a lot. If you have a drug plan through your insurance, you can probably save money by ordering yours from them rather than at your neighborhood pharmacy. Or, you might be thinking about buying yours on the Internet. But how can you tell which websites are safe and reliable? The Food and Drug Administration (see For More Information) has more information on buying medicines and medical products online.

**Medicare Prescription Drug Plans**

Medicare has prescription drug plans for people with Medicare to help save money on medicines. For information please call 1-800-633-4227 (1-800-MEDICARE) or visit the Medicare website at [www.medicare.gov](http://www.medicare.gov).

**What About Over-The-Counter Medicines?**

Many of the ideas in this Age Page are also true for over-the-counter (OTC) drugs, like medicines to relieve coughs, cold, allergies, pain, and heartburn. Be careful when taking an OTC drug. For example, don’t take a cough and cold product if you only have a runny nose and no cough. And, check with your doctor before taking aspirin if you are on a blood-thinning medicine, because aspirin also slows blood clotting.

Other things to remember:

• Measure the dose of a liquid OTC medicine as carefully as you would a prescription drug. Use a measuring spoon, since spoons you eat with vary in size.
• Be careful—OTC medicines can have side effects.
• Take the amount suggested on the label. If you don’t get better, see your doctor.
• Read the label—even if you have used the OTC product in the past. Important information can change.

Remember, medicines—whether prescription or over-the-counter—can hurt you if they aren’t used the right way. Learn to be a smart consumer of medicine.
What do diabetes medicines do?
Over time, high levels of blood glucose, also called blood sugar, can cause health problems. These problems include heart disease, heart attacks, strokes, kidney disease, nerve damage, digestive problems, eye disease, and tooth and gum problems. You can help prevent health problems by keeping your blood glucose levels on target.

Everyone with diabetes needs to choose foods wisely and be physically active. If you can't reach your target blood glucose levels with wise food choices and physical activity, you may need diabetes medicines. The kind of medicine you take depends on your type of diabetes, your schedule, and your other health conditions.

You may need diabetes medicines to reach your blood glucose targets.

Diabetes medicines help keep your blood glucose in your target range. The target range is suggested by diabetes experts and your doctor or diabetes educator. See below for more information about target levels for good health.

What targets are recommended for blood glucose levels?
The National Diabetes Education Program uses blood glucose targets set by the American Diabetes Association (ADA) for most people with diabetes. To learn your daily blood glucose numbers, you'll check your blood glucose levels on your own using a blood glucose meter.

<table>
<thead>
<tr>
<th>Target blood glucose levels for most people with diabetes</th>
<th>My targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before meals</td>
<td>70 to 130 mg/dL</td>
</tr>
<tr>
<td>1 to 2 hours after the start of a meal</td>
<td>Less than 180 mg/dL</td>
</tr>
</tbody>
</table>

* Milligrams per deciliter.

Also, you should ask your doctor for a blood test called the A1C at least twice a year. The A1C will give you your average blood glucose for the past 3 months.

<table>
<thead>
<tr>
<th>Target A1C result for people with diabetes</th>
<th>My targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 7 percent</td>
<td></td>
</tr>
</tbody>
</table>
Your personal A1C goal might be higher or lower than 7 percent. Keeping your A1C as close to normal as possible—below 6 percent without having frequent low blood glucose—can help prevent long-term diabetes problems. Doctors might recommend other goals for very young children, older people, people with other health problems, or those who often have low blood glucose.

Talk with your doctor or diabetes educator about whether the target blood glucose levels and A1C result listed in the charts above are best for you. Write your own target levels in the charts. Both ways of checking your blood glucose levels are important.

If your blood glucose levels are not on target, you might need a change in how you take care of your diabetes. The results of your A1C test and your daily blood glucose checks can help you and your doctor make decisions about

- what you eat
- when you eat
- how much you eat
- what kind of exercise you do
- how much exercise you do
- the type of diabetes medicines you take
- the amount of diabetes medicines you take

What happens to blood glucose levels in people with diabetes?
Blood glucose levels go up and down throughout the day and night in people with diabetes. High blood glucose levels over time can result in heart disease and other health problems. Low blood glucose levels can make you feel shaky or pass out. But you can learn how to make sure your blood glucose levels stay on target—not too high and not too low.

What makes blood glucose levels go too high?
Your blood glucose levels can go too high if

- you eat more than usual
- you’re not physically active
- you’re not taking enough diabetes medicine
- you’re sick or under stress
- you exercise when your blood glucose level is already high

What makes blood glucose levels go too low?
Your blood glucose levels can go too low if

- you eat less than usual
- you miss a meal or snack or eat later than usual
- you’re more active than usual
- you drink alcoholic beverages on an empty stomach

Some diabetes medicines can also lower your blood glucose too much. Ask your doctor whether your diabetes medicines can cause low blood glucose. See Insert N for information about low blood glucose.
The results of your blood glucose checks can help you make decisions about your diabetes medicines, food choices, and physical activity.

**Medicines for My Diabetes**

Ask your doctor what type of diabetes you have.

I have

- type 1 diabetes
- type 2 diabetes
- gestational diabetes
- another type of diabetes: ____________________

**Medicines for Type 1 Diabetes**

Type 1 diabetes, once called juvenile diabetes or insulin-dependent diabetes, is usually first found in children, teenagers, or young adults. If you have type 1 diabetes, you must take insulin because your body no longer makes it. You also might need to take other types of diabetes medicines that work with insulin.

**Medicines for Type 2 Diabetes**

Type 2 diabetes, once called adult-onset diabetes or noninsulin-dependent diabetes, is the most common form of diabetes. It can start when the body doesn't use insulin as it should, a condition called insulin resistance. If the body can't keep up with the need for insulin, you may need diabetes medicines. Many choices are available. Your doctor might prescribe two or more medicines. The ADA recommends that most people start with metformin, a kind of diabetes pill.

**Medicines for Gestational Diabetes**

Gestational diabetes is diabetes that occurs for the first time during pregnancy. The hormones of pregnancy or a shortage of insulin can cause gestational diabetes. Most women with gestational diabetes control it with meal planning and physical activity. But some women need insulin to reach their target blood glucose levels.

**Medicines for Other Types of Diabetes**

If you have one of the rare forms of diabetes, such as diabetes caused by other medicines or monogenic diabetes, talk with your doctor about what kind of diabetes medicine would be best for you.
Types of Diabetes Medicines
Diabetes medicines come in several forms.

Insulin
If your body no longer makes enough insulin, you'll need to take it. Insulin is used for all types of diabetes. Your doctor can help you decide which way of taking insulin is best for you.

- **Taking injections.** You'll give yourself shots using a needle and syringe. The syringe is a hollow tube with a plunger. You will put your dose of insulin into the tube. Some people use an insulin pen, which looks like a pen but has a needle for its point.
- **Using an insulin pump.** An insulin pump is a small machine about the size of a cell phone, worn outside of your body on a belt or in a pocket or pouch. The pump connects to a small plastic tube and a very small needle. The needle is inserted under the skin and stays in for several days. Insulin is pumped from the machine through the tube into your body.
- **Using an insulin jet injector.** The jet injector, which looks like a large pen, sends a fine spray of insulin through the skin with high-pressure air instead of a needle.
- **Using an insulin infuser.** A small tube is inserted just beneath the skin and remains in place for several days. Insulin is injected into the end of the tube instead of through the skin.

What does insulin do?
Insulin helps keep blood glucose levels on target by moving glucose from the blood into your body's cells. Your cells then use glucose for energy. In people who don't have diabetes, the body makes the right amount of insulin on its own. But when you have diabetes, you and your doctor must decide how much insulin you need throughout the day and night.

What are the possible side effects of insulin?
Possible side effects include

- low blood glucose (for more information, see [Insert N])
- weight gain

How and when should I take my insulin?
Your plan for taking insulin will depend on your daily routine and your type of insulin. Some people with diabetes who use insulin need to take it two, three, or four times a day to reach their blood glucose
targets. Others can take a single shot. Your doctor or diabetes educator will help you learn how and when to give yourself insulin.

Types of Insulin
Each type of insulin works at a different speed. For example, rapid-acting insulin starts to work right after you take it. Long-acting insulin works for many hours. Most people need two or more types of insulin to reach their blood glucose targets.
Look at the list of types of insulin on Insert C. Check off the names of the kinds of insulin you take. Then print and write the names of your insulins under My Insulins in the chart on Insert A.

Diabetes Pills
Along with meal planning and physical activity, diabetes pills help people with type 2 diabetes or gestational diabetes keep their blood glucose levels on target. Several kinds of pills are available. Each works in a different way. Many people take two or three kinds of pills. Some people take combination pills. Combination pills contain two kinds of diabetes medicine in one tablet. Some people take pills and insulin.

Diabetes pills help people with type 2 diabetes or gestational diabetes keep their blood glucose levels on target.

Your doctor may ask you to try one kind of pill. If it doesn't help you reach your blood glucose targets, your doctor may ask you to
• take more of the same pill
• add another kind of pill
• change to another type of pill
• start taking insulin
• start taking another injected medicine

If your doctor suggests that you take insulin or another injected medicine, it doesn't mean your diabetes is getting worse. Instead, it means you need insulin or another type of medicine to reach your blood glucose targets. Everyone is different. What works best for you depends on your usual daily routine, eating habits, and activities, and your other health conditions.

For information about the different kinds of pills and what they do, see the inserts. You'll see the brand name and the generic name—the scientific name—for each medicine. Find your diabetes pills and check off the names. Then print and write the names of your diabetes pills under My Pills and Injected Medicines in the chart on Insert A.
Injections Other Than Insulin
In addition to insulin, two other types of injected medicines are now available. Both work with insulin—either the body's own or injected—to help keep your blood glucose from going too high after you eat. Neither is a substitute for insulin.

See the cards in the pocket of this booklet for more information about these injected medicines. Check off the kinds you take. Then write the names of your injected medicines under My Pills and Injected Medicines in the chart on Insert A.

Talk with your doctor if you have questions about your diabetes medicines. Do not stop taking your diabetes medicines without checking with your doctor first. See Insert B for a list of questions to ask your doctor about your medicines.

What do I need to know about side effects of medicines?
A side effect is an unwanted problem caused by a medicine. For example, some diabetes medicines can cause nausea or an upset stomach when you first start taking them. Before you start a new medicine, ask your doctor about possible side effects and how you can avoid them. If the side effects of your medicine bother you, tell your doctor.

For More Information
To find diabetes educators—nurses, dietitians, and other health professionals—near you, call the American Association of Diabetes Educators toll-free at 1–800–TEAMUP4 (1–800–832–6874). Or go to www.diabeteseducator.org and see the "Find a Diabetes Educator" section.

For additional information about diabetes, contact
American Diabetes Association
National Service Center
1701 North Beauregard Street
Alexandria, VA 22311–1742
Phone: 1-800-DIABETES (1–800–342–2383)
Fax: 703-549-6995
Email: AskADA@diabetes.org
Internet: www.diabetes.org

JDRF
26 Broadway, 14th Floor
New York, NY 10004
Phone: 1–800–533–CURE (1–800–533–2873)
Fax: 212–785–9595
Email: info@jdrf.org
Internet: www.jdrf.org
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1 Information Way
Bethesda, MD 20892–3560
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TTY: 1–866–569–1162
Fax: 703–738–4929
Email: ndic@info.niddk.nih.gov
Internet: www.diabetes.niddk.nih.gov

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Mental Health Medications

National Institute of Mental Health
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • National Institutes of Health
Mental Health Medications

Medications are usually prescribed to treat mental disorders such as schizophrenia, depression, bipolar disorder (sometimes called manic-depressive illness), anxiety disorders, and attention deficit hyperactivity disorder (ADHD). Sometimes medications are used with other treatments such as psychotherapy. This guide describes:

Types of medications used to treat mental disorders:
- Side effects of medications
- Directions for taking medications
- Warnings about medications

This booklet does not provide information about long-term use of medications. For more information, contact your health care provider. The information in this booklet is current as of [insert date].

What are psychiatric medications?

Psychiatric medications treat mental disorders. Sometimes called psychotropic or psychopharmacologic medications, they have changed the lives of many people with mental disorders for the better. Many people with mental disorders live full and meaningful lives with the help of these medications. Without them, people with mental disorders might suffer serious and disabling symptoms.

How are medications used to treat mental disorders?

Medications treat the symptoms of mental disorders. They cannot cure the disorder, but they make people feel better so they can function. Medications work differently for different people. Some people get side effects from medications and only need them for a short time. For example, a person with depression may need medication for a few months, and then the medication may be reduced or stopped. Some people may need medication all the time, depending on the disorder and the person. People who can no longer have successful careers without medication need long-term treatment with medication.

All psychiatric medications are categorized by their effect on the brain. These medications block or change the activity of certain chemicals in the brain. For example, some medications may block the activity of a chemical called serotonin in the brain. These medications are called selective serotonin reuptake inhibitors (SSRIs). Other medications may block the activity of a chemical called dopamine in the brain. These medications are called dopamine reuptake inhibitors (DRIs). Some medications may block the activity of both serotonin and dopamine in the brain. These medications are called dual serotonin and dopamine reuptake inhibitors (SSDIs). Other medications may block the activity of other chemicals in the brain. For example, some medications may block the activity of a chemical called norepinephrine in the brain. These medications are called norepinephrine reuptake inhibitors (NRIs). Some medications may block the activity of both serotonin, dopamine, and norepinephrine in the brain. These medications are called dual serotonin, dopamine, and norepinephrine reuptake inhibitors (SDN-RIIs).

What are the side effects of medications?

Side effects of medications can be divided into two types: dose-related side effects and treatment-related side effects. Dose-related side effects are those that occur when the amount of medication is increased. Treatment-related side effects are those that occur when the medication is started or changed. For example, a person who is taking a medication to treat depression may experience side effects such as dizziness or problems with balance when the medication is first started. These side effects can usually be prevented or treated. However, some people may experience side effects that are more severe. If you experience any side effects, talk to your doctor about how to manage them. Many side effects can be reduced by taking the medication at bedtime or by taking the medication slowly over several days.
What medications are used to treat depression?

Depression is commonly treated with antidepressant medications. Antidepressants work to balance some of the natural chemicals in our brains. These chemicals are called neurotransmitters, and they affect our mood and emotional response. Antidepressants work on neurotransmitters such as serotonin, noradrenaline, and dopamine.

The most popular types of antidepressants are called selective serotonin reuptake inhibitors (SSRIs). These include:

- Fluoxetine (Prozac)
- Citalopram (Celexa)
- Sertraline (Zoloft)
- Escitalopram (Lexapro)
- Paroxetine (Paxil)

Other types of antidepressants are serotonin and norepinephrine reuptake inhibitors (SNRIs), which are similar to SSRIs and include duloxetine (Cymbalta) and venlafaxine (Effexor). Another antidepressant that is commonly used is bupropion (Wellbutrin), which works on the neurotransmitter dopamine, in contrast to its role in nicotine addiction. Some people, who are known to be sensitive to serotonin, may have more side effects.

What are the side effects?

Antidepressants may cause side effects that usually do not last long. Any unusual reactions or side effects should be reported to a doctor immediately.

The most common side effects associated with SSRIs and SNRIs include:

- Headache
- Insomnia
- Drowsiness or dizziness
- Weight changes
- Nausea
- Feeling sad or depressed
- Increased sweating
- Dry mouth
- Constipation
- Stomach upset
- Sexual problems
- Urinary problems
- Blurred vision
- Vision changes

How should antidepressants be taken?

People taking antidepressants need to follow their doctors’ directions. The medication should be taken on a regular basis, and less often than every day during the first few weeks of treatment. Possible side effects to look for are depression, suicidal thoughts or behavior, or any unusual changes in behavior such as thoughts of suicide, depression, or other mood changes. If these symptoms worsen or become worse, call your doctor right away. If you have any questions, your doctor can provide more information on the risks and benefits of taking antidepressants. It is important to take the medicine as prescribed, as directed by your doctor.

What medications are used to treat bipolar disorder?

Bipolar disorder, also known as manic-depressive illness, is a chronic illness that can lead to episodes of mania (uplifted mood) and depression. People with bipolar disorder may experience periods of depression,mania, or a mix of both.

Mood stabilizers

People with bipolar disorder usually need mood stabilizers. Sometimes, antipsychotics and antidepressants are used along with a mood stabilizer to help manage symptoms. The most common mood stabilizers are:

- Lithium (Eskalith, Lithobid)
- Carbamazepine (Tegretol)
- Valproic acid (Depakene)
- Olanzapine (Zyprexa)

Antipsychotics

Antipsychotics can be used to treat symptoms of manic episodes in bipolar disorder. These drugs include:

- Haloperidol (Haldol)
- Chlorpromazine (Thorazine)
- Prochlorperazine (Compazine)
- Thiothixene (Navane)

Antidepressants

Antidepressants are sometimes used to treat symptoms of bipolar disorder. However, these drugs are not recommended as a sole treatment for bipolar disorder. Antidepressants may help reduce the risk of suicide in bipolar disorder. Antidepressants and mood stabilizers may be given together to help manage mood symptoms. Antidepressants may increase the risk of suicide in people with bipolar disorder. People should be monitored closely for any changes in mood or behavior.
What medications are used to treat anxiety disorders?

<table>
<thead>
<tr>
<th>Antidepressants</th>
<th>Anti-anxiety medications</th>
<th>Beta-blockers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antidepressants were developed to treat depression and anxiety, but they also help people with anxiety disorders.</td>
<td>Benzodiazepines are also used for anxiety disorders.</td>
<td>Beta-blockers control some of the physical symptoms of anxiety, such as trembling and sweating.</td>
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<td>- SSRI antidepressants (such as Fluoxetine, Sertraline, Paroxetine, and Escitalopram) are commonly prescribed for panic disorder, obsessive-compulsive disorder (OCD), PTSD, and social phobia.</td>
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<td>- Fatigue</td>
<td>- Headache</td>
<td>- Dizziness</td>
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<tr>
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<td>- Nausea</td>
<td>- Cold sweats</td>
</tr>
<tr>
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<td>- Constipation</td>
<td>- Dry mouth</td>
</tr>
<tr>
<td>- Constipation</td>
<td>- Rash</td>
<td>- Nausea</td>
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<td>- Rash</td>
<td>- Hypotension</td>
<td>- Headache</td>
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<td>- Hypotension</td>
<td>- Tachycardia</td>
<td>- Rash</td>
</tr>
<tr>
<td>- Tachycardia</td>
<td>- Bradycardia</td>
<td>- Headache</td>
</tr>
</tbody>
</table>

Other medications for anxiety disorder may also be linked with rare but serious side effects. Always talk with the doctor or pharmacist about any potential side effects before taking the medication. For information on side effects of antipsychotics, see the section on medications for treating depression.

There are no cures for anxiety disorder, but treatment works for many people. Treatment works best when it is continuous, rather than on and off. However, mood changes can happen even when there are no breaks in treatment. Patients should be open with their doctors about treatment. Taking about how treatment is working can help the most effective. It may be helpful for patients or family members to keep a daily chart of mood symptoms, treatments, side effects, and the like. This chart can help patients and doctors track the illness. Sometimes a person’s treatment plan needs to be changed. When changes in treatment are needed, the doctor will guide the change. A person should never stop taking a medication without asking a doctor for help.
What medications are used to treat ADHD?

Attention-deficit/hyperactivity disorder (ADHD) occurs in both children and adults. ADHD is commonly treated with stimulants, such as:

- Methylphenidate (Ritalin, Metadate, Concerta, Daytrana)
- Amphetamines (Adderall)
- Atomoxetine (Strattera)

In 2002, the FDA approved the first non-stimulant medication for ADHD. In February 2007, the FDA approved the use of the stimulant atomoxetine (Strattera) for the treatment of ADHD in children ages 6 to 17 years.

What are the side effects?

Most side effects are minor and disappear as treatment lasts longer. The most common side effects include:

- Decreased appetite: Children who are very hungry during the first few days of the day, but they are often hungry by dinner as the medication takes effect.
- Sleep problems: If a child cannot fall asleep, the doctor may prescribe a sleep aid dose. The doctor may also suggest that parents encourage their child to go to bed at the same time each evening.
- Restlessness: Children may be restless, energetic, and talkative. They help parents focus, work, and learn.

Stimulants are toxic in large quantities and should only be used under close medical supervision.

Are ADHD medications safe?

Stimulants are not safe when given under a doctor’s supervision. Some children may take them if they feel slightly different or “faster.”

There have been reports of patients becoming depressed or suicidal while taking ADHD medication. The FDA has reported that the number of reports of suicide attempts or deaths among children and adolescents while taking ADHD medication has increased.

Who is at risk for stress?

ADHD medications may lead to drug abuse or dependence, but there is little evidence of this. Research shows that when ADHD medication is used with other disorders, the risk is lower.

FDA warning on possible side effects.

In 2005, the FDA reported that all users of ADHD medications develop some form of psychiatric disorder. The warning was based on reports of mood swings, anxiety, and depression. The motivation for the warning was to inform parents of the potential risks of ADHD medication.

Some parents worry that stimulant medications may lead to drug abuse or dependence, but there is little evidence of this. Research shows that when ADHD medication is used with other disorders, the risk is lower.

What are the special needs when taking psychiatric medications?

Psychotropic medications may be prescribed for various disorders, including:

- Children and adolescents
- Older adults
- Women who are pregnant or may become pregnant
- People with mental illnesses
- People who are using other medications

For children and adolescents, the medications are not approved for the specific mental disorder or age.

For these reasons, it is important to watch children and adolescents who take these medications. Young people may have different reactions and side effects than adults. Also, some medications, including antipsychotics and ADHD medications, carry FDA warnings about potentially dangerous side effects.

Research has shown that people who use medications for ADHD or other disorders may benefit from close medical supervision. The medications are not approved for the specific mental disorder or age.

Older adults

Because older people often have more medical problems than other groups, they may take more medications than younger people. Including prescribed, over the counter, and herbal medications. As a result, older people have a higher risk for experiencing drug interaction, missing doses, or overusing.

Older people also have more sensitivity to the side effects of medications. Even low doses of medications may cause problems in older adults. An older person may also be more likely to experience problems if they take several medications at once.

Sometimes memory problems affect older people. Older people who take medications for mental disorders. An older person may forget to take a pill or two missed or not taken. A good way to keep track of medication is to use a seven-day pill box, which can be bought at any pharmacy. At the beginning of each week, older adults and their caregivers fill the box so that it is easy to remember what medication to take. Many pharmacies also have assistance with ordering medications that must be taken more than once a day.

Women who are pregnant or may become pregnant

The research on the use of psychotropic medications during pregnancy is limited. The results are not always definitive when it comes to the safety of the medication. The medications are not approved for the specific mental disorder or age.

Children and adolescents

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Women who are pregnant or may become pregnant

The research on the use of psychotropic medications during pregnancy is limited. The results are not always definitive when it comes to the safety of the medication. The medications are not approved for the specific mental disorder or age.
What should I ask my doctor if I am prescribed a psychiatric medication?

You and your family can help your doctor find the right medications for you. The doctor must know your medical history, family history, information about allergies, other medications, supplements or herbal remedies you take, and other details about your overall health. Your family member should ask the following questions when a medication is prescribed:

- What is the name of the medication?
- What is the medication supposed to do?
- How and when should I take it?
- How much should I take?
- What should I do if I miss a dose?
- When and how should I stop taking it?
- Will it interact with other medications I take?
- Do I need to avoid any types of foods or drinks while taking the medication?
- What should I avoid?
- Should it be taken with or without food?
- Is it safe to drink alcohol while taking this medication?
- What are the side effects? What should I do if I experience them?
- Is there a pump priming for the medication available?

After taking the medication for a short time, talk to your doctor how you feel if you are having side effects, and any concerns you have about the medication.

Alphabetical List of Medications

This section includes antipsychotic medications, antidepressant medications, mood stabilizers, anticonvulsants medications, and ADHD medications. Some medications are marketed under trade names, all of which can be found in this publication.

Antipsychotic Medications

Abilify olanzapine 10 and older for bipolar disorder, manic, or mixed episodes; 10 to 17 for schizophrenia and bipolar
Clozapine clozapine 18 and older
Haloperidol haloperidol 18 and older
Levodopa levodopa 12 and older
Risperidone risperidone 18 and older
Zuclopenthixol clopenthixol 18 and older
Medications for Schizophrenia

Olanzapine olanzapine 18 and older
Quetiapine quetiapine 18 and older
Pimozide pimozide 18 and older
Thioridazine thioridazine 18 and older
Ziprasidone ziprasidone 18 and older

Antidepressant Medications

Bupropion bupropion 18 and older
Lithium lithium 18 and older
Vortioxetine vortioxetine 18 and older

Lisdexamfetamine (Xanomrine) xanomrine 18 and older
Zonisamide zonisamide 18 and older
Methylphenidate methylphenidate 18 and older
Amphetamine ( generics only) amphetamine 18 and older
Dextroamphetamine ( generics only) dextroamphetamine 18 and older

Medications for Mood Stabilizers

Valproate valproate 12 and older
Lamotrigine lamotrigine 18 and older
Carbamazepine carbamazepine 18 and older
Oxcarbazepine oxcarbazepine 12 and older
Valproic acid valproic acid 18 and older

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Trade Name</th>
<th>FDA Approved Age</th>
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<tbody>
<tr>
<td><em>Atypical Antipsychotics</em></td>
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<tr>
<td>aripiprazole (oral)</td>
<td>Abilify</td>
<td>oral, 18 and older</td>
</tr>
<tr>
<td>aripiprazole (injectable)</td>
<td>Abilify</td>
<td>injectable, 18 and older</td>
</tr>
<tr>
<td>clozapine</td>
<td>Clozaril</td>
<td>oral, 18 and older</td>
</tr>
<tr>
<td>olanzapine</td>
<td>Zyprexa</td>
<td>oral, 18 and older</td>
</tr>
<tr>
<td>paliperidone palmitate</td>
<td>Invega</td>
<td>injectable, oral, 18 and older</td>
</tr>
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<td>Seroquel</td>
<td>oral, 18 and older</td>
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<td>quetiapine fumarate</td>
<td>Seroquel</td>
<td>oral, 18 and older</td>
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<tr>
<td>oxazepam</td>
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For More Information on Medications: Visit the National Library of Medicine's MedlinePlus
http://www.nlm.nih.gov/medlineplus

For information on Clinical Trials
http://www.clinicaltrials.gov

Information from NIMH is available in multiple languages. You can browse online, download documents in PDF, and order paper brochures through the mail. If you would like to have NIMH publications, you can order them online at http://www.nimh.nih.gov. If you do not have Internet access and walk-in help, for information that supplements this publication, please contact the NIMH Information Resource Center at the numbers listed below.

National Institute of Mental Health
Sara Suess, Press & Information Branch
4001 East-West Highway
Bethesda, MD 20892-9563
Phone: 301-443-4500 or 1-866-615-NIMH (toll-free)
TTY: 301-443-4411 or 1-866-615-4431
Fax: 301-443-4779
E-mail: news@nimh.nih.gov
Website: http://www.nimh.nih.gov

References


For More Information

Here are some helpful resources:

**Agency for Healthcare Research and Quality**
540 Gaither Road
Rockville, MD 20850
1-301-427-1104
www.ahrq.gov

**Centers for Medicare and Medicaid Services**
7500 Security Boulevard
Baltimore, MD 21244-1850
1-800-633-4227 (1-800-MEDICARE/toll-free)
www.medicare.gov

**Food and Drug Administration**
10903 New Hampshire Avenue
Silver Spring, MD 20993
1-888-463-6332 (toll-free)
www.fda.gov

**Partnership for Prescription Assistance**
1-888-477-2669 (toll-free)
www.pparx.org

For more information on health and aging, contact:

**National Institute on Aging**
Information Center
P.O. Box 8057
Gaithersburg, MD 20898-8057
1-800-222-2225 (toll-free)
1-800-222-4225 (TTY/toll-free)
www.nia.nih.gov/health
www.nia.nih.gov/espanol

To sign up for regular email alerts about new publications and other information from the NIA, go to www.nia.nih.gov/health .

Visit www.nihseniorhealth.gov , a senior-friendly website from the National Institute on Aging and the National Library of Medicine. This website has
health and wellness information for older adults. Special features make it simple to use. For example, you can click on a button to have the text read out loud or to make the type larger.

National Institute on Aging
National Institutes of Health
U.S. Department of Health & Human Services

For More Information

Here are some helpful resources:

**Department of Agriculture**
Food and Nutrition Information Center
National Agricultural Library
10301 Baltimore Avenue, Room 105
Beltsville, MD 20705
1-301-504-5414
www.nal.usda.gov/fnic

**Federal Trade Commission**
600 Pennsylvania Avenue, NW
Washington, DC 20580
1-877-382-4357 (toll-free)
1-866-653-4261
www.ftc.gov/bcp/menus/consumer/health.shtm

**Food and Drug Administration**
Center for Food Safety and Applied Nutrition
5100 Paint Branch Parkway HFS-009
College Park, MD 20740-3835
1-888-723-3366 (toll-free)
www.fda.gov/AboutFDA/CentersOffices/OfficeofFoods/CFSAN

**National Center for Complementary and Alternative Medicine**
NCCAM Clearinghouse
P.O. Box 7923
Gaithersburg, MD 20898
1-888-644-6226 (toll-free)
1-866-464-3615 (TTY/toll-free)
www.nccam.nih.gov
The Federal Government has several other websites with information on nutrition, including:

www.nutrition.gov —learn more about healthy eating, food shopping, assistance programs, and nutrition-related health subjects.

www.choosemyplate.gov —information about the Dietary Guidelines for Americans

For information on exercise, nutrition, and health quackery, contact:

National Institute on Aging
Information Center
P.O. Box 8057
Gaithersburg, MD 20898-8057
1-800-222-2225 (toll-free)
1-800-222-4225 (TTY/toll-free)
www.nia.nih.gov
www.nia.nih.gov/espanol

To sign up for regular email alerts about new publications and other information from the NIA, go to www.nia.nih.gov/health.

Visit NIHSeniorHealth (www.nihseniorhealth.gov), a senior-friendly website from the National Institute on Aging and the National Library of Medicine. This website has health information for older adults. Special features make it easy to use. For example, you can click on a button to make the type larger.
Medicines: Use Them Safely

When Amy, age 72, came home from the drug store with her latest prescription, she placed all the pills bottles on the kitchen counter and counted them. "I take five different medications, and you take four," he said to his wife. "We need a system. We need to know what medicines we have, what they're for, and when we should take them."

Modern medicine has made our lives better in many ways. It has helped us live longer, healthier lives. But people over 65 have to be careful when taking medications, especially when they're taking many different drugs.

What Are Medicines? What Are Drugs?

Some people refer to the pills, liquids, creams, or sprays they take as "medicine," and other people call them "drugs." Both words can mean:

+ Medicines you get from a pharmacy with a doctor's prescription
+ Pills, liquids, or creams you buy without a prescription to use now and then, for example, for aches and pains, colds, or heartburn
+ Vitamins or dietary supplements you take regularly

Drugs you get without a doctor's prescription are called over-the-counter medicines. Because missing certain medicines can cause problems, be sure to let your doctor know about all the prescription and over-the-counter drugs you are taking.

At Your Doctor's Office

If you've gone to your doctor because you don't feel well, the doctor might decide a medicine will help and will write a prescription. Be sure:

+ Tell your doctor or nurse about all the medicines you take whenever a new drug is prescribed.
+ Remind your doctor or nurse about your allergies and any problems you have had with medicines, such as rashes, indigestion, dizziness, or mood changes.

Questions to Ask Your Doctor About a New Medicine

+ What is the name of the medicine, and why am I taking it?
+ How many times a day should I take it? At what time?
+ If the bottle says take "4 times a day," does that mean 4 times in 24 hours or 4 times during the daytime?
+ Should I take the medicine with food or without? Is there anything I should not eat or drink when taking this medicine?
+ What does "as needed" mean?
+ When should I stop taking the medicine?
+ If I forget to take my medicine, what should I do?
+ What side effects can I expect?
+ What should I do if I have a problem?

Understand how to take the medicine before you start using it.

Ask questions. It might help to write down the answers.

Ask Your Pharmacist

Your pharmacist is an important part of your healthcare team. If you have questions about your medicine after you leave the doctor's office, the pharmacist can answer many of them. For example, a pharmacist can tell you how and when to take your medicine, whether a drug may change how another medicine you are taking works, and any side effects you might have. Also, the pharmacist can answer questions about over-the-counter medications.

Try to have all your prescriptions filled at the same pharmacy so your records are in one place. The pharmacist will keep track of all your medications and will be able to tell you if a new drug might cause problems. If you're not able to use just one pharmacy, show the new pharmacist your list of medicines and over-the-counter drugs when you drop off your prescription.

When you have a prescription filled:

+ Tell the pharmacist if you have trouble swallowing pills. There may be liquid medicines available. Do not chew, break, or crush tablets without first finding out if the drug will still work.
+ Make sure you can read and understand the name of the medicine and the directions on the container and on the color-coded warning stickers on the bottle. If the label is hard to read, ask your pharmacist to use larger type.
+ Check that you can open the container. If not, ask the pharmacist to put your medicines in bottles that are easier to open.
+ Ask about special instructions on where to store a medicine. For example, should it be kept in the refrigerator or in a dry place?

Check the label on your medicine before leaving the pharmacy. It should have your name on it and the directions given by your doctor. If it doesn't, don't take it, and talk with the pharmacist.

Now, It's Your Turn

Your doctor has prescribed a medication. The pharmacist has filled the prescription. Now it's up to you to take the medicine safely. Here are some tips that can help:

+ Make a list of all the medicines you take, including over-the-counter products and dietary supplements. Show it to all of your healthcare providers including physical therapists and dentists. Keep one copy in your medicine cabinet and one in your wallet or pocketbook. The list should include the name of each...

Generic Or Brand Name?

When getting a prescription filled, sometimes you can choose between either a generic or brand-name drug. Generic and brand-name medicines are alike because they act the same way in the body. They contain the same active ingredients—the part of the medicine that makes it work. A generic drug is the same as a brand-name drug in dosage, safety, strength, quality, the way it works, the way it is taken, and the way it should be used. Generic drugs usually cost less.

If you want a generic drug, ask your healthcare provider if that's a choice. Not all drugs are available in the generic form, and there might be medical reasons your doctor prefers the brand-name medicine.
Medicare Prescription Drug Plans

Medicare has prescription drug plans for people with Medicare to help save money on medicines. For information please call 1-800-633-4227 (1-800-MEDICARE) or visit the Medicare website at www.medicare.gov.

Online. But how can you tell which websites are safe and reliable? The Food and Drug Administration (see For More Information) has more information on buying medicines and medical products online.

What About Over-The-Counter Medicines?

Many of the ideas in this AgePage are also true for over-the-counter (OTC) drugs like medicines to relieve coughs, cold, allergies, pain, and heartburn. Be careful when taking an OTC drug. For example, don’t take a cough and cold product if you only have a runny nose and no cough. And, check with your doctor before taking aspirin if you are on a blood-thinning medicine.

Medications can cost a lot. If you have a drug plan through your insurance, you can probably save money by ordering yours from them rather than at your neighborhood pharmacy. Or, you might be thinking about buying yours on the web. Because aspirin also slows blood clotting, other things to remember:
• Check the expiration date on the packaging.
• Be careful—OTC medicines can have side effects.
• Take the amount suggested on the label. If you don’t get better, see your doctor.
• Read the label—even if you have used the OTC product in the past. Important information can change.

For More Information

Here are some helpful resources:

Centers for Medicare and Medicaid Services
7500 Security Boulevard
Baltimore, MD 21244-1150
1-800-633-4227
(1-800-MEDICARE; toll-free)
www.medicare.gov

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Silver Spring, MD 20903
1-888-463-6332
www.fda.gov

Partnership for Prescription Assistance
1-800-477-2669 (toll-free)
www.pparx.org

For more information on health and aging, contact:

National Institute on Aging Information Center
P.O. Box 9057
Gaithersburg, MD 20898-9057
1-800-222-2222 (toll-free)
1-800-789-2225 (TTY; toll-free)
www.nia.nih.gov
www.nia.nih.gov/Expand

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1-800-633-4227
(1-800-MEDICARE; toll-free)
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10903 New Hampshire Avenue
Silver Spring, MD 20903
1-888-463-6332
www.fda.gov

Partnership for Prescription Assistance
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1-800-222-2222 (toll-free)
1-800-789-2225 (TTY; toll-free)
www.nia.nih.gov
www.nia.nih.gov/Expand
Appendix F: Program Development Checklist

1. Discuss your idea with your supervisor or Department Chair.

2. Conduct a needs assessment to:
   - Identify your target audience (anticipated population, accessible population, and the number of people who express committed interest to participate in the program)
   - Consider the amount of information you intend to deliver and timeline (i.e. Should this be a weekend seminar? Weekly groups?)

3. Write up a proposal with the following information:
   - Name of the program
   - Short description of the program
   - How does it meet the organization’s mission and goals
   - Target audience (results of your needs assessment, competitor?)
   - Length of the program
   - Capacity of the program
   - Estimated out of pocket costs; tentative budget
   - Propose a timeline (start date)
   - Expected outcomes of the program
   - Program needs
     - Personnel
     - Environment & spacing
     - Supplies & equipment required

4. Seek approval from your Department Chair and the head person of your organization.
   - Discuss any conflict of interest or non-compete contractual obligations (solicit input from other departments and organization’s legal department)
   - Identify any liability or safety issues and develop plan

5. Development.
   - Curriculum
     - Leader materials
     - Participant workbooks
Handouts, posters, etc.

- Registration forms
- Pre and post knowledge surveys
- Satisfaction survey
- Review and comply with copyright requirements; obtain consent as necessary

6. Recruitment.
- Develop flyers, internet postings, ads, etc.
- Identify locations and key personnel to gain permission to post
- Network with others to expand recruitment through electronic messaging

7. Implementation.
- Reserve meeting rooms in advance
- Reminder calls or emails to participants for first class
- Assemble all supplies and participant materials (two days prior)
  - Extra pens/pencils
  - Handouts
  - Workbooks
  - Posters or other visual media
- Familiarize yourself with and set-up any technologies used in presenting class before day of implementation
- Set up space ½ hour before class begins
  - Water and refreshments
  - Tissue
  - Signs on doors or elevator to direct participants
The Success and Challenges of Program Development

May 3, 2013
Elizabeth Bair, OTS & Eva Shing, OTS
Project Advisor: Sean Roush, OTD, OTR/L
School of Occupational Therapy
Introduction

- Pacific Psychology Clinic
  - Mission: committed to providing affordable and accessible psychological services
  - Services: outpatient assessment, counseling, and therapy (1:1 and group)
  - Clientele: all ages with common diagnosis of ADHD, depression, anxiety, relationship issues, PTSD.
Needs & Opportunities

- Borland and Schiller (2012) needs analysis
  - Limited mental health groups led by health professionals in the local community
  - Lack of groups co-led by OT & PSY in the community & U.S. educational system
  - Clients of Pacific Psychology Clinic often have both mental and physical health conditions
  - PSY student therapists have limited or lack of experience with OT
  - PSY student therapists identified physical health issues as a barrier to their treatment
Project Goals

• A comprehensive health education class co-lead by OT & PSY students

• OT contributions:
  ▫ Knowledge of mental & physical conditions
  ▫ Profession of “doing”

• Models
  ▫ Model of Human Occupation [MOHO]
  ▫ Transtheoretical Model of Change
Evidence

• Needs
  ▫ High rate of medical & mental health conditions
  ▫ Medical & mental health conditions interacts

• Best practice
  ▫ Continuity of care among disciplines
  ▫ Specific programs to increase self-management skills

• Current existing programs
  ▫ Stanford Chronic Disease Self-Management Program
  ▫ Peer-led vs. clinician-led
Outcome

• Successes
  ▫ Successful recruitment of PSY student
  ▫ An abundance of free credible resources from government & non-profit organization

• Barriers
  ▫ Copyrights
  ▫ Contractual obligation with Stanford CDSMP

• Next Step
Discussion

• Limitations
  ▫ Contractual obligations
  ▫ Time constraints
  ▫ Limited interaction with PSY student

• Recommendations
  ▫ Health education class alternatives
  ▫ Increase communication among CHF
Summary

- High need for free or affordable services for individuals with co-morbid medical & mental health conditions
- Future directions of interdisciplinary education & practice
- Be aware of contractual obligations within large organizations

Pacific University CommonKnowledge: http://commons.pacificu.edu/ipp/
References


Brezinka, V., & Kittel, F. (1996). Psychosocial factors of coronary heart disease in women: A review. Social Science Medicine, 42(10), 1351-1365.


doi: 10.1093/schbul/sbj048


Questions?
Thank you!