

# 2020 Online DS Course

ASSIGNMENT 1  
September 2020



Theme of assignment – Creating awareness about Down Syndrome

Format used – Year 2021 Calendar

Submitted by – Group no. 3

Participants – Saijyothi M. Joshi  
Jessica Chauhan Singh  
Mithula Vijaykumar  
Gauri Kokane



CALENDER 2021



# Trisomy 21: Empower with Knowledge

*“The first step toward change is awareness. The second step is acceptance.”* – Nathaniel Branden

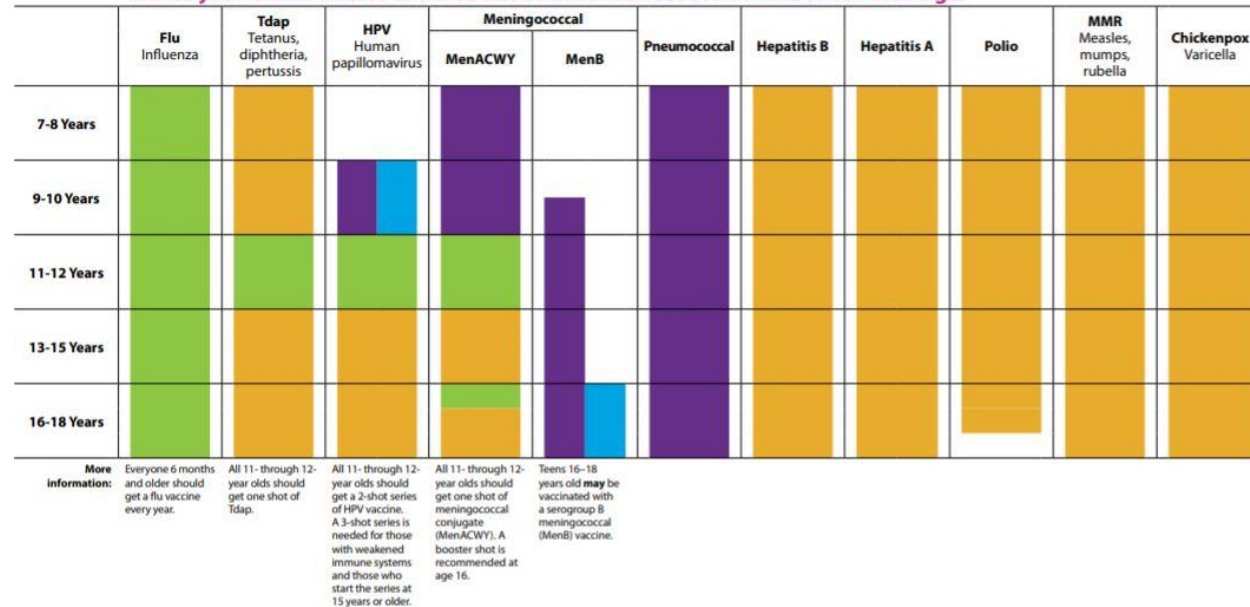
	Birth	1 MONTH	2 MONTHS	4 MONTHS	6 MONTHS	
Recommended Immunizations	Hepatitis B	<input type="radio"/> HepB	<input type="radio"/> HepB <sup>1</sup>		<input type="radio"/> HepB	
	Rotavirus			<input type="radio"/> RV	<input type="radio"/> RV <sup>2</sup>	
	Diphtheria, Tetanus, Pertussis			<input type="radio"/> DTaP	<input type="radio"/> DTaP	
	Haemophilus influenzae type b			<input type="radio"/> Hib	<input type="radio"/> Hib	
	Pneumococcal			<input type="radio"/> PCV	<input type="radio"/> PCV	
	Inactivated Poliovirus			<input type="radio"/> IPV	<input type="radio"/> IPV	
	Influenza (Flu)				<input type="radio"/> Influenza, first dose <sup>1</sup> <input type="radio"/> second dose	
Milestones*	Milestones should be achieved by the age indicated. Talk to your child's doctor about age-appropriate milestones if your child was born prematurely.	<input type="radio"/> Recognizes caregiver's voice <input type="radio"/> Turns head toward breast or bottle <input type="radio"/> Communicates through body language, fussing or crying, alert and engaged <input type="radio"/> Startles to loud sounds	<input type="radio"/> Starts to smile <input type="radio"/> Raises head when on tummy <input type="radio"/> Calms down when rocked, cradled or sung to <input type="radio"/> Pays attention to faces	<input type="radio"/> Begins to smile at people <input type="radio"/> Coos, makes gurgling sounds <input type="radio"/> Begins to follow things with eyes <input type="radio"/> Can hold head up	<input type="radio"/> Babbles with expression <input type="radio"/> Reaches for toy with one hand <input type="radio"/> Brings hands to mouth <input type="radio"/> Responds to affection <input type="radio"/> Holds head steady, unsupported	<input type="radio"/> Knows familiar faces <input type="radio"/> Responds to own name <input type="radio"/> Brings things to mouth <input type="radio"/> Rolls over in both directions <input type="radio"/> Strings vowels together when babbling ("ah," "eh," "oh")
	Growth	At each well child visit, enter date, length, weight, and percentile information to keep track of your child's progress.	WEIGHT / PERCENTILE LENGTH / PERCENTILE HEAD CIRCUMFERENCE	WEIGHT / PERCENTILE LENGTH / PERCENTILE HEAD CIRCUMFERENCE	WEIGHT / PERCENTILE LENGTH / PERCENTILE HEAD CIRCUMFERENCE	WEIGHT / PERCENTILE LENGTH / PERCENTILE HEAD CIRCUMFERENCE

	12 MONTHS	15 MONTHS	18 MONTHS	19 23 MONTHS	2-3 YEARS	4-6 YEARS	
Recommended Immunizations	Hepatitis B	<input type="radio"/> HepB (Final dose administered between 6 and 18 months)					
	Diphtheria, Tetanus, Pertussis		<input type="radio"/> DTaP			<input type="radio"/> DTaP	
	Haemophilus influenzae type b	<input type="radio"/> Hib					
	Pneumococcal	<input type="radio"/> PCV					
	Inactivated Poliovirus	<input type="radio"/> IPV (Third dose administered between 6 and 18 months)				<input type="radio"/> IPV	
	Influenza (Flu)	<input type="radio"/> Influenza, first dose <sup>2</sup> <input type="radio"/> second dose (if needed)			<input type="radio"/> Influenza, first dose <sup>2</sup> <input type="radio"/> second dose (if needed)	<input type="radio"/> Influenza, first dose <sup>2</sup> <input type="radio"/> second dose (if needed)	<input type="radio"/> Influenza, first dose <sup>2</sup> <input type="radio"/> second dose (if needed)
	Measles, Mumps, Rubella	<input type="radio"/> MMR					<input type="radio"/> MMR
Varicella	<input type="radio"/> Varicella					<input type="radio"/> Varicella	
Hepatitis A	<input type="radio"/> Hep A <sup>3</sup>						
Milestones*	Milestones should be achieved by the age indicated. Talk to your child's doctor about age-appropriate milestones if your child was born prematurely.	<input type="radio"/> Cries when mom or dad leaves <input type="radio"/> Says "mama" and "dada" <input type="radio"/> Copies gestures (for example, waves "bye bye") <input type="radio"/> May stand alone <input type="radio"/> Looks at right picture or thing when named	<input type="radio"/> Imitates what you are doing <input type="radio"/> Drinks from a cup <input type="radio"/> Scribbles on his own <input type="radio"/> Walks well <input type="radio"/> Says a couple of words other than "mama" and "dada"	<input type="radio"/> Points to show others something interesting <input type="radio"/> Says several single words <input type="radio"/> Points to one body part <input type="radio"/> May walk up steps and run	<input type="radio"/> Plays mainly beside other children <input type="radio"/> Follows two-step commands <input type="radio"/> Plays simple make-believe games <input type="radio"/> Throws ball overhand	<input type="radio"/> Can name most familiar things <input type="radio"/> Shows affection for friends without prompting <input type="radio"/> Turns book pages one at a time <input type="radio"/> Kicks a ball	<input type="radio"/> Speaks very clearly <input type="radio"/> Tells stories <input type="radio"/> Can print some letters or numbers <input type="radio"/> Hops; may be able to skip <input type="radio"/> Enjoys playing with other children
	Growth	At each well child visit, enter date, length, weight, and percentile information to keep track of your child's progress.	WEIGHT / PERCENTILE LENGTH / PERCENTILE HEAD CIRCUMFERENCE	WEIGHT / PERCENTILE LENGTH / PERCENTILE HEAD CIRCUMFERENCE	WEIGHT / PERCENTILE LENGTH / PERCENTILE HEAD CIRCUMFERENCE	WEIGHT / PERCENTILE LENGTH / PERCENTILE HEAD CIRCUMFERENCE	WEIGHT HEIGHT BMI

Shaded boxes indicate the vaccine can be given during shown age range.

VISIT DATE VISIT DATE VISIT DATE VISIT DATE VISIT DATE VISIT DATE

### Talk to your child's doctor or nurse about the vaccines recommended for their age.



**Green:** These shaded boxes indicate when the vaccine is recommended for all children unless your doctor tells you that your child cannot safely receive the vaccine.

**Yellow:** These shaded boxes indicate the vaccine should be given if a child is catching up on missed vaccines.

**Purple:** These shaded boxes indicate the vaccine is recommended for children with certain health or lifestyle conditions that put them at an increased risk for serious diseases. See vaccine-specific recommendations at [www.cdc.gov/vaccines/hcp/acip-recs/](http://www.cdc.gov/vaccines/hcp/acip-recs/).

**Blue:** This shaded box indicates children not at increased risk may get the vaccine if they wish after speaking to a provider.

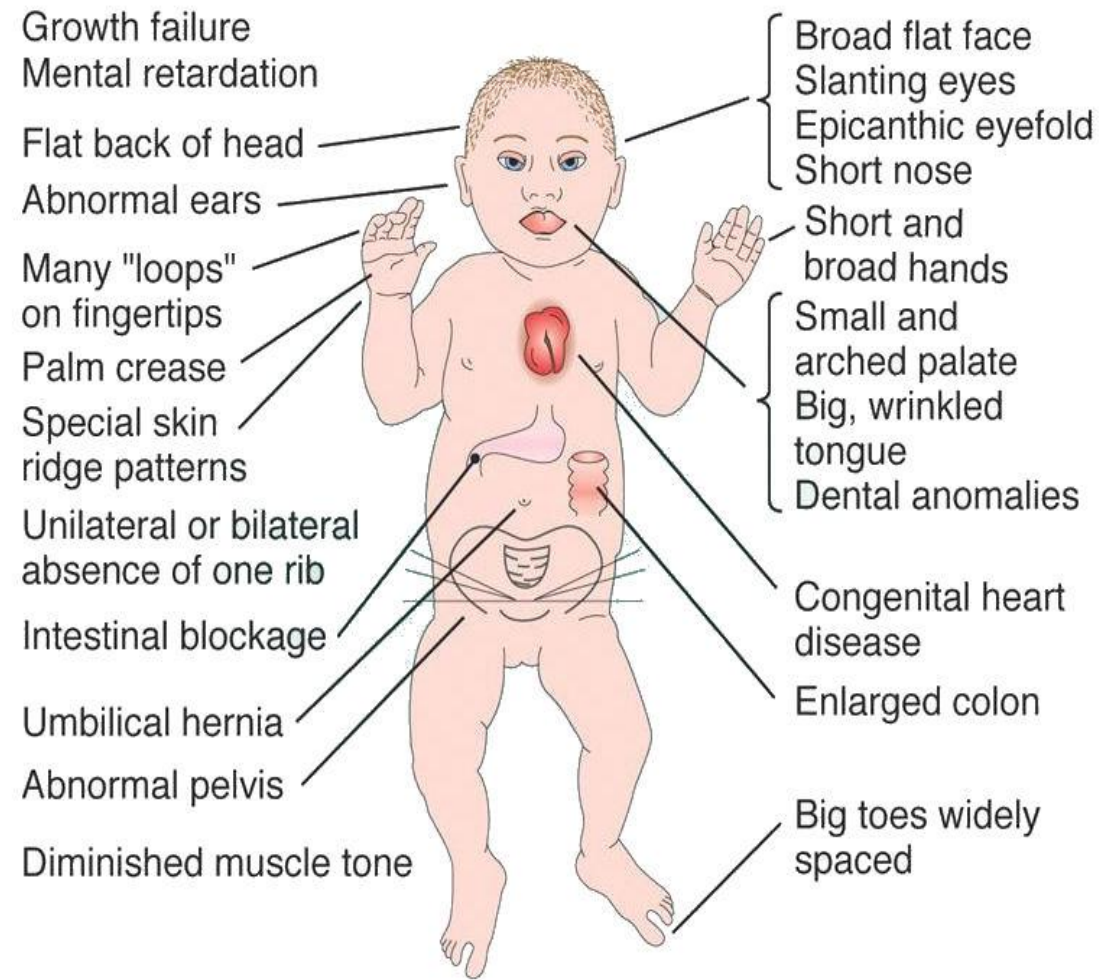
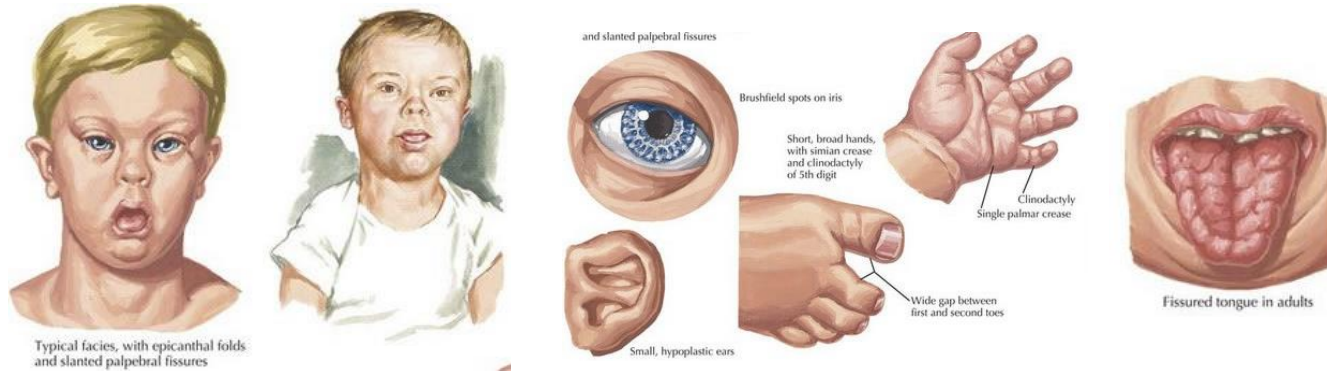


# Immunizations and Developmental Milestones for Your Child from Birth Through 6 Years Old and Vaccines from 7 to 18 years of age

**Down Syndrome** is the most common and readily identifiable chromosomal condition .

- It is caused by a chromosomal abnormality for some unexplained reason, an accident in cell development in 47 instead of the usual 46 chromosomes.
- This changes the orderly development of the body and brain.
- In most cases, the diagnosis of Down Syndrome is made shortly after birth.
- The incidence is very high - about 1 in every 750 live births is born with Down Syndrome in India

It is named after Dr Langdon **Down**, the physician who first described its features in 1866.

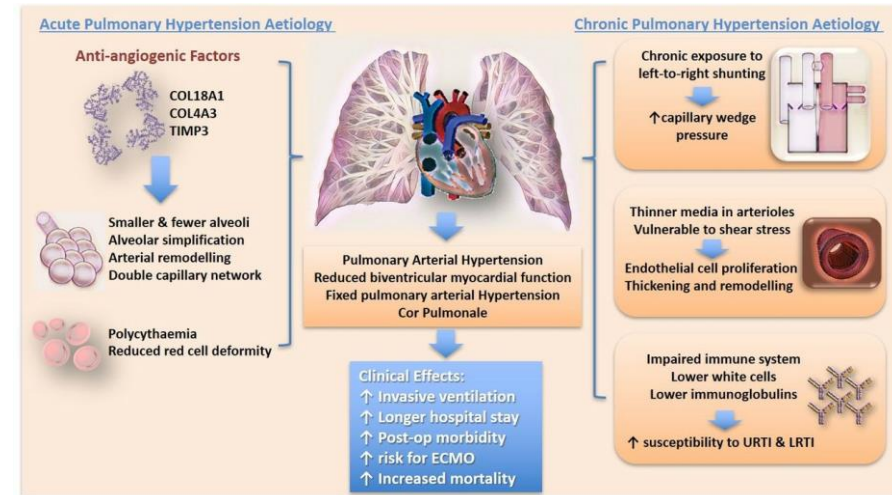
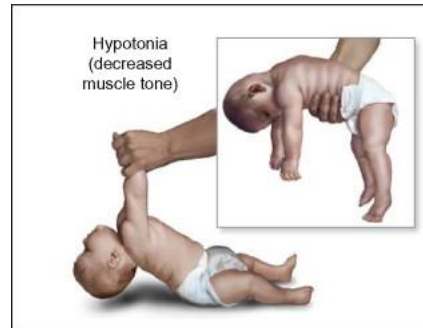
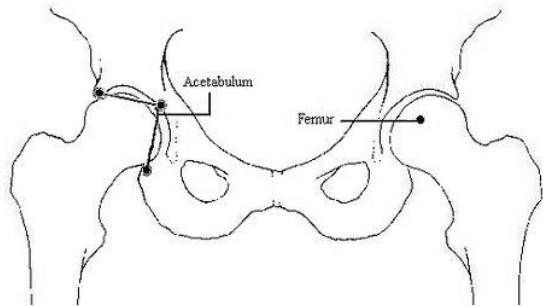
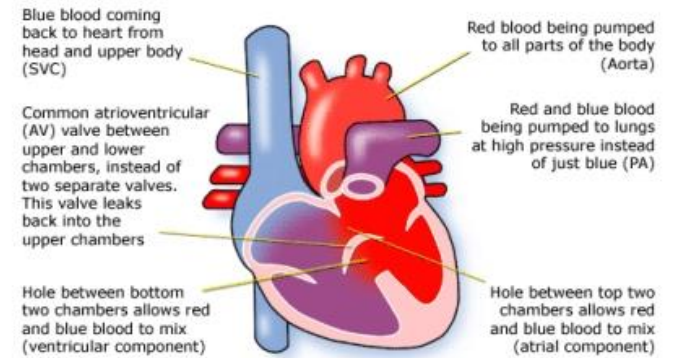


January 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

**JANUARY**  
**2021**

S.No.	CONCERN AREAS	ISSUES/PROBLEMS	TREATMENT/SOLUTIONS	PROCESS	Dr REFERENCE
01	ORTHOPAEDICS	<ul style="list-style-type: none"> <li>Multiple musculoskeletal problems</li> <li>Ligamentous laxity</li> <li>Joint hypermobility</li> <li>Cervical spine instability</li> <li>Foot disorders</li> <li>Hip instability</li> </ul>	<ul style="list-style-type: none"> <li>Most of the orthopaedic manifestations of down syndrome can initially be managed non operatively.</li> <li>Treatment should be based on functional performance rather than radiographic findings.</li> <li>If planning surgical treatment, preoperative evaluation should include cardiac and cervical spine assessment.</li> </ul>	Periodic follow up with the orthopaedic specialist (yearly) is required, in order to take corrective measures at the early stage itself.	Orthopedician : <b>Dr R. Sankar</b>  Email id : <b>sankarortho@gmail.com</b>
02	CARDIOLOGY	<ul style="list-style-type: none"> <li>ASD (Atrioventricular septal defect)</li> <li>Ventricular septal defect (VSD)</li> <li>Persistent ductus arteriosus</li> <li>Pulmonary arterial hypertension</li> </ul>	<ul style="list-style-type: none"> <li>Heart surgery to correct the defects is recommended in most of the cases.</li> <li>If at all surgery is decided, it must be done before the age of 5-6 months in order to prevent lung damage.</li> </ul>	Yearly echo follow up whether or not surgery has taken place.	Paediatric cardiologist: <b>Dr Amita Signal</b>  <b>09312239463</b>

### Atrioventricular Septal Defect



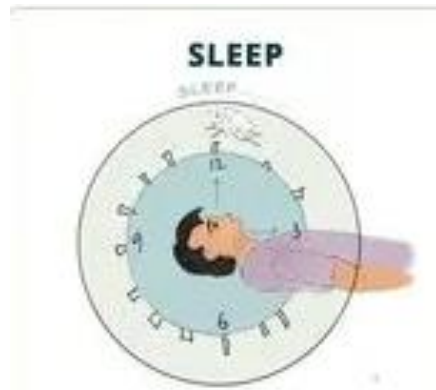
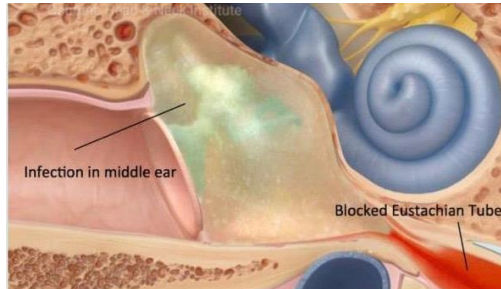
February 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

**FEBRUARY 2021**

# ENT Issues

Ear, nose, and throat (ENT) problems are common in children with Down Syndrome (DS). This includes problems with chronic ear infections, glue ear and chronic middle ear effusions with associated hearing loss, airway obstruction, and sleep apnea, as well as problems with chronic rhinitis and sinusitis.

Doctor reference:  
Dr Mohan kameshwaran (04424311411)



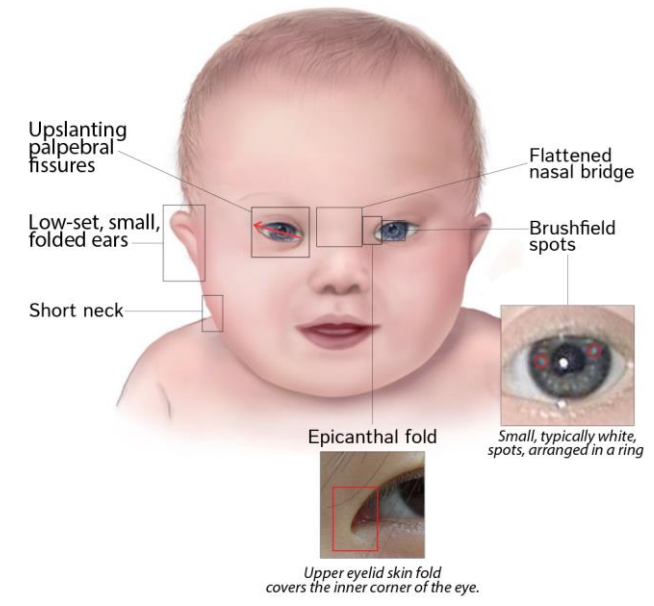
- Look out for
- Inflamed tonsils & adenoids
  - Nasal block
  - Increased snoring
  - Sleep apnea

# Eye Issues

Characteristic features include upward slanting of the eyelids, prominent folds of skin between the eye and the nose, and small white spots present on the iris called Brushfield's spots. Signs to look for include squinting or closing one eye shut, an unusual head tilt, crossing or wandering of one or both eyes, or light sensitivity.

Doctor reference:  
Dr. Nikhil Rishikeshi

Key Facial Characteristics of Down Syndrome



March 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

MARCH  
2021

# Physiotherapy

Early intervention is a systematic program of therapy, exercises and activities designed to address developmental delays that may be experienced by children with Down syndrome.

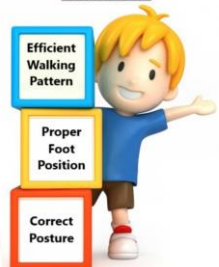
## CONCERNED AREAS FOR PHYSIOTHERAPY

- Postural Alignment
- Balance Issues
- Improper Walking Pattern
- Reduced Muscle Strength
- Reduced level of physical activity
- Issues with Sensation
- Reduced mental health and Emotional well being
- Delayed Developmental milestones

Doctor reference:

DR. ANIL SHARMA (9811337322/ 9811119153)

Building a Solid Physical Foundation



# Speech

Speech and language present many challenges for children with Down syndrome but Communication is exchange of ideas, information, thoughts, and feelings between senders and receivers — Gestures, Posture, Eye contact, Facial expression, Head and body movement

## Factors Affecting Treatment

- Anatomical Factors
- Physiological disorders
- Neurofunctional patterns
- Perceptual speech symptoms
- Pragmatic language factors
- Message content and length
- Familiarity of listener/speaker
- External environmental factors

Doctor reference:  
Dr Narmata Pai Dr Saranya ( 9500017583)

April 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

APRIL  
2021

# Occupational therapy

Occupational therapy practitioners work with persons with Down syndrome to help them master skills for independence through self-care like feeding and dressing, fine and gross motor skills, school performance, and play and leisure activities.

The Goal of occupational therapy for these children is not to accelerate the rate of their development, as is often presumed, but to facilitate the development of optimal movement patterns. This means that over the long term, therapist want to help the child develop good posture, proper foot alignment, an efficient walking pattern, and a good physical foundation for fine motor skills, and activities of daily living.

Doctore reference  
Ms. Shyama Madhu (6383795434)



## OT checks following sensorimotor components-

- Muscle tone
- Muscle strength
- Muscle endurance
- Range of motion
- Coordination and balance
- Posture
- Hand function.



## Cognitive and perceptual components-

- Attention
- Memory
- Figure-ground
- Directionality



## Social components-

- Social smile
  - Peer relationship
  - Group interaction
- Behavior Tantrums and  
Communication (verbal & non verbal)



May 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
2	3	4	5	6	7	1
9	10	11	12	13	14	8
16	17	18	19	20	21	15
23	24	25	26	27	28	22
30	31					29

MAY  
2021



## Dental issues

- Baby bottle syndrome
- Cavities Gum problems
- Multiple missing teeth by birth
- Irregular teeth-bad bite
- Cosmetics

### Prevention:

- Brushing twice a day/anti cavity mouth washes
- Restricting sugary eatables
- Use of special devices-air / water flosser

### Doctor reference

Dr.Nidhi Gupta (9350214961)



## Skin issues

- Soft and velvety skin in early childhood
- Dry skin in late childhood - Xerosis (70%), atopic dermatitis (50%), palmoplantar hyperkeratosis (40-75%), and seborrheic dermatitis (31%)
- Premature wrinkling of the skin, cutis marmorata, and acrocyanosis
- Bacteria infections, fungal infections (tinea), and ectoparasitism (scabies)
- Elastosis perforans serpiginosa
- Syringomas, which may be eruptive
- Alopecia areata (6-8.9%)
- Vitiligo
- Angular cheilitis

### Doctor reference

Dr.Shwetha Rahul, Chennai.

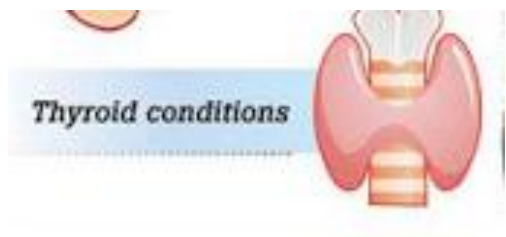


## Nutritional issues

- Growth and development slower in ages 3 -36 months
- Average height and head circumference smaller
- Feeding challenges include, difficulties in swallowing
- Overweight, Constipation, Heart defects
- Thyroid disorders(hypothyroidism likely)Coeliac diseases
- Diabetes, GIT Anomalies
- Dysphagia signs and symptoms include, coughing, choking, arching/stiffening of body during feeding, refusing food or liquids.

### Doctor reference

Dr.Madhu Sharma, Panchkula



June 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

JUNE  
2021

# Puberty and Perimenopause/menopause

## Puberty in girls:

- Signs-typical age 10 yrs.(8-13 yrs.),breast budding, appearance of pubic hair, growth spurt
- Menstruation: Not different from typical girls, initially unpredictable and irregular but later became cyclic
- Menstrual hygiene should be practiced before it is necessary, use of various tools for teaching-pictures, drawings, written lists, books, visuals of task analysis (changing pads),this should be practiced at home, school and in community
- Girls and women's with Down Syndrome are fertile and capable of conceiving a pregnancy.

## Puberty in Boys:

- Signs- enlargement of testicles, average age for this is 11 yrs.(8-13yrs), growth of penises and testicles is complete in middle teen years.
- Growth spurts is usually over around 15-16 yrs. of age.
- Voice changes and increased facial hair are quite variable in their timing.
- Sexual functioning in Boys with Down Syndrome- they do have erections and ejaculations
- Fertility appears to be decreased
- During puberty, boys may become more clumsy and uncoordinated., unaware of own strength, prompting and physical management becomes more difficult.

## Problems/issues/concerns:

- Irregularities in periods (25-30% due to thyroid disorders),levels of sex hormones are affected by anti epileptic painful cycles, hygiene and periods management issues.
- Irritability, insomnia, tensions, anxiety
- More time to understand the changes during puberty.
- Concerns about sexual relationship and potential abuse.
- Menopause symptoms:- hot flushes-night sweats-vaginal dryness and discomfort during sex-difficulty sleeping-low mood or anxiety-reduced sex drive (libido)-problems with memory and concentration



## Doctor reference:

Dr.Uma Ram DGO,DNB,FRCOG,Seethapathy clinic and hospital, Chennai

July 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

# Schooling

Plan, but be willing to stray off that plan.

- Schooling for our children is a very crucial concept, and needs a very realistic and pragmatic approach.
- Our children have medical, and health conditions which needs to be properly managed time to time.
- Health monitoring (Physical & Psychological), 24x7, helps us to keep anxiety, stress, and depression among our children at bay. Otherwise we end up raising a child with declined cognition.
- Since a relaxed mind can bring out more results, so with this thought we have to decide what is best for our children.
- Learning should be based on child's interest, and not based on your (Parent's) ambitions.
- OTs and PTs should be an integral part of a child's routine.
- Speech therapy should be aligned with the daily activities of the child. This can be done by connecting with child at their own level. Encourage child to babble not only at home but even outdoors where no one understands. This builds a strong foundation that they are being heard.
- Use assistive devices and technology to their advantage.
- Expose them to outer world as much as you can. Make them interact with strangers as much as you can. This will instill confidence in them.
- Convert every learning into a playful activity.
- Record photos, videos and let the child watch it on TV/Phone
- Use drama and story telling, since most of our kids are visual learners.
- Eventually home schooling is a relatively more better option in terms of outputs, because the child learns at his own pace.



August 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST  
2021

# Vocational training

Vocational training is to help these children, make a living and be financially independent. This helps them be independent and reach their full potential.

Vocational training houses different types of works/jobs depending on the skills of every individual.

Employment Opportunities include-

- Dance
- Music
- Drama/theatre
- Artist
- Weaving
- Baking/cooking
- Workshop duties
- Paper/envelope making
- Candle/soaps making
- Hotel Management

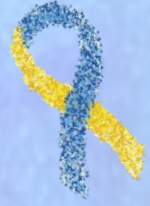


September 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

SEPTEMBER  
2021

**DS  
Awareness  
Month**

While March 21 is celebrated as World Down Syndrome day, the month of October is celebrated as Down Syndrome Awareness month.



**"INCLUSION IS A RIGHT, NOT A PRIVILEGE FOR SELECT FEW" – Judge Geary**

*Inclusion requires the teacher to believe that all students have something important to offer in the classroom and that we really are better off learning together.*



October 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

**OCTOBER  
2021**

# Aquatic therapy

A combination of land and water exercise is an effective strategy to improve daily activities in babies with trisomy 21. Aquatic therapy showed significant improvement in gross motor milestones in babies with trisomy 21 like neck control, sitting, crawling. Aquatic therapy is started from 4 months of age.

## Benefits of aquatic therapy-

- Improves cardio vascular endurance
- Improves the tone of the muscles as most babies with trisomy 21 have hypotonia
- Improves bone strength n ligament laxity Improves balance n coordination

## Precautions to be taken during aquatic therapy

- To check whether the baby had any cardiac issues
- Episodes of pneumonia
- Ear infections

Mithula -7358039531  
Srilakshmi-8124006533



December 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

NOVEMBER  
2021

# Rights Financial Planning & Inclusion



- As soon as Diagnosis is done and Parents have Accepted the condition they should start working on these things along with Medical & Therapeutic services.
- Get the Assessment done and then try to get Disability Certificate, Railway Concession Certificate and UDID Card
- DS is a Life long condition, so start Financial Planning soonest. To begin with, start setting aside Rs. 10/ 20, 50 or 100/- per day.
- Rs. 5000/- saved regularly every month can grow up into nearly 3.5 Crores, over 35+ years & over 8 Cr. In 40 yrs. The interest on this corpus can take care of the monthly financial requirement when the child grows up.
- Open Bank Account of every child—even if Minor! Start early. After attaining 18 years age, he/ she will become First Holder and parents can be joint holders.
- Minor children can get PAN Card. Get it soonest. It will help in minimising the Tax Burden on interest income.
- PPF Account can be opened in minor's name. Open it in nationalised bank. Interest earned on PPF is Tax Free so far. Min deposit per annum can be Rs. 500/- upto 1.5 lakhs. As minor account, it will be linked with parents. But after 18 yrs age, advantage of compounding will be readily seen.
- DMAT Account can also be opened if interested in investments in Stock Markets.
- Insurance schemes are still not clearly defined to include Disabilities. That makes these options near redundant as there may be issues in claims settlement. Do NOT Waste your money. Save it instead.
- Guardianship IS NOT MANDATORY. There are clear Guidelines in RPD Act as well as National Trust Act. and RBI Circular. Every citizen has a Right to open a Bank Account.
- Get Adhar Card and Voter ID Card. It helps. In case of ANY Difficulty with Bank or ANY other Agency/ Department redressal is done by Chief Commissioner of PwDs and State Commissioners depending upon the jurisdiction.

What After Us :

- ❖ Be Bridges/ Positive Interface with the Society about condition of our children.
- ❖ Different Models have evolved over past few years and have their pros & cons.
- ❖ Once the Financial Resources are earmarked for our child/ adult with DS planning will be needed on three levels
  - Management of Funds.
  - Ensuring regular cash flow for service delivery and continuity.
  - Actual Service Delivery. Different arrangements will be needed to make sure that after the parents, a group of supporters will regularly take care of these functions.

November 2021						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

DECEMBER  
2021



**Babli Ramachandran**  
Besides being an accomplished Bharatanatyam dancer, Babli also teaches yoga to others with Down syndrome.



**Karishma Kannan**  
Artist/Painter



**Reshmi Rekha Sahu**  
Odissi Dancer



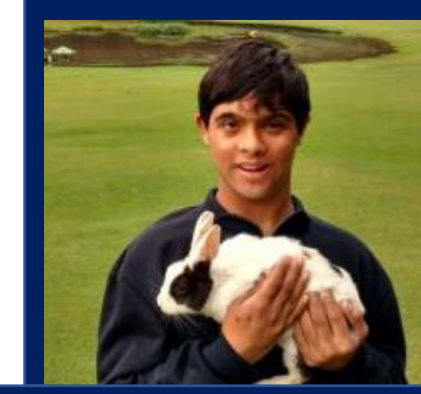
**Gauri Gadgil**  
International swimmer, actress - Debut film YELLOW



**Jijo Das**  
Artist, Illustrator, Youtuber Website-Art of my optimus



**Sneha Verma and Disha Maru**  
Gold and Silver at Special Olympics in swimming



**Sahil Singh**  
Self advocate, UN speaker, Athlete leader (SOB), Memer of Youth council (SOB)

**Achievements**  
**Accomplishments**



THANK YOU!

