
Supporting People with Down Syndrome in Their Health Journeys

Brian Chicoine, MD

Medical Director, Advocate Medical Group Adult Down Syndrome Center
Faculty, Family Medicine Residency, Advocate Lutheran General Hospital

March 28, 2026

Brighter Futures Conference



Now part of  ADVOCATEHEALTH



Objectives

- Explain changes in the health and health promotion of people with Down syndrome over time.
- Describe common characteristics of people with Down syndrome and their impact on health.
- Discuss concepts that are important to consider when supporting people with Down syndrome.
- Share resources that can be used by adults with Down syndrome and those who care for, work with, and support them.

Resource Library



Advocate Medical Group
Adult Down Syndrome Center

I'm looking for... MENU

Resource Library | All Resources



 **People with Down Syndrome**



 **Families & Caregivers**



 **Health Care Professionals**

 **Events, Classes & Programs**
[See the Schedule](#)

 **Video Gallery**
[View All](#)

 **Related Organizations**
[See Listing of Links](#)

 **Projects**
[See Our Latest Projects](#)

 **News**
[View News Articles](#)

<https://adsresources.advocatehealth.com/>

 Advocate Health Care

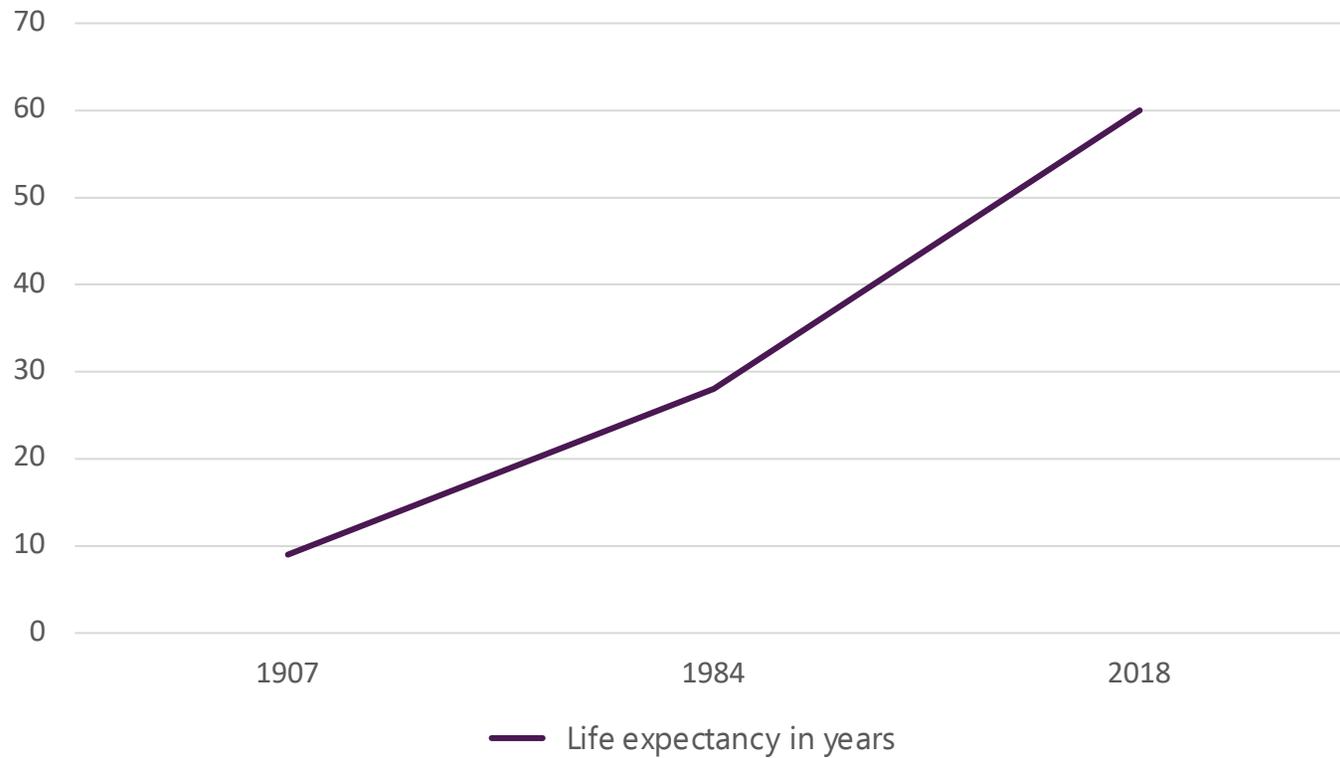
Now part of  **ADVOCATEHEALTH**

Please note:

- This presentation is intended for families, caregivers, health care professionals, and service providers of individuals with Down syndrome.
- The information in this presentation is provided for educational purposes only and is not intended to serve as a substitute for a medical, psychiatric, mental health, or behavioral evaluation, diagnosis, or treatment plan by a qualified professional.
- We are unable to provide diagnosis or treatment recommendations specific to an individual. We recommend that you bring specific questions about an individual with Down syndrome to their medical and/or therapy professionals.

Today, people with Down syndrome are living *longer* and *healthier* than any other time in the past.

Life expectancy in years



Bittles et al. 2004, Coppus et al. 2008, Glasson et al. 2002, Zhu et al. 2013

 Advocate Health Care

Now part of  **ADVOCATEHEALTH**

There are more **adults** with Down syndrome living now than ever before.

People with DS in the United States

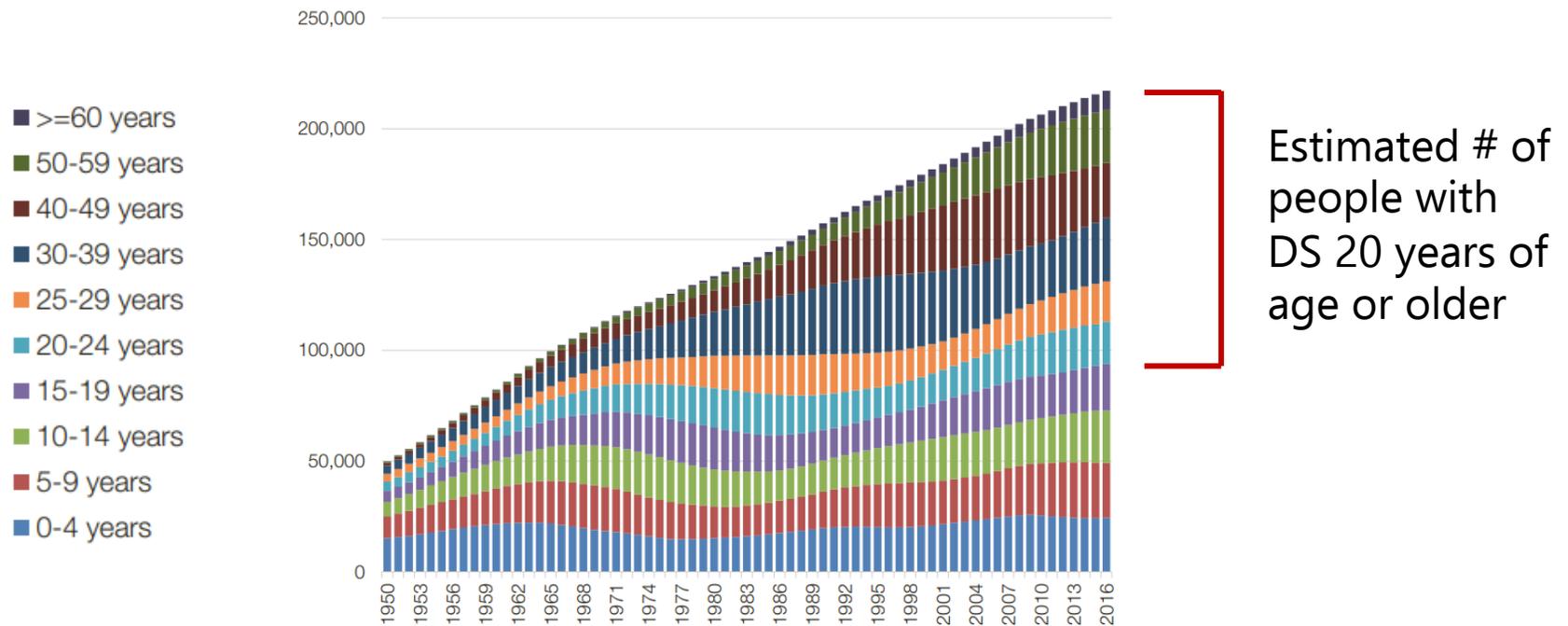


Figure 5. Population of people with Down syndrome in the USA, 1950-2016

A look at the past...

 Advocate Health Care

Now part of  **ADVOCATEHEALTH**

Then (1992)



Now (2026)



Then (1992)

- Healthcare
 - Lack of physicians who:
 - Were knowledgeable about health of **adults** with Down syndrome
 - Treated adults with Down syndrome with dignity and respect
 - Something done **for** or **to** adults with Down syndrome
 - Inclusion
 - Mostly in schools

Now (2026)

- Healthcare
 - Insufficient number of physicians who:
 - Are knowledgeable about health of **adults** with Down syndrome
 - Treat people with Down syndrome with dignity and respect
- Positive changes:
- Health is something done **with** adults with Down syndrome
 - Inclusion
 - Throughout society

What have we learned?

Common characteristics of many (but not all) people with Down syndrome

**Each person with
Down syndrome
is unique.**

**Many people with
Down syndrome
share common
characteristics.**

Physical

- Almond-shaped eyes that slant up
- Short neck
- Small ears
- Small hands and feet
- A single line across the palm of the hand (palmar crease)
- Shorter in height
- Lower heart rate, lower blood pressure

Cognitive

- Mild to moderate to severe intellectual disability
- Better receptive language than expressive language
- Concrete thinking
 - Difficulty with abstract concepts (e.g., time)
- Visual memory

Behavioral

- Self-talk and imaginary friends
- The “Groove”
- Empathy radar

THE “GROOVE”

The “groove” is a preference for **sameness, repetition, and routine.**

Possible Advantages

The groove can...

- Give structure and order to daily life
- Support successful completion of tasks
- Increase independence
- Help manage stress

Possible Disadvantages

The groove can make it difficult to...

- Be flexible
- Transition from one task to the next
- Deal with changes
- Apply skills across different settings

 Advocate Medical Group
Adult Down Syndrome Center

Health conditions

 Advocate Health Care

Now part of  **ADVOCATEHEALTH**

More common and/or common

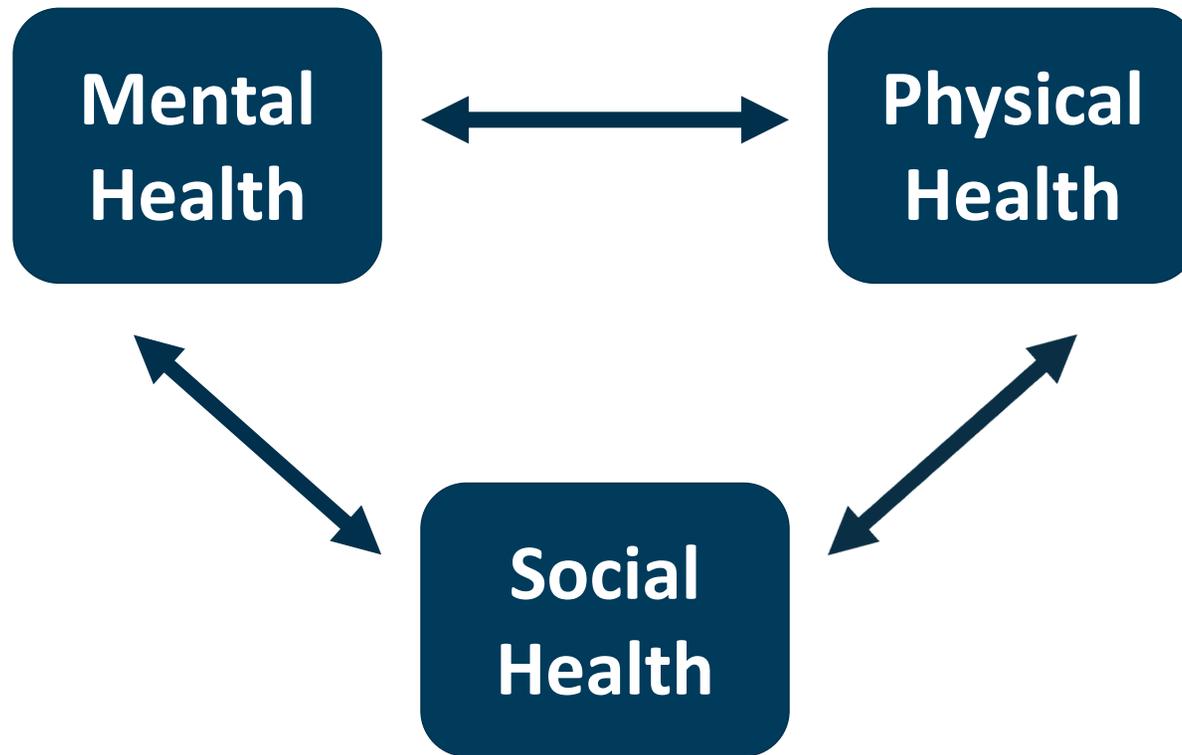
- Thyroid disorders
- Anxiety
- Obsessive-compulsive disorder
- Depression
- Obesity
- Pneumonia
- Swallowing dysfunction
- Skin conditions (e.g., folliculitis)
- Gum disease
- Gastroesophageal reflux (GERD)
- Celiac disease
- Constipation
- Seizures
- Atlantoaxial instability
- Vision and hearing problems
- Sleep apnea
- Congenital heart disease
- Alzheimer's disease

Less common and/or uncommon

- Many solid tumor cancers
- Atherosclerotic disease (“hardening of the arteries,” plaques in the arteries)
- Myocardial infarctions (heart attacks)
- Hypertension (high blood pressure)

Pain

- People with Down syndrome experience pain.
 - Some people with Down syndrome report it less often than people without Down syndrome.
 - May have difficulty localizing pain.
 - May have delayed response to pain.
- Some people with Down syndrome appear to experience greater pain than people without Down syndrome.
- Certain conditions may increase pain perception (e.g., aging, Alzheimer's disease).



**Any and all behavior change
should be viewed as a possible
communication tool.**

Important concepts

Diagnostic overshadowing

- To cause something to seem less important
- The attribution of symptoms to an existing diagnosis rather than a potential co-morbid condition (The Joint Commission)
- Co-occurring conditions
 - Misdiagnosis
 - Underdiagnosis
 - Overdiagnosis

“It’s just Down syndrome.”

Dignity of risk

- Respect for an individual's right to:
 - Make their own decisions
 - Participate in a broad range of desired activities
 - Expose themselves to potential consequences or learning opportunities

**Unrestricted
freedom**

No freedom



**Unrestricted
freedom**

Education

No freedom



Health promotion

 Advocate Health Care

Now part of  **ADVOCATEHEALTH**

“With” instead of “for”

Patient Education and Health Promotion Videos

<p>Appropriate Touch</p>	<p>How to Wash Your Hands</p>	<p>How to Brush Your Teeth</p>
<p>Tips for Being Physically Active</p>	<p>How to Put Your Hair into a Ponytail</p>	<p>Erin's Tips for Living a Healthy Lifestyle</p>
<p>How to Use a CPAP Machine</p>	<p>Tips for Dealing with Stress</p>	<p>Fruits and Veggies</p>

Getting Ear Wax Removed

The doctor looked in my ears and I have a lot of wax.	The doctor wants to take the wax out.	It should not hurt, but it might feel a little funny.	I have used both of my ears cleaned out so far just now so, the doctor will tell me how.	If I need a check, I can ask the doctor to stop.
If I have questions, I can ask the doctor.	The doctor will stand a stool on my shoulders so that I don't get too wet.	I can wear my towel to help the doctor catch the water and wax.	The doctor will use a syringe full of warm water to squirt into my ear.	The doctor will gently push the water into my ear with the syringe.
The doctor will look in my ears to see if there is any more wax.	If there is more wax, they will need to push more water into my ear to get the wax out.	The doctor will look in my ear at the end to make sure all the wax is gone.	The doctor will take the syringe from me and squeeze the wax toward and behind my eardrum.	I DON'T! I am so proud of myself!

© 2023 Adult Down Syndrome Center Advocate Medical Group Adult Down Syndrome Center

MENOPAUSE

I can't get going when I'm getting older.	My body is changing. I'm experiencing hot flashes.	My husband is upset. I'm not sleeping. I'm not eating.	This "hot flash" thing is not me. I'm just getting older.	My body will change.
My doctor says I need to take medicine to help me get going.	My doctor says I need to take medicine to help me get going.	I can't get going when I'm getting older.	I can't get going when I'm getting older.	Do I need to take medicine at all?
I can't get going when I'm getting older.	I can't get going when I'm getting older.	I can't get going when I'm getting older.	I can't get going when I'm getting older.	I can't get going when I'm getting older.

Page 1 of 1 © 2024 Adult Down Syndrome Center Advocate Medical Group Adult Down Syndrome Center

What is Celiac Disease?

I have celiac disease.

That means I should not eat foods with gluten.

Gluten is a part of some foods.

Page 1 of 8 © 2024 Adult Down Syndrome Center Advocate Medical Group Adult Down Syndrome Center

Recipe for health

Ingredients

- Nutritious food
- Physical activity
- Sleep
- Stress management
- Meaningful activities and social connections
- Social skills



Nutritious food

- Involve the person in planning meals and snacks, shopping for foods, and/or preparing meals and snacks.
- Label foods
- Use apps and visuals
- Use portion control products (plates, containers, measuring cups, etc.)
- Discuss which parts of the meal to have seconds of (e.g., fruits or vegetables)



[Guide to Healthy Eating](#)



[The Traffic Light Eating Plan](#)

Physical activity

- Build it into the schedule/calendar
- Break it into shorter periods throughout the day
- Make it fun
 - Listen to music
 - Be active with others
 - Turn it into a game



Be active throughout the day!
Moving our bodies throughout the day can help us be healthy.

Be active in the morning
Go for a walk. Do an exercise video.

Be active in the afternoon
Dance break! Lift weights.

Be active in the evening
Stretch/do yoga. Clean.

To be active throughout the day, I can...

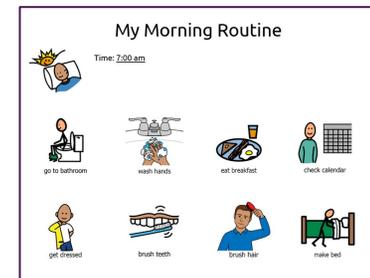
[Be Active Throughout the Day](#)

Sleep

- 7-9 hours per night
- Encourage good sleep hygiene
 - Going to bed and waking up at the same time each day
 - Setting up a good sleep space
 - No TV, tablet, or phone
 - Establishing a bedtime routine
 - Hygiene and relaxation
 - Avoiding sugar, caffeine, and alcohol before bed
- Set an alarm for when it is time to start getting ready for bed



Ways to Get Good Sleep



Create a Morning or Bedtime Routine Visual

Stress management



- Identify what stress feels like
- Identify emotions
- Identify “triggers” (causes of stress)
- Calming strategies
 - Counting to 10, taking deep breaths, walking away, coloring
- Coping strategies
 - Reframing thoughts, asking for help, “I” statements
- Anticipate and prepare for life changes
 - Transition out of school, moving, staff changes, siblings going to college, etc.
- Practice during times that are not stressful



[How to Cope with Stress Resources](#)



Meaningful activities, social connections

- Building community
 - Down syndrome organizations
 - Next Chapter Book Club
 - Theater program
 - Art program
 - Special Olympics
 - Special recreation associations
 - Best Buddies (Best Buddies Citizens, eBuddies)
 - Religious organizations
- Jobs
- Volunteering
- Hobbies
- Relationships
- Support changing interests
- Use calendars and other visuals

WEEKLY PLANNER	
Monday 	Tuesday Gerry's Cafe
Wednesday 	Thursday
Friday 	Saturday Gerry's Cafe
Sunday 	Notes: _____ _____ _____

Visual schedule example



Social skills

- Ongoing learning and practice

Relationships

One-Way

- You like a person and want to be friends or romantic partners, but they do not like you or want to be your friend or romantic partner.
- Someone wants to be your friend or romantic partner, but you do not want to be their friend or romantic partner.
- One-way connections do NOT lead to friendships or romantic relationships.

Two-Way

- You like a person and want to be friends or romantic partners with them and that person wants to be your friend or romantic partner too!
- Two-way connections can lead to friendships and romantic relationships.

Page 1 of 2
© 2020 Adult Down Syndrome Center

Advocate Medical Group
Adult Down Syndrome Center

One-Way and Two-Way Relationships

My Rules for Conversations

- I will look at the person talking.
- I will listen to what others are saying.
- I will maintain good personal space.
- I will speak in a loud and clear voice.
- I will take turns talking.
- I will only talk about appropriate topics.
- I will stay on topic.
- I will ask questions when I am confused.

Page 1 of 1
© 2020 Adult Down Syndrome Center

Advocate Medical Group
Adult Down Syndrome Center

Conversations Rules

COMPROMISE

What does it mean?

- Not always getting your way.
- Doing something that is **not** your idea.

Compromise...

- Requires flexible thinking.
- Is a skill that helps us develop & maintain healthy relationships.

Jacob

Cristina

WHAT SHOULD JACOB & CRISTINA DO?

Compromise 1

Do one thing that they both want to do.

Jacob Cristina

Compromise 2

Do one of their choices this time and the other person's choice the other time.

Time 1

Jacob

Time 2

Cristina

Compromise 3

Decide together to do something that is not either of their first choices.

Jacob AND Cristina

© 2021 Adult Down Syndrome Center

Advocate Medical Group
Adult Down Syndrome Center

Compromise

Finding and working with health professionals

 Advocate Health Care

Now part of  **ADVOCATEHEALTH**

Finding health professionals

- Lists of Down syndrome clinics
 - Pediatric clinics may be able to recommend health professionals who see adults
- Lists of Down syndrome organizations
 - Recommendations from staff and families

How can I find a Down syndrome clinic in my area or health care professionals with experience in caring for individuals with Down syndrome?

Several national Down syndrome organizations maintain lists of Down syndrome clinics in the United States. If there is a clinic near you but adults are not seen by its health care professionals, the clinic may be able to recommend primary care professionals and specialists who see adults.

[GLOBAL Down Syndrome Foundation Clinic List](#) 

[National Down Syndrome Congress Clinic List](#) 

[National Down Syndrome Society Clinic List](#) 

If there is not a clinic in your area, we recommend reaching out to a Down syndrome organization in your area. Their staff and/or member families may be able to point you to health care professionals with experience in caring for individuals with Down syndrome and/or recommend professionals with whom they have had good experiences.

More information and links on our [FAQ page](#) and in our Finding a [Mental Health Professional](#) resource.

Working with health professionals

- Share resources
 - [CARE Down Syndrome](#)
 - [Down Syndrome Medical Interest Group-USA](#)
 - [GLOBAL Medical Care Guidelines](#)
 - [Practicing Inclusive Mental Healthcare of Individuals with Down Syndrome](#)
 - [Primary Care Provider's Guide to Women's Health and Down Syndrome](#)





national down syndrome society

A Clinical Education and Resource
Hub for Healthcare Professionals

cares.org



Elevating Primary
Care for Adults
with Down
Syndrome

national down syndrome society
ndss.

What You'll Find...



Self-Paced eLearning Course

- 2-hour eLearning course
- Covers topics such as common health conditions, avoiding diagnostic overshadowing, Down Syndrome Regression Disorder, and pain
- CME accredited for 2 credits
- No cost



Reference Articles

- 17 Articles
- Peer-reviewed
- Each written on a different health related topic
- Topics include Alzheimer's disease, mental health, weight management, and sleep
- CME accredited for 0.25 credits each
- No cost



Resource Library

- Includes a list of external articles, websites, visuals, guidebooks, and more for medical professionals to use
- Downloadable patient education materials



Join us in elevating
primary care for **adults**
with Down syndrome



Visit **careds.org**
to learn more



WHAT IS THE DSMIG PROJECT ECHO?

The DSMIG Project ECHO is a monthly virtual meeting for health care professionals to learn and share information about the care of people with Down syndrome. It is based on the Project ECHO model developed at the University of New Mexico. All sessions take place from 5:00 - 6:15 PM ET.



Now part of  **ADVOCATEHEALTH**

Find out more!



DSMIG-USA[®]
Down Syndrome Medical Interest Group



317-328-4636 X161
info@dsmig-usa.org
dsmig-usa.org

The graphic features a blue background with orange and green accents. It includes a circular photograph of a man and a woman smiling, and three decorative circles (two blue, one orange) to the left of the contact information.

A look at the future...

 Advocate Health Care

Now part of  **ADVOCATEHEALTH**

Looking ahead

Life expectancy and health conditions

- Alzheimer's disease
- Inflammation (interferonopathy)
- Metabolic issues (obesity and related health conditions)

Supporting people with Down syndrome

- Exercise
- Nutrition

Health professionals

- Educating and supporting health professionals to give the care people with Down syndrome desire and deserve.
 - Knowledgeable
 - Dignity and respect

Key points

- Each person with Down syndrome deserves to receive health care from health care professionals who treat them with dignity and respect and are informed about their health needs.
- While each person with Down syndrome is unique, there are some common characteristics.
- Health changes are not “just Down syndrome” and should be evaluated with special attention to the pattern of co-occurring conditions (some more common, some less common).
- People with Down syndrome can and should be involved in their own health promotion.

Resources

 Advocate Health Care

Now part of  **ADVOCATEHEALTH**



Articles

[Alzheimer's Disease Guidebook \(NDSS\)](#)

[Atlantoaxial Instability](#)

[Celiac Disease](#)

[Constipation](#)

[Depression](#)

[Diagnostic Overshadowing](#)

[Gastroesophageal Reflux Disease](#)

[Hypothyroidism and Hyperthyroidism](#)

[Pain](#)

[Pneumonia](#)

[Reducing Risk of Getting Alzheimer's Disease](#)

[Regression \(NDSS\)](#)

[Self-Talk](#)

[Sleep Apnea](#)

[Swallowing Problems \(Dysphagia\)](#)

[The Groove](#)

[Tips for Staying Hydrated](#)

[Weight Management in Adults with Down Syndrome](#)



Webinars

[Adapting Activities for Older Adults](#)

[Behavior Changes](#)

[Common and Uncommon Health Conditions](#)

[Decline in Skills and Regression](#)

[Gastrointestinal Health](#)

[Healthy Aging](#)

[Key Insights from the PCP's Guide to Women's Health and Down Syndrome](#)

[Personal Hygiene](#)

[Promoting Mental Health Across the Lifespan](#)

[Self-Talk](#)

[The Groove](#)

[The Recipe for Health](#)



Videos and visuals

[Boundaries](#)

[Celiac Disease Visuals](#)

[Create a Morning/Bedtime Routine Visual](#)

[Fun Activities for Promoting Health](#)

[Getting Good Sleep Visuals](#)

[Guides to Healthy Eating and Drinking](#)

[Healthy Eating at Buffets Video & Visual](#)

[Healthy Pace for Eating Video & Visuals](#)

[How to Cope with Stress Visuals](#)

[Hydration Video & Visuals](#)

[Relationships](#)

[Resources on Phone, Social Media,
and Internet Safety and Etiquette](#)

[Tips for Being Physically Active Video](#)

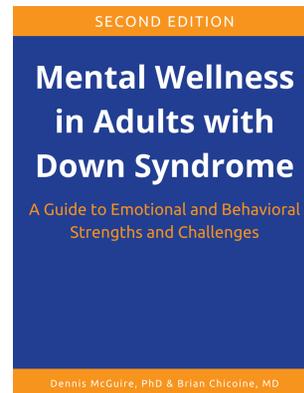
[Tips for Eating Health Meals](#)

[Visuals About the Food Groups](#)

[What to Drink Instead of Soda](#)

Resources

- [Mental Wellness in Adults with Down Syndrome: A Guide to Emotional and Behavioral Strengths and Challenges](#)
 - Available as a free PDF in English and Spanish



References

- Agarwal P, Leurgans SE, Agrawal S, et al. Association of Mediterranean-DASH intervention for neurodegenerative delay and Mediterranean diets with Alzheimer disease pathology. *Neurology*. 2023;100(22):e2259-e2268. doi:10.1212/WNL.0000000000207176
- Altuna M, Giménez S, Fortea J. Epilepsy in Down syndrome: A highly prevalent comorbidity. *J Clin Med*. 2021;10(13):2776. doi:10.3390/jcm10132776
- Ballard C, Mobley W, Hardy J, Williams G, Corbett A. Dementia in Down's syndrome. *Lancet Neurol*. 2016;15(6):622-636. doi:10.1016/S1474-4422(16)00063-6
- Bull MJ, Trotter T, Santoro SL, et al. Health supervision for children and adolescents with Down syndrome. *Pediatrics*. 2022;149(5):e2022057010. doi:10.1542/peds.2022-057010
- Chicoine B, Kirschner KL. Considering dignity of risk in the care of people with intellectual disabilities: A clinical perspective. *Perspect Biol Med*. 2022;65(2):189-198. doi:10.1353/pbm.2022.0014
- Chicoine B, Rivelli A, Fitzpatrick V, Chicoine L, Jia G, Rzhetsky A. Prevalence of common disease conditions in a large cohort of individuals with Down syndrome in the United States. *J Patient Cent Res Rev*. 2021;8(2):86-97. doi:10.17294/2330-0698.1824

References

- De la Rosa A, Olaso-Gonzalez G, Arc-Chagnaud C, et al. Physical exercise in the prevention and treatment of Alzheimer's disease. *J Sport Health Sci.* 2020;9(5):394-404. doi:10.1016/j.jshs.2020.01.004
- Fitzpatrick V, Rivelli A, Bria K, Chicoine B. Heart disease in adults with Down syndrome between 1996 and 2016. *J Am Board Fam Med.* 2020;33(6):923-931. doi:10.3122/jabfm.2020.06.190425
- Fitzpatrick V, Rivelli A, Chaudhari S, et al. Prevalence of infectious diseases among 6078 individuals with Down syndrome in the United States. *J Patient Cent Res Rev.* 2022;9(1):64-69. doi:10.17294/2330-0698.1876
- Fortea J, Vilaplana E, Carmona-Iragui M, et al. Clinical and biomarker changes of Alzheimer's disease in adults with Down syndrome: A cross-sectional study. *Lancet.* 2020;395(10242):1988-1997. doi:10.1016/S0140-6736(20)30689-9
- Hallyburton A. Diagnostic overshadowing: An evolutionary concept analysis on the misattribution of physical symptoms to pre-existing psychological illnesses. *Int J Ment Health Nurs.* 2022;31(6):1360-1372. doi:10.1111/inm.13034
- Hartley SL, Fleming V, Schworer EK, et al. Timing of Alzheimer's disease by intellectual disability level in Down syndrome. *J Alzheimers Dis.* 2023;95(1):213-225. doi:10.3233/JAD-230200

References

- Iulita MF, Garzon Chavez D, Klitgaard Christensen M, et al. Association of Alzheimer disease with life expectancy in people with Down syndrome. *JAMA Netw Open*. 2022;5(5):e2212910. doi:10.1001/jamanetworkopen.2022.12910
- Lai F, Mercaldo N, Wang CM, Hersch GG, Rosas HD. Association between inflammatory conditions and Alzheimer's disease age of onset in Down syndrome. *J Clin Med*. 2021;10(14):3116. doi:10.3390/jcm10143116
- Lao P, Zimmerman ME, Hartley SL, et al. Obstructive sleep apnea, cerebrovascular disease, and amyloid in older adults with Down syndrome across the Alzheimer's continuum. *Sleep Adv*. 2022;3(1):zpac013. doi:10.1093/sleepadvances/zpac013
- Livingstone N, Hanratty J, McShane R, Macdonald G. Pharmacological interventions for cognitive decline in people with Down syndrome. *Cochrane Database Syst Rev*. 2015;2015(10):CD011546. doi:10.1002/14651858.CD011546.pub2
- Mann DM. Alzheimer's disease and Down's syndrome. *Histopathology*. 1988;13(2):125-137. doi:10.1111/j.1365-2559.1988.tb02018.x
- McCarron M, McCallion P, Reilly E, et al. A prospective 20-year longitudinal follow-up of dementia in persons with Down syndrome. *J Intellect Disabil Res*. 2017;61(9):843-852. doi:10.1111/jir.12390

References

- Menéndez M. Down syndrome, Alzheimer's disease and seizures. *Brain Dev.* 2005;27(4):246-252. doi:10.1016/j.braindev.2004.07.008
- Nianogo RA, Rosenwohl-Mack A, Yaffe K, Carrasco A, Hoffmann CM, Barnes DE. Risk factors associated with Alzheimer disease and related dementias by sex and race and ethnicity in the US. *JAMA Neurol.* 2022;79(6):584-591. doi:10.1001/jamaneurol.2022.0976
- Piro-Gambetti B, Schworer EK, Handen B, Glukhovskaya M, Hartley SL. Does employment complexity promote healthy cognitive aging in Down syndrome?. *J Intellect Disabil.* 2024;28(2):499-513. doi:10.1177/17446295231169379
- Rivelli A, Fitzpatrick V, Chaudhari S, et al. Prevalence of mental health conditions among 6078 individuals with Down syndrome in the United States. *J Patient Cent Res Rev.* 2022;9(1):58-63. doi:10.17294/2330-0698.1875
- Rivelli A, Fitzpatrick V, Wales D, et al. Prevalence of endocrine disorders among 6078 individuals with Down syndrome in the United States. *J Patient Cent Res Rev.* 2022;9(1):70-74. doi:10.17294/2330-0698.1877
- Rubenstein E, Tewolde S, Michaels A, et al. Alzheimer dementia among individuals with Down syndrome. *JAMA Net w Open.* 2024;7(9):e2435018. doi:10.1001/jamanetworkopen.2024.35018

References

- Santoro JD, Patel L, Kammeyer R, et al. Assessment and diagnosis of Down syndrome regression disorder: International expert consensus. *Front. Neurol.* 2022;13:940175. doi:10.3389/fneur.2022.940175
- Sinai A, Mokrysz C, Bernal J, et al. Predictors of age of diagnosis and survival of Alzheimer's disease in Down syndrome. *J Alzheimers Dis.* 2018;61(2):717-728. doi:10.3233/JAD-170624
- Sobey CG, Judkins CP, Sundararajan V, et al. Risk of major cardiovascular events in people with Down syndrome. *PLoS One.* 2015;10(9):e0137093. doi:10.1371/journal.pone.0137093
- Tournissac M, Leclerc M, Valentin-Escalera J, et al. Metabolic determinants of Alzheimer's disease: A focus on thermoregulation. *Ageing Res Rev.* 2021;72:101462. doi:10.1016/j.arr.2021.101462
- Tsou AY, Bulova P, Capone G, et al. Medical care of adults with Down syndrome: A clinical guideline. *JAMA.* 2020;324(15):1543-1556. doi:10.1001/jama.2020.17024
- Xia X, Qiu C, Rizzuto D, et al. Role of orthostatic hypotension in the development of dementia in people with and without cardiovascular disease. *Hypertension.* 2023;80(7):1474-1483. doi:10.1161/HYPERTENSIONAHA.123.21210
- Zis P, Strydom A. Clinical aspects and biomarkers of Alzheimer's disease in Down syndrome. *Free Radic Biol Med.* 2018;114:3-9. doi:10.1016/j.freeradbiomed.2017.08.024

Adult Down Syndrome Center



[Resource Library](#)



[Email List](#)



[Facebook](#)



[Instagram](#)

FREE HEALTH RESOURCES

for people with Down syndrome, families and caregivers, and professionals



Resource Library



Find information on aging, puberty, mental health, self-talk, weight management, Alzheimer's disease, social skills, and more.

adscresources.advocatehealth.com

Facebook & Instagram



[@adultdownsyndromecenter](https://www.facebook.com/adultdownsyndromecenter)

Email List



www.eepurl.com/c7uV1v

 Advocate Medical Group
Adult Down Syndrome Center

 Advocate Health Care

Now part of  ADVOCATEHEALTH

Questions?

Adult Down Syndrome Center



[Resource Library](#)



[@adultdownsyndromecenter](#)



[Email List](#)