

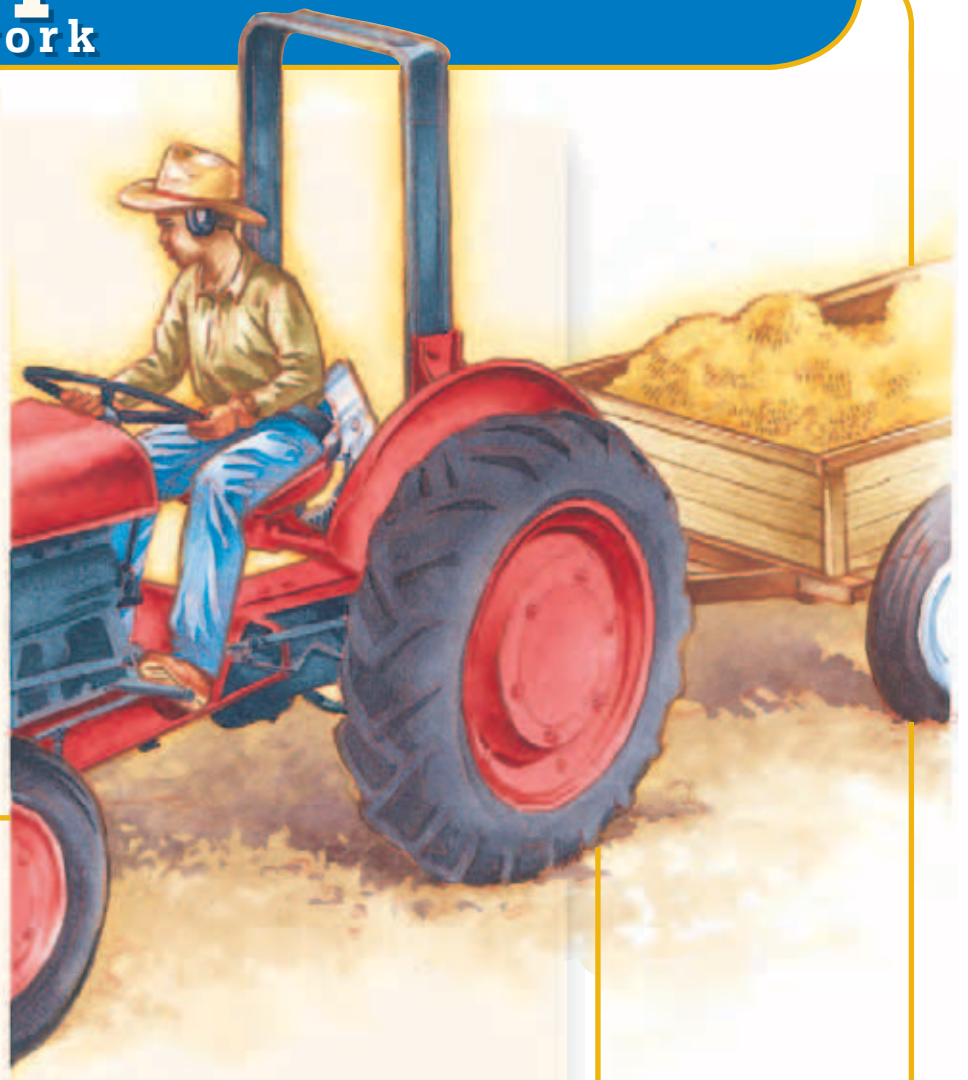
Trailed implements

fieldwork

Adult responsibilities

ADULTS NEED TO MAKE SURE:

- Implement is in good working order
- All safety features are in place
- Work area has no hazards
- Child and adult can communicate by cell phone, walkie-talkies or other method
- Child wears long sleeved shirt, long pants, wide brimmed hat, sunglasses and sunscreen
- Long hair is tied up
- Child has at least on ten-minute break every hour
- Child drinks a quart of fluids every hour



Can your child do this job?

ABILITY

Can the child drive a tractor?

(See "Driving a Farm Tractor")

- Yes.
- No. **STOP** STOP! Children must be able to drive a tractor to do this job safely.

Can the child hitch and unhitch the trailed implement?

(See "Trailed Implements Hitch/Unhitch")

- Yes.
- No. **!** CAUTION! An adult should hitch and unhitch the implement.

Does the child have good peripheral vision? For example, while looking straight ahead, can the child see your finger entering his or her field of vision at shoulder level?

- Yes.
- No. **STOP** STOP! Children with limited vision may not see people or obstacles in the work area.

Can the child react quickly?

- Yes.
- No. **STOP** STOP! Children need quick reactions to avoid injury.

Can the child recognize a hazard and solve the problem without getting upset?

- Yes.
- No. **STOP** STOP! Children must be able to recognize hazards, think about how to respond and stay calm to prevent injury.

Does the child usually go with his or her "gut" feeling without thinking too much about what could happen next?

- Yes. **STOP** STOP! Children who act on impulse are more likely to be injured.
- No.

Is your child responsible? Do you trust your child to do what's expected without anyone checking?

- Yes.
- No. **STOP** STOP! Irresponsible behaviour can lead to injury.

Does the child do things that seem dangerous for the thrill of it?

- Yes. **STOP** STOP! Children who take risks or behave dangerously are more likely to be injured.
- No.

TRAINING

Has an adult demonstrated fieldwork with a trailed implement on site?

- Yes.
- No. **STOP** STOP! Children learn best when shown how to do the job at the work site.

Has the child shown he or she can do the job safely 4 to 5 times under close supervision?

- Yes.
- No. **!** CAUTION! An adult must watch constantly until the child shows he or she can do the job.

SUPERVISION

Can an adult supervise as recommended?

- Yes.
- No. **STOP** STOP! The right level of supervision is key to preventing injuries.

Main Hazards



Tractor rollover can cause death or disability



Collision with fences and trees can cause injury

Remember



Hearing protection



Non-skid shoes

Supervision

What's the right amount? Here are suggestions—but remember, it depends on the child.

Age 14-15: **WATCH** constantly at first. When the child shows he or she can do the job, **CHECK** every few minutes.

Age 16+: A child must be 16 or older to drive an articulated tractor or drive on a public road. **CHECK** every few minutes. When the child shows he or she can do the job, **LEAVE** for 15 to 30 minutes.

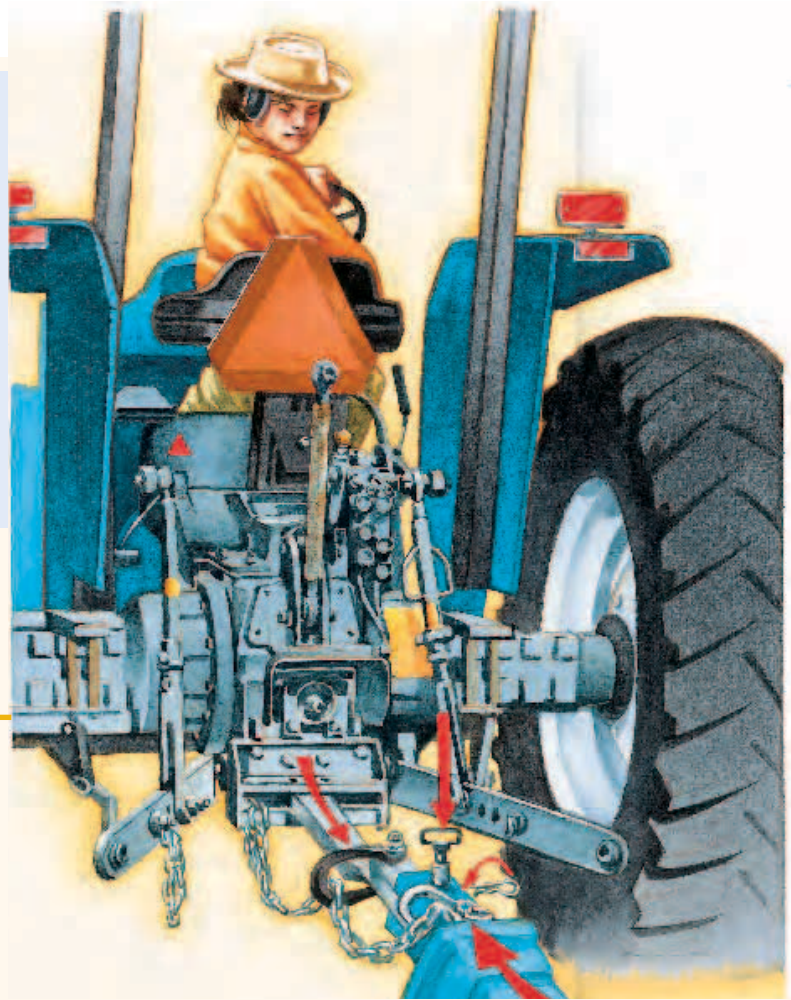
Physical Development & Tractors

Physical Differences

CHILDREN ARE PHYSICALLY DIFFERENT FROM ADULTS

Children and adolescents are physically different from adults in several ways. These include:

- Reach
- Strength
- Vision
- Balance and coordination



Can your child do the job?

REACH

Compared to adults:

- Children have shorter arms and legs
- Children have shorter torsos and cannot reach as far

Inability to comfortably and quickly reach foot pedals, hand levers, and steering wheels while driving a tractor can impact safety dramatically.

Many times this translates into the child not wearing a seat belt in order to move forward in the tractor seat to reach pedals, levers, and even the steering wheel.

STRENGTH

Compared to adults:

- Children are not as strong
- Children tire easily

Even children with significant strength can fatigue quickly, and their endurance to produce strong movements may fade quickly. Failure to have strength to push pedals and levers needed to operate a tractor can be extremely dangerous, especially in emergency situations.

VISION

Compared to adults:

- Children do not have the same visual angles
- Children have a limited field of view

Because children are generally smaller than adults, they do not have the same visual angles from tractor seats. Even if their eyes are only 6 inches lower than an adult's, youth will have much less vision of the terrain in front of a moving tractor.

BALANCE & COORDINATION

Compared to adults:

- Children are not as coordinated
- Children have less ability to balance

Children's ability to balance and to coordinate their body is less than that of an adult. Growth spurts through adolescence exacerbate the problem. This can impact safety in various situations, including tractor work.

Remember

- Children can not reach as far as adults
- Children are not as strong as adults
- Children do not have the same visual view as adults
- Children do not have the same balance and coordination as an adult
- Children are not small adults

Content Provided by: David Schwebel, PhD, University of Alabama at Birmingham, Birmingham, AL

Cognitive Development & Tractors

Cognitive Differences

CHILDREN'S THINKING SKILLS ARE DIFFERENT FROM ADULTS

Thinking skills of children and adolescents are not fully developed until early adulthood. Children have differences in:

- Speed of processing
- Decision making
- Impulse control
- Generalization skills
- Attention span



Can your child do the job?

SPEED OF PROCESSING

Compared to adults:

- Children cannot absorb information at the same rate
- Children cannot process the information as quickly
- Children cannot make decisions as fast

How quickly can a brain absorb information, process it, and arrive at a decision? When driving, such activity occurs constantly – and very quickly. It is not conscious – the brain just does it, even in children. But it seems that the process happens a little slower – just split seconds slower – in children than it does in adults. Those split seconds can make a life-or-death difference when there's an emergency.

DECISION MAKING

Compared to adults:

- Children do not have the advanced thinking skills to process information logically
- Children do not have the skill to consider the consequences of their actions
- Children do not have the skill to consider alternative options

A safe tractor operator constantly makes decisions. Some can be carefully considered (Should I wear the seat belt?). Others must be made almost instantaneously (Should I swerve to avoid that boulder?). These decisions require advanced thinking skills, including skill to process information logically, skill to think about consequences of actions, and skill to consider alternative options. Children do not have the same level of advanced thinking skills that adults do, and this can result in danger.

IMPULSE CONTROL

Compared to adults:

- Children cannot restrain themselves
- Children do not have mature impulse control skills

Most adults can “restrain” themselves when they want something. When offered a “freebie” that they don't really want or need, for example, many adults will decline the offer. Children and adolescents have more difficulty restraining themselves because they have not yet developed mature impulse control skills. In fact, these skills usually do not reach maturity until early adulthood. Poor impulse control increases risk when operating tractors.

GENERALIZATION SKILLS

Compared to adults:

- Children cannot easily translate a message learned from one scenario to another

Adults can typically take a lesson learned in one place, and “translate” it to another. For example, adults might realize that the on-off switch for automobile windshield wipers is typically on a lever extending over the steering wheel. Adults driving an unfamiliar car will not struggle to keep themselves safe by initiating the wipers when raindrops appear. Children and adolescents are less skilled at “transferring” information learned in one environment to a new environment. They might be more likely to panic in the unfamiliar car, failing to safely clear their windshield because they are less able to generalize from previous vehicles they have driven.

ATTENTION SPAN

Compared to adults:

- Children and adolescents are unable to concentrate on tasks for long periods of time

Children and adolescents are unable to concentrate on a task as long as adults. They are more susceptible to boredom and mind-wandering. This means they should not be expected to engage in a task as long as adults can without increased risk.

Remember

- Children do not absorb, process and arrive at a decision as quickly as adults
- Children do not have the same level of advanced thinking skills that adults have
- Children do not develop mature impulse control skills until early adulthood
- Children are not able to concentrate on a task as long as adults
- Children are less skilled at “transferring” information learned in one environment to a new one

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Perceptual Development & Tractors

Perceptual Differences

CHILDREN'S PERCEPTIONS ARE DIFFERENT FROM ADULTS

Children have different perceptual processes. They are different from adults in these ways:

- Estimation of physical ability
- Perception of movement, speeds, acceleration and deceleration
- Perception of distances
- Perception of slopes and terrain
- Visual search skills
- Perception of sounds



Can your child do the job?

ESTIMATION OF PHYSICAL ABILITY

Compared to adults:

- Children cannot accurately estimate their ability
- Children cannot accurately determine reach

Young children are not very good at recognizing their own physical abilities. Can they reach an object above their head, for example? Or step over a barrier? Accuracy of estimating ability develops slowly over time. Inaccurate estimation of ability to reach tractor controls could have devastating impact on safety.

PERCEPTION OF MOVEMENT AND SPEEDS

Compared to adults:

- Children cannot accurately judge speeds
- Children cannot accurately determine when an object is accelerating or slowing down

Judging when a moving object might arrive is a challenging task, and research by scientists studying children's pedestrian skills finds that it takes many years before children can judge traffic moving at stable speeds like adults do. When cars are not moving at a stable speed, but instead are speeding up or slowing down, the task is even harder. Obviously, failure to accurately judge moving objects like vehicles or animals creates risk for a tractor operator.

PERCEPTION OF DISTANCES

Compared to adults:

- Children cannot judge distances

One challenging aspect of learning to drive a car is recognizing if your vehicle is in the center of the lane. Youth have difficulty judging the distances of objects. Inaccurate judgment of the distance between a tractor tire and a ditch creates risk of rollovers.

PERCEPTION OF SLOPES AND TERRAIN

Compared to adults:

- Children cannot determine the angle of an incline or decline

Children may struggle to accurately judge the angle of an incline or decline. Misperception of ravines or hills increases crash risk.

VISUAL SEARCH SKILLS

Compared to adults:

- Children cannot scan the environment and look for changes

Children and adolescents develop the ability, over time, to search for relevant stimuli in an environment. Imagine, for example, a game teachers sometimes give children: Find differences between two sets of similar pictures. A safe tractor operator must continuously scan the environment to recognize obstacles to be avoided. Children can not do this as well as adults, and errors can be fatal.

PERCEPTION OF SOUNDS

Compared to adults:

- Children cannot use listening skills as well to determine if a vehicle is coming or going.

Children are not as good as adults at using hearing to decide when an approaching vehicle might arrive. Although most of safe tractor driving relies on vision, hearing is also important. Children's use of hearing to make judgements is inferior to that of adults.

Remember

- Children can not accurately estimate their ability
- Children can not accurately judge the speed of moving traffic
- Children have difficulty judging distances of objects
- Children struggle to accurately judge the angle of incline or decline
- Children have difficulty recognizing hazards in the driving environment
- Children's use of sounds to make decisions is inferior to that of adults

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Social Development & Tractors

Social Differences

ADULT INFLUENCES ON CHILDREN

Adults, and especially parents, have enormous impact on children in these ways:

- Actual teaching
- Modeling
- Setting rules

PEER INFLUENCES ON CHILDREN

The influence of peers becomes highly relevant to behavior in these ways:

- Risk taking
- Peer pressure
- Modeling



Can you do the job?

PARENT TEACHING

Parent responsibilities:

- **Teach children how to be safe**
- **Rules need to be announced and repeated**
- **Guidelines and lessons need to be provided**

The quality of parent teaching influences children's safety. If lessons and rules are clearly outlined, if sufficient supervised practice is provided and if rules are enforced consistently, then youth are more likely to develop safe operating habits. If rules are inconsistently provided and if supervision is not provided intensively or effectively, then risk emerges.

PARENT MODELING

Parent responsibilities:

- **Model safe behaviors**

Children learn by watching, and this happens much more than most parents realize. If their parents wear ear protection, children are also more likely to wear them. If their parents use seat belts, then youth probably will as well. Parents usually don't realize it, but nearly every action they engage in – including dangerous ones – is noted by their children.

PARENT RULES

Parent responsibilities:

- **Be the authority on the farm**
- **Set rules for children and adolescents**
- **Enforce rules**
- **Set consequences for disobedience**

Parents and other adults are the authorities on the farm. They can and should set rules for children and adolescents. Adults also can and must enforce the rules. Disobedience, particularly when risk of injury is involved, should be punished appropriately. At the same time, safe behaviors should be praised and rewarded. In fact, scientific research finds that praise and reward for safe behavior is ultimately more effective at changing children's behavior than frequent punishment for unsafe behavior.

Can your child do the job?

PEER RISK TAKING

Compared to adults:

- **Children and adolescents like to take risks**

Children and especially adolescents like to take risks. This is natural – after all, one needs to try new things to grow. Sometimes these risks are perfectly reasonable – riding the brand new loop-de-loop roller coaster at the amusement park is thrilling but not particularly dangerous. But sometimes adolescent risks are extremely dangerous. Adolescent risk-taking with drugs and alcohol, with driving, and with sexual behavior are well documented. Risks while operating tractors are equally concerning.

PEER PRESSURE

Compared to adults:

- **Children and adolescents are developing their identity and are susceptible to influences of peers.**

Adolescence is a time of great changes in the human brain. One change is the desire to understand oneself – to develop “an identity”. Because adolescents are trying to understand themselves, they are vulnerable to the influence of others. They try to be like their friends, and they try to do the same things as their friends. This shows itself in fashion trends, in musical preferences, and, alarmingly, in risk-taking behavior. If one teen in a “clique” does something risky, the others may try to follow. The mix of risk-taking tendencies and peer pressure is sometimes a dangerous one.

PEER MODELING

Compared to adults:

- **Children and adolescents model their peers who may be engaging in dangerous activities**

Just as youth model the behavior of their parents, they also model the behavior of their friends, older siblings, and other role models. If they witness dangerous behavior by someone they respect or someone they want to be like, youth may engage in that dangerous behavior as well.

Remember

- Adults influence children with their teaching, safety modeling and rules
- Children and adolescents like to take risks
- Children and adolescents are susceptible to peer influence
- Children and adolescents model the behavior of persons they respect

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Sociocultural Factors & Tractors

Sociocultural Differences

CHILDREN ARE SOCIOCULTURALLY DIFFERENT FROM ADULTS

Several sociocultural factors increase risk of tractor-related injuries. These include:

- Tendency toward distraction
- Fatigue and sleep habits
- Clothing and hair styles



Can your child do the job?

TENDENCY TOWARD DISTRACTION

Compared to adults:

- **Children have a higher tendency toward distractions**
- **Children have a higher tendency to multitask**

Today's youth seem to text-message their friends almost constantly. They have their mp3 players blasting all the time (including while texting!). They use their smart phones to browse the internet, check social media sites, monitor scores of their favorite teams, and read their email. They also talk on the phone. And, of course, they use laptops and computers for entertainment, school work, and communication. On their own, these activities are not dangerous. But when they are combined with other activities – such as driving a tractor – they can be very hazardous. Research indicates quite clearly the risk of young adults driving cars while distracted; one can assume that risk generalizes to tractor operation as well.

FATIGUE AND SLEEP HABITS

Compared to adults:

- **Children and adolescents biologically need more sleep**

North American adolescents rarely get the sleep their bodies need. They stay up late “connected” with technology and wake up early to go to school or work. Chronic fatigue leads to inattention, risk-taking, poor concentration, and mistakes. Even when adolescents stay awake, they place themselves at greater risk on tractors due to fatigue. Of course, they may also fall asleep on the job.

CLOTHING AND HAIRSTYLES

Compared to adults:

- **Children and adolescents favor looking fashionable over safety**
- **Children and adolescents don't realize the danger in wearing loose or tattered clothing**
- **Children and adolescents don't realize that loose drawstrings or hair that is not pulled back can be a hazard**

Many teens pride themselves in dressing and looking fashionable. Unfortunately, fashion and tractor operation do not always mix. Loose or tattered clothing, draw-strings on sweatshirts or jackets, long hair that is not properly tied, and other such “fashion statements” can be dangerous. Youth's personal desire to look a certain way, along with peer pressure to do so, must be overcome so that proper and safe clothing and hair arrangements are worn.

Remember

- Children and adolescents can be distracted easily**
- Children and adolescents do not get enough sleep**
- Children and adolescents choose fashion over safety**

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