

Extended workdays: Effects on performance and ratings of fatigue and alertness

ROGER R. ROSA

U.S. Department of Health and Human Services, Centers for Disease Control, National Institute for Occupational Safety and Health, Division of Biomedical and Behavioral Sciences, Cincinnati, Ohio

DANIEL D. WHEELER and JOEL S. WARM

University of Cincinnati, Cincinnati, Ohio

and

MICHAEL J. COLLIGAN

U.S. Department of Health and Human Services, Centers for Disease Control, National Institute for Occupational Safety and Health, Division of Biomedical and Behavioral Sciences, Cincinnati, Ohio

The present investigation provided a laboratory test of long workdays and served as an initial step in developing a field-test battery that is sensitive to fatigue. Six subjects worked both a 12-h/4-day workweek and an 8-h/6-day week at a data-entry job simulation. Before and after the first and last days of each week, they completed a battery of brief tests measuring cognitive, perceptual-motor, task-sharing, motor, and sensory capacities, as well as subjective feelings. Results suggest that the 12-h/4-day week was more fatiguing than the 8-h/6-day week. In the data-entry job, it was easier to improve performance across the 8-h/6-day week. This result suggested that the fatigue of the 12-h days slowed the rate of improvement across the week. With respect to the test battery, two cognitive tasks (grammatical reasoning and digit addition) and several self-report scales also reflected greater fatigue in the 12-h/4-day week. Performance efficiency decreased and reports of drowsiness and lack of concentration increased from the beginning to the end of the final 12-h workday. On the basis of these results, it was concluded that the test battery has utility for the assessment of the potential fatigue effects of long workdays in actual work settings.

Employee demands for increased "usable" leisure time and evolving industrial needs for longer work shifts have stimulated interest in alternatives to the common 8-h/5-day workweek (e.g., Hedges, 1971). Alternative schedules often include work shifts longer than 8 h because the 5-day week is "compressed" into 4 days or fewer or because overtime is required. The increased use of longer workdays under such schedules has led to concerns about reduced job efficiency and related problems involving safety and health hazards attributable to cumulative fatigue. The literature on work scheduling (see Alluisi & Morgan, 1982, for a review) provides only a few clues about the effects of long workdays on performance efficiency or individual well-being.

Studies examining the effects of the compressed workweek have reported inconsistent changes (i.e., increases in some cases and decreases in others) in absenteeism (e.g., Campbell, 1980), worker satisfaction (e.g., Nord

& Costigan, 1973), and productivity (Ivancevich, 1974; Ivancevich & Lyon, 1977). Furthermore, it has been suggested that, in situations in which production levels have been maintained following conversion to a compressed schedule, this may have been at the expense of increased fatigue as reported by workers (Hodge & Tellier, 1975). In addition, there are few data on how the workers' subjective reports related to actual behavioral measures of work efficiency or safety. There are some reports (e.g., Ellingstad & Heimstra, 1970; Grandjean, Wozka, Schaad, & Gilgen, 1971) of demonstrated declines in performance across a work shift of 8 or more hours, but these studies have not systematically compared different work schedules in terms of days worked or hours worked per day. Other researchers (see Alluisi & Morgan, 1982, for a review) have compared performance during various work schedules requiring 12 or 16 h of work per day. However, these studies usually have involved atypical work-rest cycles, such as 4 h on duty/4 h off duty, 4 h on/2 h off, or 6 h on/2 h off, which were designed to simulate military operations. The alteration of the normal sleep routine during such short work-rest schedules makes it difficult to apply the results of these studies to the long work-rest cycles, such as 10 h on/14 h off, common in some civilian occupations.

Roger R. Rosa and Michael J. Colligan's mailing address is: U.S. Department of Health and Human Services, Centers for Disease Control, National Institute for Occupational Safety and Health, Division of Biomedical and Behavioral Sciences, Cincinnati, OH 45226. Daniel D. Wheeler and Joel S. Warm's mailing address is: Department of Psychology, University of Cincinnati, Cincinnati, OH 45221.

Effects Of Extended Workdays

G Orfield



Effects Of Extended Workdays:

Decoding **Effects Of Extended Workdays**: Revealing the Captivating Potential of Verbal Expression

In a period characterized by interconnectedness and an insatiable thirst for knowledge, the captivating potential of verbal expression has emerged as a formidable force. Its capability to evoke sentiments, stimulate introspection, and incite profound transformations is genuinely awe-inspiring. Within the pages of "**Effects Of Extended Workdays**," a mesmerizing literary creation penned by way of a celebrated wordsmith, readers attempt an enlightening odyssey, unraveling the intricate significance of language and its enduring affect our lives. In this appraisal, we shall explore the book is central themes, evaluate its distinctive writing style, and gauge its pervasive influence on the hearts and minds of its readership.

<https://upload.sharkcoupons.com/data/publication/default.aspx/Naturopathie%20Pratique%20Nouvelle%20Eacutedition.pdf>

Table of Contents Effects Of Extended Workdays

1. Understanding the eBook Effects Of Extended Workdays
 - The Rise of Digital Reading Effects Of Extended Workdays
 - Advantages of eBooks Over Traditional Books
2. Identifying Effects Of Extended Workdays
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Effects Of Extended Workdays
 - User-Friendly Interface
4. Exploring eBook Recommendations from Effects Of Extended Workdays
 - Personalized Recommendations
 - Effects Of Extended Workdays User Reviews and Ratings
 - Effects Of Extended Workdays and Bestseller Lists

5. Accessing Effects Of Extended Workdays Free and Paid eBooks
 - Effects Of Extended Workdays Public Domain eBooks
 - Effects Of Extended Workdays eBook Subscription Services
 - Effects Of Extended Workdays Budget-Friendly Options
6. Navigating Effects Of Extended Workdays eBook Formats
 - ePub, PDF, MOBI, and More
 - Effects Of Extended Workdays Compatibility with Devices
 - Effects Of Extended Workdays Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Effects Of Extended Workdays
 - Highlighting and Note-Taking Effects Of Extended Workdays
 - Interactive Elements Effects Of Extended Workdays
8. Staying Engaged with Effects Of Extended Workdays
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Effects Of Extended Workdays
9. Balancing eBooks and Physical Books Effects Of Extended Workdays
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Effects Of Extended Workdays
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Effects Of Extended Workdays
 - Setting Reading Goals Effects Of Extended Workdays
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Effects Of Extended Workdays
 - Fact-Checking eBook Content of Effects Of Extended Workdays
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning

- Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
14. Embracing eBook Trends
- Integration of Multimedia Elements
 - Interactive and Gamified eBooks

Effects Of Extended Workdays Introduction

In today's digital age, the availability of Effects Of Extended Workdays books and manuals for download has revolutionized the way we access information. Gone are the days of physically flipping through pages and carrying heavy textbooks or manuals. With just a few clicks, we can now access a wealth of knowledge from the comfort of our own homes or on the go. This article will explore the advantages of Effects Of Extended Workdays books and manuals for download, along with some popular platforms that offer these resources. One of the significant advantages of Effects Of Extended Workdays books and manuals for download is the cost-saving aspect. Traditional books and manuals can be costly, especially if you need to purchase several of them for educational or professional purposes. By accessing Effects Of Extended Workdays versions, you eliminate the need to spend money on physical copies. This not only saves you money but also reduces the environmental impact associated with book production and transportation. Furthermore, Effects Of Extended Workdays books and manuals for download are incredibly convenient. With just a computer or smartphone and an internet connection, you can access a vast library of resources on any subject imaginable. Whether you're a student looking for textbooks, a professional seeking industry-specific manuals, or someone interested in self-improvement, these digital resources provide an efficient and accessible means of acquiring knowledge. Moreover, PDF books and manuals offer a range of benefits compared to other digital formats. PDF files are designed to retain their formatting regardless of the device used to open them. This ensures that the content appears exactly as intended by the author, with no loss of formatting or missing graphics. Additionally, PDF files can be easily annotated, bookmarked, and searched for specific terms, making them highly practical for studying or referencing. When it comes to accessing Effects Of Extended Workdays books and manuals, several platforms offer an extensive collection of resources. One such platform is Project Gutenberg, a nonprofit organization that provides over 60,000 free eBooks. These books are primarily in the public domain, meaning they can be freely distributed and downloaded. Project Gutenberg offers a wide range of classic literature, making it an excellent resource for literature enthusiasts. Another popular platform for Effects Of Extended Workdays books and manuals is Open Library. Open Library is an initiative of the Internet Archive, a non-profit organization dedicated to digitizing cultural artifacts and making them accessible to the public. Open Library hosts millions of books, including both public domain works and contemporary titles. It also allows users to

borrow digital copies of certain books for a limited period, similar to a library lending system. Additionally, many universities and educational institutions have their own digital libraries that provide free access to PDF books and manuals. These libraries often offer academic texts, research papers, and technical manuals, making them invaluable resources for students and researchers. Some notable examples include MIT OpenCourseWare, which offers free access to course materials from the Massachusetts Institute of Technology, and the Digital Public Library of America, which provides a vast collection of digitized books and historical documents. In conclusion, Effects Of Extended Workdays books and manuals for download have transformed the way we access information. They provide a cost-effective and convenient means of acquiring knowledge, offering the ability to access a vast library of resources at our fingertips. With platforms like Project Gutenberg, Open Library, and various digital libraries offered by educational institutions, we have access to an ever-expanding collection of books and manuals. Whether for educational, professional, or personal purposes, these digital resources serve as valuable tools for continuous learning and self-improvement. So why not take advantage of the vast world of Effects Of Extended Workdays books and manuals for download and embark on your journey of knowledge?

FAQs About Effects Of Extended Workdays Books

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Effects Of Extended Workdays is one of the best book in our library for free trial. We provide copy of Effects Of Extended Workdays in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Effects Of Extended Workdays. Where to download Effects Of Extended Workdays online for free? Are you looking for Effects Of Extended Workdays PDF? This is definitely going to save you time and cash in something you should think about.

Find Effects Of Extended Workdays :

naturopathie pratique nouvelle eacutedition

physical chemistry atkins 9th edition

firm in the faith

takeuchi tb1140 hydraulic excavator parts manual instant sn 51410002 and u

2008 alfa romeo 147 service and repair manual

iteration theory

elasticity in engineering mechanics solution manual

quizlet american government chapter 5

non renewable energy interpreting graphics holt environmental

interethnic communication current research

volvo penta starter generator wiring

firm value and optimal levels of liquidity

nissan frontier d40 full service repair manual 2011 2013

1999 yamaha banshee 350 service repair manual 99

20kenworth t800b wiring diagram

Effects Of Extended Workdays :

rubí capitulo 1 seriescalidad lat - Mar 15 2022

web dec 26 2022 ver rubí 1x1 rubí capítulo 1 temporada 1 capitulo 1 lista de capitulos 151 vistas descargar ver temporadas temporada 1 seriescalidad publicado dec 26 2022 comentarios rubí 1 inicia sesión o regístrate para dejar comentarios déjanos tu comentario reportar

tu rubí mi rubí spanish edition by rebecca alpizar goodreads - Aug 20 2022

web mar 9 2023 tu rubí mi rubí rebecca alpizar 5 00 1 rating0 reviews no hay maneras de salir de este laberinto no no hay en este en el que tres pasos adelante me retroceden dos el dédalo que te enfrenta al repetir de cada uno de tus pensamientos sintiéndolos de uno en uno de tus nervios incluso los que se consideran bien ocultos

rubí tv mini series 2020 imdb - Feb 11 2022

web rubí with camila sodi josé ron rodrigo guirao dÍaz kimberly dos ramos young journalist carla rangel is tasked with interviewing a wealthy mysterious woman named rubí about her storied past involving passion seduction betrayal and greed

[rubí rubí 1 spanish edition kindle edition amazon com](#) - Jul 31 2023

web oct 8 2010 rubí rubí 1 spanish edition kindle edition by gier kerstin miralles de imperial luis download it once and read it on your kindle device pc phones or tablets use features like bookmarks note taking and highlighting while reading rubí rubí 1 spanish edition

[mi rubí serie de 1 libros edición para kindle amazon com](#) - Sep 20 2022

web mi rubí yo no sabía que la vida es más que solo vivir entonces llega ella para desfogar cada uno de mis nervios sentidos y sentimientos en significados infinitos inclusive en lo inexplicable ella con ojos de oro puro y en colgante sus labios de rubí sonrientes como una joya exquisita en fuego donde quiero ser envuelto

rubí rubí 1 spanish edition formato kindle amazon it - Nov 22 2022

web rubí rubí 1 spanish edition ebook gier kerstin miralles de imperial luis amazon it kindle store

rubí rubí 1 spanish edition kindle - Jan 25 2023

web oct 8 2010 amazon co jp rubí rubí 1 spanish edition gier kerstin miralles de imperial luis kindle

rubí rubí 1 spanish edition kindle edition - Mar 27 2023

web oct 8 2010 amazon co jp rubí rubí 1 spanish edition ebook gier kerstin miralles de imperial luis foreign language books *rubí rubí 1 spanish edition kindle ausgabe amazon de* - Oct 02 2023

web en 2013 la película basada en rubí el primero de los títulos de la trilogía se convirtió en un gran éxito de público silber el primer libro de los sueños supone el inicio de su nueva

rubí 1 2 athletic club nov 1 2023 final score espn - Apr 15 2022

web oct 23 2023 game summary of the rubi vs athletic club spanish copa del rey game final score 1 2 from november 1 2023 on espn

rubí rubí 1 spanish edition edición kindle amazon com - Apr 27 2023

web amazon com rubí rubí 1 spanish edition ebook gier kerstin miralles de imperial luis tienda kindle

rubí rubí 1 spanish edition format kindle amazon fr - Jun 29 2023

web achetez et téléchargez ebook rubí rubí 1 spanish edition boutique kindle enfants et adolescents amazon fr

[rubí rubí 1 spanish edition ebook kindle amazon com br](#) - May 29 2023

web compre o ebook rubí rubí 1 spanish edition de gier kerstin miralles de imperial luis na loja ebooks kindle encuentre ofertas os livros mais vendidos e dicas de leitura na amazon brasil

rubí rubí 1 spanish edition kindle edition amazon co uk - Sep 01 2023

web rubí rubí 1 spanish edition ebook gier kerstin miralles de imperial luis amazon co uk kindle store

[mi rubí spanish edition kindle edition amazon com](#) - Oct 22 2022

web mar 31 2021 mi rubí spanish edition kindle edition by alpízar rebecca download it once and read it on your kindle device pc phones or tablets use features like bookmarks note taking and highlighting while reading mi rubí spanish edition

[rubí season 1 watch full episodes streaming online justwatch](#) - Jul 19 2022

web streaming rent or buy rubí season 1 currently you are able to watch rubí season 1 streaming on vix for free with ads 20 episodes s1 e1 episode 1 s1 e2 episode 2 s1 e3 episode 3 s1 e4 episode 4 s1 e5 episode 5 s1 e6 episode 6 s1 e7 episode 7 s1 e8 episode 8 s1 e9 episode 9 s1 e10 episode 10

[prime video rubí season 1](#) - Jun 17 2022

web details sort s1 e1 rubí capítulo 1 july 20 2022 44min 13 rubí es una bella joven universitaria que vive junto con su madre doña refugio y su hermana cristina en una pobre vecindad subscribe to vix gratis or vix premium s1 e2 rubí capítulo 2 july 20 2022 43min 13 alejandro se enamora de rubí tras su primer encuentro en el aeropuerto

[rubí rubí 1 spanish edition kindle edition amazon com au](#) - Feb 23 2023

web rubí rubí 1 spanish edition ebook gier kerstin miralles de imperial luis amazon com au books

rubí 1 2 athletic club 2 nov 2023 final score espn in - May 17 2022

web game summary of the rubi vs athletic club spanish copa del rey game final score 1 2 from 2 november 2023 on espn in *rubí rubí 1 spanish edition format kindle amazon ca* - Dec 24 2022

web rubí rubí 1 spanish edition ebook gier kerstin miralles de imperial luis amazon ca boutique kindle *artico pte ltd 201221653g singapore company* - Jun 19 2023

web sep 1 2012 artico pte ltd was incorporated on 1 september 2012 saturday as a exempt private company limited by shares in singapore the company current operating status is live with registered address at 71 kim yam road the company principal activity is in interior design services

[1 atico restaurants in orchard singapore time out](#) - Jan 14 2023

web dec 2 2020 time out says a new dining destination is heating up the roof of ion orchard perched 56 storeys high 1 atico is a new rooftop dining destination that brings together three different concepts

menu exclusive lounge entertainment venue singapore 1 - Jul 20 2023

web step into our enchanting rooftop dining venue and experience the magic of the season from a whole new perspective this christmas toast to the joy of the holidays with our december festive high tea set and a 5 course nikkei and argentinian christmas grand feast at flnt and fire exclusively from 23 25 dec only

research from ians and artico search reveals cybersecurity - Mar 16 2023

web sep 26 2023 boston ma september 26 2023 today ians research and artico search released their 2023 security budget benchmark report an annual research study that analyzes detailed cybersecurity

exclusive lounge entertainment venue singapore 1 atico - Oct 23 2023

web 1 atico is an exclusive lounge and social spot in singapore with luxurious rooftop dining bar and grill at the peak of ion orchard visit our website today

company lunch dinner event venue singapore 1 atico 1 - Feb 15 2023

web 1 atico enter a new lifestyle dimension 218 meters in the sky at 1 atico singapore s latest penthouse destination with spectacular panoramic views over the city sprawled across two levels at the peak of ion orchard the luxe multi concept 1 atico is home to three distinct social experiences from fire in the sky argentinian

artico search - Sep 22 2023

web artico delivers extraordinary people to build scale and protect your business about us

artico pte ltd company profile dun bradstreet - May 18 2023

web artico pte ltd company profile singapore singapore competitors financials contacts dun bradstreet find company research competitor information contact details financial data for company name of company city state get the latest business insights from dun bradstreet

about us artico search - Aug 21 2023

web founded in 2021 artico s team matches the world s best talent with venture capital private equity backed and publicly traded companies connected with decades of experience and a serious network of elite candidates our relationships help us calibrate quickly enabling perspectives on potential candidates that other firms often overlook

1 atico ion orchard forget all else and strut briskly to the - Apr 17 2023

web feb 15 2021 the novelty of sky dining can get tiresome banking on jaw dropping skylines and arrowed as a cliché venue for proposals some may say but level 55 of ion orchard has never felt weary on my eyes regardless of the purpose of my visit today it s home to 1 atico 1 group s infant addition to its family it splits itself into three concepts flnt

level 2 health and social care diploma yvonne nolan google - Feb 08 2023

web heinemann offers a total solution for those taking and delivering the new level 2 qualification in health and social care supporting candidates in their qualification so

books by yvonne nolan author of health social care adults - Jan 07 2023

web yvonne nolan has 28 books on goodreads with 503 ratings yvonne nolan s most popular book is health social care adults level 3 work based learning

health and social care amazon co uk nolan yvonne - Aug 14 2023

web buy health and social care 3 by nolan yvonne pritchatt nicki railton debby isbn 9780435031978 from amazon s book store everyday low prices and free delivery on

[s nvq level 2 health and social care amazon co uk](#) - May 11 2023

web in stock the essential resources for the new s nvqs in health and social care written by yvonne nolan the author of the bestselling textbooks for s nvq 2 and 3 care these

health social care adults s nvq level 3 yvonne nolan - Apr 10 2023

web health social care adults s nvq level 3 nvq svq health and social care series s nvq level 3 author yvonne nolan edition illustrated revised publisher pearson

health social care s nvq level 2 yvonne nolan google - Jun 12 2023

web health social care the essential resources for the new s nvqs in health and social care written by yvonne nolan the author of the bestselling textbooks for s nvq 2 and

yvonne nolan İstanbul İstanbul türkiye profesyonel profil - Jul 01 2022

web yvonne nolan adlı kullanıcının linkedin deki profesyonel profilini görüntüleyin linkedin yvonne nolan gibi profesyonellerin önerilen iş ilanları için şirket içi bağlantıları sektör

nvq svq level 3 health and social care candidate book - Aug 02 2022

web feb 4 2008 new rrp 42 99 condition very good 10 in stock very good good well read series nvq svq health and social care summary provides information on

dr Öğr Üyesi necla yÜce haspolat bulut klinik - Jan 27 2022

web van yüzüncü yıl Üniversitesi ile van gençlik ve spor İl müdürlüğü iş birliğinde van yyÜ sağlık çalışanlarından oluşan dursun odabaş tıp merkezi türk halk müziği korosu

health and social care nolan yvonne pritchatt nicki - Dec 06 2022

web heinemann offers a total solution for those taking and delivering the new level 3 qualification in health and social care supporting candidates in their qualification so

50 yvonne nolan profiles linkedin - Mar 29 2022

web 209410025 kodlu program için yÖk lisans atlası yükseköğretim girdi süreç ve Çıktı göstergeleri

evde hasta bakımı programı bulunan tüm Üniversiteler - Nov 24 2021

web organ nakli merkezi tüp bebek merkezi uyku bozuklukları merkezi sigarayı bıraktırma merkezi

[the role of community based health practice on the](#) - Apr 29 2022

web view the profiles of professionals named yvonne nolan on linkedin there are 50 professionals named quot yvonne nolan quot who use linkedin to exchange

level 2 health and social care diploma candidate - Nov 05 2022

web mar 22 2011 yvonne nolan colette burgess colin shaw 4 26 42 ratings1 review heinemann offers a total solution for

those taking and delivering the new level 2

by yvonne nolan level 2 health and social care diploma - Oct 04 2022

web apr 6 2011 buy by yvonne nolan level 2 health and social care diploma candidate book level 2 work based learning health and social care 3rd edition 3rd edition by

nvq level 3 health and social care by yvonne nolan open - Sep 03 2022

web sep 6 2005 publish date september 6 2005 publisher heinemann educational publishers pages 384 subjects nurses aides nursing care allied health personnel

50 yvonne nolan profiles linkedin - Sep 22 2021

van yyü dursun odabaş tıp merkezi - Dec 26 2021

web kafkas Üniversitesi İÖ 2 yıllık atatürk sağlık hizmetleri meslek yüksekokulu devlet

adana dr turgut noyan uygulama ve araştırma merkezi - Oct 24 2021

web view the profiles of professionals named yvonne nolan on linkedin there are 50 professionals named quot yvonne nolan quot who use linkedin to exchange

yvonne nolan independent social work social care - May 31 2022

web within an interdisciplinary collaboration among the medicine nursing elderly care and physiotherapy programs a total of 111 students participated in the project this study

health and social care adults yvonne nolan google books - Jul 13 2023

web the essential resources for the new s nvqs in health and social care written by yvonne nolan the author of the bestselling textbooks for s nvq 2 and 3 care these candidate

health social care options plus yvonne nolan with nicki - Mar 09 2023

web including two practical care units to help develop physical care skills this book reflects the working environment and client profile that is required to successfully complete the

İstanbul Sağlık ve Teknoloji Üniversitesi tıp - Feb 25 2022

web hakkımda sivas gazi lisesinden 1994 de mezun oldu tıp eğitimi İstanbul Üniversitesi cerrahpaşa tıp fakültesi 1994 2000 uzmanlık eğitimi Çocuk sağlığı ve hastalıkları